
UNIT 1 AN INTRODUCTION TO PARTICIPATORY MANAGEMENT

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1.1 INTRODUCTION

In this unit, we will discuss important concepts of the participatory management, its emergence as a new paradigm of management; its philosophy and approaches to development; participation mechanisms and impact of political system and major constraints in people's participation. In the context of the human relationship with the nature, the focus is on the role of individuals and communities to promote and integrate their contribution in the conservation efforts and development. The main contents covered in this unit include, Participatory Management and Development: Basic Concepts, Philosophy of participatory approach to development, Socio-political context and constraints of the Participatory Management and development process; Participation and community mobilisation for the development process; major constraints in participation; and Participatory Rural Appraisal (PRA): as a tool for Participatory Development.

Objectives

After studying this unit, you should be able to:

- understand and discuss the concepts of participatory management and development, and the philosophy of participatory approach to development;
- define the concept and process of participation, people's involvement and empowerment to promote the development process;
- understand the process of community mobilisation and participation in the participatory management;
- apply the PRA methods in the development projects; and
- comprehend the socio-political context of the participatory management, and identify and address some of the major constraints in participatory management.

1.2 PARTICIPATORY MANAGEMENT AND DEVELOPMENT

In any organisation or development activity not only the designated managers but also the other support staff exercise their influence over the decisions that affect the organisation, project or any development activity. In this process, participation of all

the stakeholders is assured, throughout the project cycle, starting from the visualisation and planning to the implementation and final evaluation and assessment.

Participatory management can improve the effectiveness and capacity of an organisation involved in the development management thus contributing to good leadership by the management. It also contributes to an increased transparency in organisational decision making and implementation of the project activities.

Social organisation is a process of organising the community in-groups to achieve any collective objective or to fulfill the community needs.

Community mobilisation is a process of mobilising the community for participation in the social, human and community development process.

Though these terms are always used inter-changeably, they are different from each other in substance and practice despite having many common features. While social change is an integral part of development, development facilitates and leads towards social change.

Development implies improvement, growth and change. It is concerned with the transition of cultures, societies, and communities from less advanced to more advanced social stages.

Development involves a broader perspective. It is regarded as a form of social change. While social change can be considered as a concept that charts the transformation of societies, states and communities, development is often seen as a planned and directed social change.

Development, as a form of social change, has two dimensions:

1. It is the vision of those who adhere to the law of non-intervention and argue that social change will have its own natural evolution where the state will adopt non-interventionist policies and the market forces will determine the social change. This perspective has evolved from the natural law and the “invisible-hand” ideology of the laissez-faire doctrine. It is based partially on economic analysis and partially on ideological beliefs.
2. The idea of development stems from the vision of society in terms of a planned intervention, which stresses on the utilisation of knowledge and technology to help solve the problems of individuals and groups. It is based on the philosophical idea that in applying systematic and appropriate knowledge to the problems confronting the social system, we can facilitate purposefully directed change for the betterment of all.

Community Development is the process by which the efforts of the people are united with those of the governmental authorities to improve the economic, social, and cultural conditions of communities, to integrate the communities into the life of the nation, and enable them to contribute to the progress of the nation. This process is, therefore, made up of two essential elements. Firstly, the participation by the people themselves is an effort to improve their level of living, with as much reliance as possible on their own initiatives; and secondly, the provision of technical and other services is a way that encourages initiative, self-help and mutual help and makes these more effective. It is expressed in programmes designed to achieve a wide variety of specific improvement.

In brief, the Community Development could be defined as:

- A group of people,
- In a community,
- Reaching a decision,
- To initiate a social action process i.e., planned intervention,
- To change,
- Their economic, social, cultural, or environmental situation.

Community Development has evolved from two major forces:

- Economic development; and
- Community organisation.

Participatory Development enables people to address the local issues by forming into associations. Through this they will be able to plan and act on their own behalf, encourage trust and self-awareness and enable independence and self-sufficiency.

The main goal of the participatory development is to involve local communities, and all other stakeholders, by using participatory methods to create voluntary associations for community development, so that they can identify, plan, control and maintain and use local resources for greater prosperity. Local associations are part of the civil society. In this process, besides the community organisations, all other stakeholders and partners, who may be the potential contributors in the development process, are also involved at various stages.

Participation is an act of being involved and of involving individuals or groups in making choices and decisions, in planning, in taking actions, in controlling and sharing the benefits. Participation reduces dependency by creating confidence, self-sufficiency and trust.

In community work, participation means that the whole community, including those who do not usually speak-up, participate in the decisions of the community.

Stakeholders means the people and groups who have interest or “stake” in the success of the organisation, project or any other developmental activity. This definition of stakeholders is very broad. Most voluntary and non-profit organisations have a wide array of stakeholders, who feel that their perspective should be duly represented in the decision-making, thereby increasing the accountability factor.

Stakeholders’ connection can be:

- legal (in case of the members),
- practical (those who provide funds),
- moral (such as clients, partners, and the public at large).

The importance of stakeholders adds an entirely new dimension to governance and participatory management and development. Representation and accountability become core of the governance and management and development process, closely intertwined with decision making.

Satisfying these stakeholders is nevertheless a complex task: relationships differ, their weight of influence varies, competing interests must be balanced and conflicting perspectives reconciled. The result is a **complex web of players**, as shown in the Fig. 1.1.

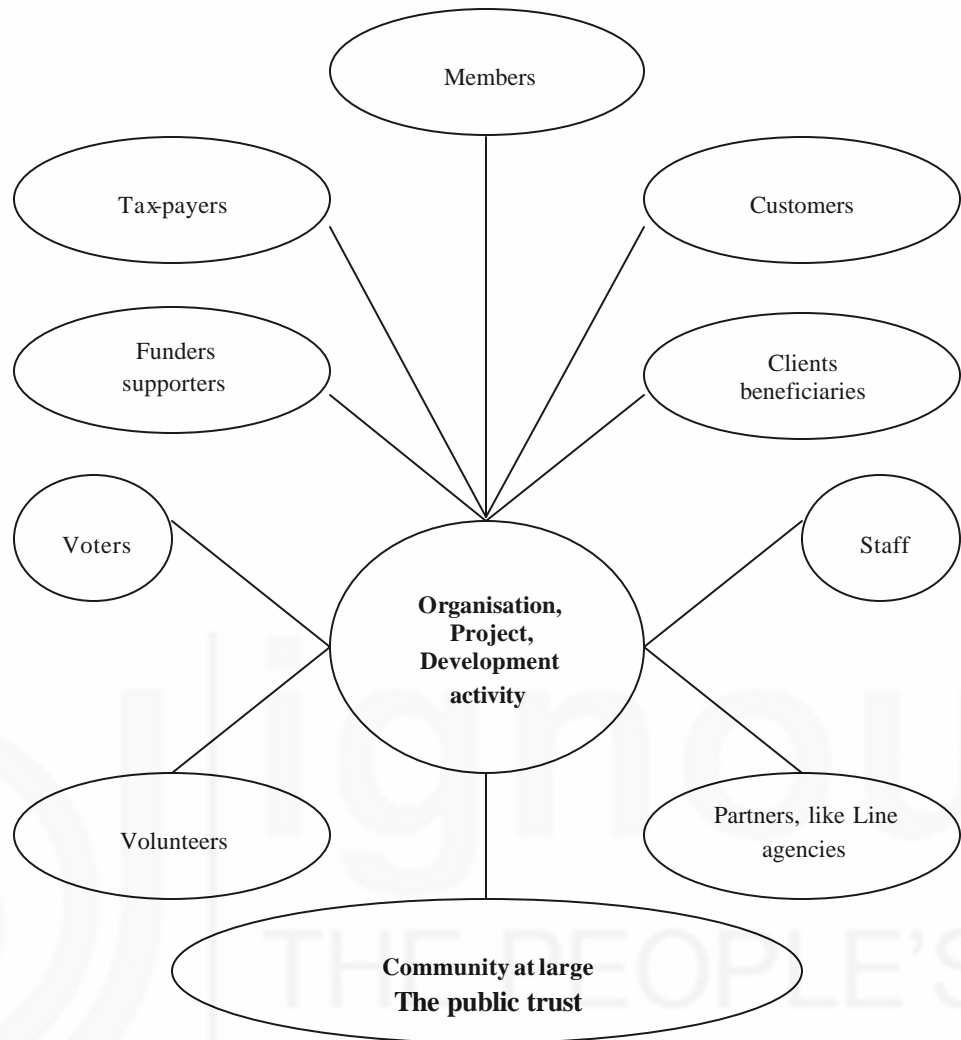


Fig.1.1: Complex web of stakeholders and players of the participatory development and management process

SAQ 1

- i) Explain in your own words the concept of participatory management and development.
 - ii) Explain the following concepts:
 - a) Development and Social Change.
 - b) Community Development.
 - c) Stakeholders.
-

1.3 PHILOSOPHY OF THE PARTICIPATORY APPROACH

The effectiveness of the participatory approach to management and development, depends on the tools we use. Communities cannot be lectured about participation. They know when they are excluded. So for development workers, for a more meaningful and sustainable relationship with the poor, listening to what the poor have to say, allowing to make them sense the reality, enabling them to put it in a shape what is workable and supporting the actions they decide to take, is part of the

development workers' job today. Since it is different from the development work of the past, it requires other skills and tools.

Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA) are among the basic methods, which are commonly used in the participatory development and management. These methods make use of specific tools to enable people to analyse their situation. The tools of PRA and PLA come with a philosophy, which ensure that knowledge of the people is used to empower them, rather than the development worker. Both together form part of the participatory process towards involving people in their own development. PRA has been discussed in detail in the sections to follow.

1.4 PARTICIPATION AS A PROCESS OF CONSULTATION

Participation is a process of consultation and willingness to share something and to do something collectively. Participation is a process, in which, everything, from the concept through planning, implementation, monitoring, evaluation, and maintenance, should be in the ownership of the people.

In order to elaborate the concept and process of participation, let us review some of the characteristics of the participation:

- Participation is a way of life.
- Individuals are like the components of machinery.
- Participation demands equality in decision-making.
- Change in the attitude is required for participation.
- Commonality of interest provides basis for participation.
- Combined thinking and struggle promotes participation.
- Participation is need-based.
- Two-way learning process leads towards participation.
- Someone has to initiate the process of participation as an activist.

How to Promote Participation

- Involve people's time/money to ensure their interest.
- Listen and learn where to support.
- Consult, take collective decisions without hierarchy.
- Follow up.
- Identify common interests.
- Promote solution.
- Reaching the poor.
- Allocate works, promote leadership, and convene meetings.
- Provide appropriate technology to solve and manage collective social and economic problems.
- By giving equal chance of opinion to all the members of the community or group.
- Call meetings, select activists / people by criteria.
- Take burning issues to mobilise the people.
- Organise people around their rights.
- Form Village Development Organisations (VDOs).
- Mobilise, be punctual, make no promises.
- Set personal examples through actions and deeds.

1.4.1 Constraints of Community Participation and Mobilisation

It is evident that there are a number of constraints which hinder the process of community participation and mobilisation. At the same time there are strong networks in the communities in terms of interdependence or cooperation amongst friends,

families, and neighbours. Unfortunately, however, in most of the communities there is little formal organisation and strategising around community organisations, which could potentially serve as a means to address their needs.

This sense of immobility and trends to avoid participation in the development process arises from a number of factors:

- i) The misperception among the community members that politicians and bureaucrats will alleviate their problems, despite the fact that the problems of corruption and poor administration are evident throughout the world;
- ii) Lack of expertise amongst the community to facilitate such organisation;
- iii) Lack of will and interest amongst the community members to enhance the required skills for facilitation of such social organisation;
- iv) Illiteracy, social problems, especially lack of access to social and economic resources/services and poverty among the majority of people living in rural areas and among the marginalised groups in the urban areas;
- v) The unwillingness of the community as a whole to give up individual interests to form a broader cooperative;
- vi) An extreme shortage of available resources to facilitate the community mobilisation process;
- vii) Politicisation of the development and management procedures and processes;
- viii) Traditional cultures, social systems; and
- ix) Adherence to authoritarian and non-democratic societies and political systems.

1.4.2 Solutions to Community Participation

The solutions to resolve such problems are rooted within the resource capacities and social organisational structures of the communities. The organising structure presented here to resolve the problems related to the community mobilisation is based on the concepts of self-help, encompassing various distinguishing features of community development theory, practice and ideology. While it is not assumed that all the problems of the communities can be resolved by community's efforts alone, it is seen as a means of achieving broad community participation and effort. Through this means, it is suggested that the living conditions, facilities and services of the community will improve, along with the empowerment of the community.

SAQ 2

- i) Explain the philosophy of the participatory approach.
 - ii) Write the following in your own words:
 - a) Process of consultation.
 - b) Community participation and mobilisation.
 - c) Solutions to the community participation.
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1.5 VISUAL TOOLS AND MATERIALS FOR PARTICIPATORY MODES OF INTERACTION

Visual tools that reflect local reality help overcome class and literacy barriers and facilitate the involvement of those usually excluded: *women, the poor and the less powerful*. At the agency level, visual materials help participatory modes of interaction, break hierarchical and disciplinary barriers and forces staff to explore new ways of

doing things. It also demystifies planning and researches. Additionally it often marks the beginning of people realising such materials could be used to involve community people in the decision making.

Almost all materials can be used in a participatory way. It is easy to use innovative, visual materials to extract information from communities for external planning rather than to empower people to undertake action. Readers are encouraged to relate and utilise the ideas in the book to meet their own specific needs.

In participatory activities, facilitators keep a low profile after introducing a task or activity and ultimately they become invisible and withdraw their support at an appropriate time. The tasks should be simple and the need for instructions should be minimal. This necessitates much time preparing the materials and thinking through the process. However during the actual activity, good facilitators ensure that the process be controlled and taken over by the group to the greatest extent possible. Tasks that are open-ended allow the emergence of local perspectives, beliefs, values, and reality rather than eliciting the “one correct answer”.

When the intention is to empower participants, it is helpful to keep the following questions in mind while designing and conducting activities:

- Is the task open-ended or over-structured?
- How much time and instruction are needed to clarify the task?
- Who is controlling the process?
- Who plays the dominant role in managing the task?
- Who is controlling the outcome?
- Does the task search for the correct answer?
- Who is talking the most? (Facilitator or participants).
- Does the task generate discussion, thinking, energy, excitement and fun?
- Does the activity lead to changing perspective, group spirit or discussion of “what next?”

1.6 APPROACHES TO PARTICIPATORY MANAGEMENT

The bases for participatory management and development should be ‘communities first’ approach and planning/action which leads to the formation of sustainable Community Organisations (COs).

Field workers using participatory methods achieve community involvement and empowerment. The methods we use come from a large set of tools developed for Rapid Appraisal and Participatory Assessment (RA & PA), which have evolved into a dynamic people-centred Participatory Learning and Action (PLA) approach to development.

The premise of participatory development is that when community members plan and act as a group, in local associations, the result is more lasting and sustainable (as compared to the results using top-down methods of development, defined and dictated by outsiders).

Full participation of the community members in social organisation and mobilisation from the beginning will lead to their empowerment and self-sufficiency as members of the Community Organisations.

The use of participatory tools to empower communities not only helps them to develop sustainable associations and take action on their own behalf, but also helps field workers, agency and government workers to understand and appreciate local communities, local people and local institutions; thus, a participatory approach is many-sided. The understanding and information gained by the participatory process are more useful for local development rather than those gained by using other

methods. The active involvement of local people in the process is more productive, realistic, appropriate, dynamic and empowering than the questionnaire survey approach to research or the dependency-creating methods of top-down development.

There are many tools for participatory development. The following are especially good for creating rapport, generating a participatory process, and collecting information for use in planning and action. Some tools are based simply upon common sense and are improved by experience. By using combined techniques and strategies of PLA and rapid appraisal, the field worker-facilitator is armed with a powerful, flexible and creative tool kit for the field.

Some of the common tools and strategies for participatory social mobilisation are given below for the guidance of the social organisers:

- conduct semi-structured interviews (SSI) and focus group discussions with farmers;
- conduct key informant interviews;
- probe for better understanding;
- practice participant-observation;
- use observation skills based on experience to make social viability judgments;
- promote simple community resource sketch mapping by farmers;
- plot water accessibility and distribution patterns and discuss problems with farmers;
- map water distribution systems with farmers;
- conduct watercourse transect surveys with farmers;
- give farmers a pen and encourage them to do the mapping, plotting and transects;
- conduct a watercourse or community SWOL analysis with farmers, identifying the local “Strengths, Weaknesses, Opportunities and Limitations” (SWOL), especially encourage discussion on the ‘opportunities’ and be positive;
- document water utilisation history and practice from oral histories;
- create social profiles and farmer profiles through discussion and social mapping; and
- conduct simple eye-ball measurements of watercourse systems etc.

These participatory tools and observation-based judgment methods are useful for gathering information and mobilising farmer associations. But because they are subjective and qualitative, the data is not very much ‘enumerated’ or ‘counted’. Similarly, precision and accuracy of information is not essential and fixed blueprints for mobilisation do not exist. Approximate understanding and flexibility are undoubtedly, assets.

Certain helper questions are useful to ask at the initial stages of both consultative and participatory fieldwork (see below); they are open ended and excellent for probing a topic:

- Use them to avoid simple yes/no answers (yes and no tell you very little).
- Avoid leading questions in which the answers are suggested in the questions (they are usually misleading or leading).
- Follow up by silently asking yourself; so what? “What am I learning? What am I hearing about this issue or situation? What is really important there?”

- Use probing techniques, then analyse the answer and use your accumulated insight, judgment and good sense based on experience, along with the clues which farmers give you, to raise more questions.

The field worker strives to be a true facilitator and catalyst for development. He practices a soft, low-key approach that is courteous, informative, supportive, and helpful. He avoids behaviour that is showy or elitist (For example, he rides a motorcycle, not in a flashy jeep. He wears village style clothes, not a city suit. He speaks the local language, not showing off his English). Thus the field worker is a helper and not boss.

Below are two comparative lists of terms and ideas about the ideal facilitator's role as compared to the undesirable ruler or boss – like style and attitudes.

Helper or Facilitator	Ruler or Boss
An expediter and assistant	Bureaucratic, authoritarian
A humble helper and consultant	A bossy director, autocratic
Dresses simply like a community member and walks or rides local transport or a bicycle or motorcycle; walks, talks and respects farmers	Likes to look superior (wears urban dress, is driven in a flashy jeep, shows off his mobile/cell phone etc.); disregards community members.
Maintains a low-key, soft approach to his work, focusing attention on the community members and not on himself	Likes a flashy approach; drives too boldly and noisily drawing attention to him.
Likes to learn from local experience	Opinionated, has all the answers
Respects local knowledge and skills	Disrespects local knowledge and skills
Encourages participation, self-confidence and independence, helps community members do it themselves	Does not appreciate or encourage participation, perpetuates beneficiary dependency
Prefers working with community members, enjoys their company	Does not really like working with community members, not living in villages
Understands civil society and appreciates its importance in local and national development.	Does not appreciate civil society, nor its significance for local or national development
Is people centred	Is technology/bureaucracy-centred.

1.7 USE OF PARTICIPATORY APPROACH

The participatory methods are used in every activity associated with social mobilisation, group organisation and planning, operation, and management.

You may wish to start with a community mapping exercise to become familiar with the place, the people and the issues. But give farmers the lead.

Walk, talk and draw a transect map, to focus attention on resource issues and their management. Let them make the maps and lead the discussion.

Collect information for community profiles. Learn the community.

Put the communities-first. All decisions about forming an association, how to run it, and how to manage the watercourse resources must be the decisions of the community members.

Encourage and enable them take action to address local issues, solve their problems and manage their resources.

Our goal is formation of community based associations that are community-led and self-sufficient.

As a facilitator, guide and catalyst, you encourage innovation. The more the rural development is conducted by, with and for communities, the more sustainable it becomes.

Development by intervention is directed by the outsiders, and for outsiders. Communities have little say in the matter. This old-style development promotes dependence on outsiders and outsider solutions. Perpetuating dependent beneficiaries should not be the goal.

Participation encourages innovation.

Innovation promotes positive development. In innovative development, progressive ideas and actions are based upon local experience, local leadership and local management on what works, locally! Innovative development reduces dependency. In fact, it empowers.

Ultimately, mobilisation will be successful and development sustainable when the farmers say in a positive voice, with conviction:

“This is our association - we will run it!”

“This is our watercourse - we will manage it!”

“These are our resources - we must look after them!”

SAQ 3

- i) What do you understand by visual tools and materials? Explain.
 - ii) Describe various approaches for Participatory Management.
 - iii) Write a note on the use of participatory approach.
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1.8 PARTICIPATORY RURAL APPRAISAL

Since 1990 various appraisal techniques have gained widespread recognition in participatory management, development, research and implementation of various projects. The reason for emphasis on rapidity is that commonly used survey methods are not only very costly, but also take too long for data collection and analysis. The participation in data collection is more important because all the key responsibilities are given to outsiders in the conventional research, rather than community members.

Participatory rural appraisal (PRA) is an intensive but semi-structured learning experience carried out in a community by a multi-disciplinary team working with the community. It is an alternative to the traditional research methods, which focuses upon questionnaire-based surveys and statistical analysis.

Much of what is new in PRA, consists of the approach of the professionals involved. We should encourage the participation of the community members, believing that the

community knows the purpose of the study and will reveal if we are prepared to listen. We respect the community members; show interest in what they say, know, show and do – and do not visit them with the intention of confirming our own biases. We are patient, we do not rush or interrupt the community members, we listen in order to learn. We do not lecture, but we provide information that is requested if we have it. We are humble when with the farmers – respecting their understanding of their own situation. We facilitate the community members to express, share and analyse their own knowledge. We are assertive with those who have sent us to learn – making it clear what we have learnt and facilitating positive and constructive change.

PRA has begun and continues to be acknowledged, as a better way for outsiders to learn. In answering the question, ‘Whose knowledge counts?’ it seeks to enable outsiders to learn from rural people and about rural environment and conditions, and to do this in a cost-effective and timely manner. PRA is an **Approach for Shared learning**. It is “An approach (and family of methodologies and techniques) for shared learning between local people and outsiders, to enable development practitioners, government officials and local people to plan together, appropriate interventions for launching and completion of various development projects.”

Participatory Rural Appraisal – A Misnomer:

Participatory more or less.

Rural but also urban uses.

Appraisal but also in identification, Implementation, evaluation, And ESW (Economic and Sector Work).

The term – PRA itself is misleading since more and more PRA is being used not only in rural settings (a recent World Bank study of urban violence in Jamaica used a range of PRA techniques), and not only for project appraisal, but also throughout the project cycle, for Economic and Sector Work (ESW).

Indeed, the term PRA, is one of the many labels for similar participatory assessment approaches, and the methodologies overlap considerably. It is probably more useful to consider the key principles behind PRA, and its “trademark techniques” rather than the name, per se, when assessing its appropriateness to particular situation.

The term PRA also refers to some other research methods and techniques, such as:

- Participatory Research Approaches (PRA).
- Participatory Rapid Appraisal (PRA).
- Participatory Reflection Action (PRA).

There are some other research methods, where participatory approaches are commonly used for conducting social and development research, or to conduct field work for data collection. For example:

- PLA – Participatory Learning Approaches.
- PLA – Participatory Learning and Action.
- RRA – Rapid Rural Assessment.

PRA: Key Principles

Participation	: Local people are partners in data collection and analysis
Flexibility	: Not a standardised methodology but depends on time, purpose, resources, and skills
Teamwork	: Outsiders and insiders, men and women, mix of disciplines
Optimal Ignorance	: Cost and time efficient, ample time for analysis and planning
Systematic	: For validity and reliability, partly stratified sampling, triangulation

1.9 PARTICIPATORY RURAL APPRAISAL IN THE DEVELOPMENT

Note for Counsellors

This section of the unit is based on the application of the PRA tools and techniques for conducting fieldwork and implementation of the development projects. Teaching and learning of the tools/techniques should be done through simulations; practical demonstrations and the field training to apply the PRA TECHNIQUES in the natural and real life situation. To facilitate the students some of the commonly used techniques are discussed here while minor and less used tools should be verbally described and discussed by the counsellors during tutorial sessions or practically demonstrated during the fieldwork.

Grouping of the Key Techniques of the PRA

- a) **Interviews/
Discussions** : Individuals
Households,
Focus groups,
Community meetings
- b) **Mapping** : Community maps
Personal maps
Institutional maps
- c) **Ranking** : Problem ranking
Preference ranking
Wealth ranking
- d) **Trend Analysis** : Historical diagramming
Seasonal calendars

“Basket of Techniques”

PRA offers a “basket of techniques”, from which the most appropriate for the project/ESW context can be selected. The central part of any PRA is semi-structured interviewing—that is, interviewing based not on a questionnaire, but on a checklist of issues, which the PRA team adapts according to the interview situation. The interviewers guide these interviews informally like conversations. While sensitive topics are better addressed in interviews with individuals, other topics of more general concern are amenable to focus on group discussions and community meetings.

During these interviews and discussions, several diagrammatic techniques are often used to stimulate debate and record the results. Many of these visuals are drawn, not on paper, but on the ground with sticks, stones, seeds and other local materials, and then later on transferred to paper for a permanent record.

Mapping techniques, very useful at the start of a PRA activity, involve community members depicting the physical and /or social characteristics of their community and the areas of most importance to them, or key informants mapping the extent to which local organisations interact with each other. Ranking exercises, done either by individuals or groups, reveal the priority problems and preferences of the population, or, in wealth ranking, the local definition and indicators of poverty and the stratification of the community by relative wealth.

Some of the commonly used PRA tools for analyses are being elaborated in the following pages.

Participant observation means, observation coupled with questions of what, why, where, when, who and which type, about the things, activities, persons, relationships, and problems around you. Since this is the first phase for establishing an open and sincere relationship with the local people to gain acceptance, one has to sincerely become a learner, keen and curious to know about local people, their ways, their joys and sorrows. We must become a keen observer of local people.

Observe everything and anything about the life of the people and about their environment and use this data to confirm hypotheses you have about the community.

Ask informal, open-ended questions, so that data are generated and more questions arise out of it. An important aspect to keep in mind is how to select people to approach.

DO's

Ask after health
Introduction
Purpose of visit
Check time suitability
Speak with respect
Cultural feeling
Speak in local language
Stay sensitive to people's environment
Don't interrupt
Use social maps

Find out about: Division of resources; participation; health facilities; local population; information of local NGOs; general information; ranking of problems; find out who can act, local potential; political situation and any other information related to the project activities.

i) Mapping

Maps can be drawn using open spaces anywhere in the village with the help of stones, twinges, etc. Historical landmarking is one way of gaining information.

ii) Transect Walk

As we walk through the village, we mark down anything we see on the way, and ask questions about what we see, who did we meet, what kind of houses did we see, and water routes, etc. This is later on plotted on a paper and thus becomes a transect map.

iii) Venn (Chapati) Diagram/ Institutional Diagram

Village agencies like village council, schools, government offices, etc., serve the people. Draw circles for those that are important, i.e. the size corresponding to the importance of the agency. The central circle represents the village; the length of lines leading from this centre point indicate the effectiveness of service delivery, that is accessibility of the villagers to those resources offered by the agencies. The circles of different sizes indicate the importance of these organisations and agencies to the village.

iv) Pie Diagram or Pie Chart

This is basically a circle with sections, that indicate the proportion, for example, household expenses; how much is spent on medicines, food, etc., to determine where savings can be made. This can also be used to determine household income. It may, however, be wiser to start with expenditures, first. People then are less hesitant to talk about their incomes. Although the information may not be statistically correct, it does give the field worker and the community member an idea of income and expenditure.

v) Problem-Solutions Matrix

Several columns representing problems and solutions can be done with individuals and groups giving a cross-analysis of varying perspectives of existing groups in the community. Since this chart also indicates the efforts people have already made to improve their situation or solve their problems, it is a good tool for planning new action. The suggestions of the community are also represented on the matrix and so act as a guide to the local planning committee. This tool is useful for cross-checking information gathered through other techniques.

vi) Ranking and Scoring

Ranking is the prioritisation of the issues or classification, in a community according to importance, e.g. water, electricity. It can also be done between two or more issues. The community members prioritise the issues by discussing among themselves the importance of each in relation to the next. The problems-solutions matrix can follow this exercise.

vii) Seasonal Calendar

It can be used to determine how time is used, what crops are grown, rainfall, income levels, occupations of women, etc., from season to season. For example, in a seasonal calendar, the daily routine of an old woman and young girl were compared in terms of activities and time spent in carrying out each task in the course of one day.

viii) Mobility Chart or Mobility Mapping

Mobility patterns of a person, for marriage attendance, school, job, travel gives us an idea of movements of people- e.g., frequent visits to a doctor outside the village could indicate the lack of medical facilities within the village. Several movement lines in certain areas could indicate the importance of the person or place to the community.

ix) Some More Techniques

PRA makes use of a wide range of techniques. Besides the above-mentioned tools, in order to familiarise the participants with some other techniques, a list is given below:

- Secondary data review
- Direct observation
- Observation indicator checklists
- Focus group discussions
- Preference ranking a scoring
- Pair wise ranking
- Direct matrix ranking
- Ranking by voting
- Wealth ranking
- Analysis group discussion
- Innovation assessment
- Construction of diagrams
- Modelling
- Participatory mapping
- Historical and future (visioning) mapping
- Social mapping
- Historical seasonal calendar
- Time trends
- Historical profile
- Livelihood analysis

- Flow/casual diagram
- Systems diagram
- Histogram
- Participatory observation – learning by doing
- Oral histories
- Participatory genealogy
- Workshops
- Group walks
- Stories
- Case studies and portraits
- Proverbs
- Indigenous categories and terms, taxonomies
- Rapid market surveys

CAUTION

No PRA will use all of these techniques; the most appropriate and useful set of techniques should be selected. Each time a PRA is done, it should experiment with, invert, and adapt methods as necessary.

1.10 CONSTRAINTS FOR PARTICIPATORY MANAGEMENT AND DEVELOPMENT

The participatory development workers and management experts have normally experienced the following constraints and barriers in the process of participatory management and development work:

- Constraints related to the goal and the objectives of the organisation or project;
- Process versus product;
- Community related constraints or citizen involvement;
- Language, semantics, titles all represent constraints;
- Holistic versus traditional approach;
- Allocation of resources;
- Resources and Processes;
- Constraints related to the project scope; and
- Profit motives.

Other barriers, which slow down or prohibit the participatory management and development, include:

- Psychological barriers;
- Sociological barriers;
- Economic or financial barriers; and
- Technical barriers.

SAQ 4

- i) Explain the following in your own words :
- a) Participatory Rural Appraisal
 - b) Approach for shared learning.
 - c) Participatory Rural Appraisal in the Development.
 - d) Constraints for Participatory Management and Development.
-

Let us summarise what we have studied so far.

1.11 SUMMARY

Recent developments in the development economics have focussed on the enhanced role of good governance and in this respect participatory management has acquired a central position in the development of the rural sector in the developing countries. The participation of the local population in the management of the local problems of developments, particularly their participation in decision making process, has become an effective instrument in the community development leading to complete social transformation. Their participation in solving the local problems through various initiatives is a concerted effort to reduce poverty and improve their standards of living. Participation in the decision making process is an important constituent of the participatory management. This involves the participation of all the stakeholders throughout the project cycle starting from visualisation and planning to the implementation, final evaluation and assessment. However, there are constraints of the community participation and the mobilisation process. The participatory tools to empower communities not only help them to develop sustainable association but also help the field workers to understand and better appreciate local communities, local people and local institutions. Of the various approaches to participatory management Participatory Rural Appraisal (PRA) is quite important; these can be used both in the rural and urban areas not only for appraisal but also for identification, implementation and evaluation of the projects. Participatory Rural Appraisal (PRA) is one of the important tools and method used by the field worker for appraisal and participatory assessment. PRA and its tools are extremely useful to the field worker using participatory management method to achieve community involvement and empowerment.

The PRA also includes research methods and techniques such as Participatory Research, Approach, Participatory Rapid Appraisal, and Participatory Reflection Action. Other research methods where participatory approach can be used, are for conducting social and development research such as Participatory Learning Approach, Participatory Learning and Action and Rapid Rural Assessment.

1.12 TERMINAL QUESTIONS

1. Discuss the philosophy of the participatory approach.
2. Do you agree with the concept that participation is a process of consultation?
3. How can participation be promoted and community involved in the participatory management and development?
4. Describe the barriers and constraints hampering community participation and mobilisation process. What are the ways to overcome such barriers?
5. How do the visual tools and materials help participatory modes of interaction and empowerment?
6. Describe the approaches and methods for participatory management and development. When do you use the participatory approach?
7. Discuss the PRA as a basic tool for participatory management and development.
8. Describe the commonly used PRA tools. How are these tools applied in the participatory development projects?
9. Identify the constraints and barriers of participatory management and development. Can you suggest some measures to remove such barriers?

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UNIT 2 HISTORICAL PERSPECTIVES

Structure

- 2.1 Introduction
 - Objectives
- 2.2 Historical Perspective of the Participatory Management and Development
 - Evolution of PRA
- 2.3 History of Participatory Management and Development Approach in South Asia
 - Introduction of Self-Government System
 - Rural Development Initiatives
- 2.4 Summary
- 2.5 Terminal Questions

2.1 INTRODUCTION

In the first unit you have studied the genesis and concept of participatory management. You have also studied the participatory rural appraisal (PRA) as a tool and method used by field worker for appraisal and participatory management.

In this unit the main focus will be on the explanation of the historical perspectives of the participatory management of development, including its background and evolution of this approach in South Asia. The main contents discussed in this unit are: historical perspective of the participatory management of development, background and evolution of participatory development and history of participatory approach in South Asia.

Objectives

After studying this unit, you should be able to:

- understand and discuss the historical perspective of the participatory management of development;
- describe the background and evolution of participatory development; and
- recall the history of participatory approach in South Asia.

2.2 HISTORICAL PERSPECTIVE OF THE PARTICIPATORY MANAGEMENT AND DEVELOPMENT

Robert Chambers, one of the pioneers of the participatory approaches of management and development, says, in his book:

“Participatory approaches and practices enable workers to express and analyze their multiple realities. Many poor people’s realities are local, complex, diverse, dynamic and unpredictable. For farming, forest-based and pastoral livelihoods they often seek security by complicating and diversifying activities, and multiplying linkages and supports to exploit varied and varying local resources and opportunities.

The values and preferences of poor local people typically contrast with those of the better off, outsiders and professionals. They need and want to be able to take a long view. They can, locally, manage greater complexity. Their values, preferences and criteria are typically numerous, diverse and dynamic, and often differ from those supposed for them by professionals.

Local people are themselves diverse, with sharp contrasts of preferences and priorities, by age, gender, social and ethnic group, and wealth.

Reversals of normal dominance to enhance the diversity and complexity, to empower local people, the poor and other workers, and to privilege their realities, expresses a new paradigm (as discussed in Chapter 9 of his book) and requires changes in the behavior and attitudes of uppers” (Chapter 10, p. 162).

The above analysis of the human society and the socio-economic development perspective based on the previously practiced development models, mainly structured upon the “top-down” approaches, outlines the reasons and factors leading towards the introduction and evolution of the participatory approaches in the management and development.

Referring to the impact and failure of the traditional models of management and development, Daphne Thuvesson (1995), writes, “As the existing system crumbles around us, new and exciting alternatives are sprouting up in the rubble”. Thomas Kohn, wrote in 1962, “Probably the single most prevalent claim advanced by the proponents of a new paradigm (participatory approaches) is that they can solve the problems that have led the old one to crises”.

How far these ‘claims’ have proved successful is under debate for quite some time, but the results of the application of the participatory approaches in management and development and existing realities show that the proponents of the ‘new paradigm’ were not totally wrong in their assumptions.

The 1980s and 1990s have seen a gradually growing criticism on the development models and strategies, which were followed for the past three decades with only minor adjustments. The conventional models and strategies have seen development primarily as a series of technical transfers aimed at boosting production and generating wealth. In practice, conventional development projects usually target medium to large-scale progressive producers, supporting them with technology, credit and extension advice in the hope that improvements will gradually extend to more “backward” strata of rural society. In many cases, however, the channeling of development assistance to the better off has led to the concentration of land and capital, marginalisation of small farmers and alarming growth in the number of land-less labourers, which is simply widening the gap between the rich and the poor.

Over the past ten years, rapid appraisal techniques have gained widespread recognition in development research and in planning and implementation of the development projects. The reason for emphasis on rapidity is that commonly used survey methods and other data collection and implementation techniques applied in the development sector are not only very costly but also take too long for data collection and analysis. Moreover, the participation in data collection and development process is more important because all the key responsibilities are given to outsiders in the conventional research and development project implementation processes, rather than community members and other relevant stakeholders.

The basic fault in the conventional approaches of development is that the rural poor and other marginalised groups of society are rarely consulted and involved in the development planning and usually have no active role in the implementation and monitoring and evaluation of the development activities. A vast majority of the poor have no organisational structure to represent their interests and to protect their rights. Isolated, illiterate or under-educated and often dependent on rural elite, they lack the means to win greater access to resources and markets, and to prevent the imposition of unworkable programmes or technologies.

In most of the countries of South Asia, particularly in the Government sector, the rules of business of development do not focus on the poorest, for conducting various rural development and extension programmes.

Considering the background and evolution of the participatory research, management and development approaches in the academic perspective, the following significant phases can be identified in the formulation and development of these approaches:

- Contribution of the scholars and researchers who were involved in ethnographic research;
- Development and application of rapid assessment procedures;
- Adoption of participatory rapid/rural appraisal techniques;
- Introduction and use of rapid rural appraisal tools and methods;
- A vigorous development and application of the farming system research; and
- Finally, on the basis of the conducted research, recognition of limitations of “green revolution” and transfer of technology

2.2.1 Evolution of PRA

Participatory Rural Appraisal (PRA) evolved from a series of qualitative, multidisciplinary approaches to learning about local-level conditions, environment and local peoples’ perspectives, including Rapid Rural Appraisal, and Agro-eco-system Analysis. The pioneers of PRA development have been NGOs, and agricultural research organisations, and in recent years the World Bank and other donors have begun to adopt PRA methods in their work.

The phases of the evolution of the PRA have been reflected in the following Fig. 2.1

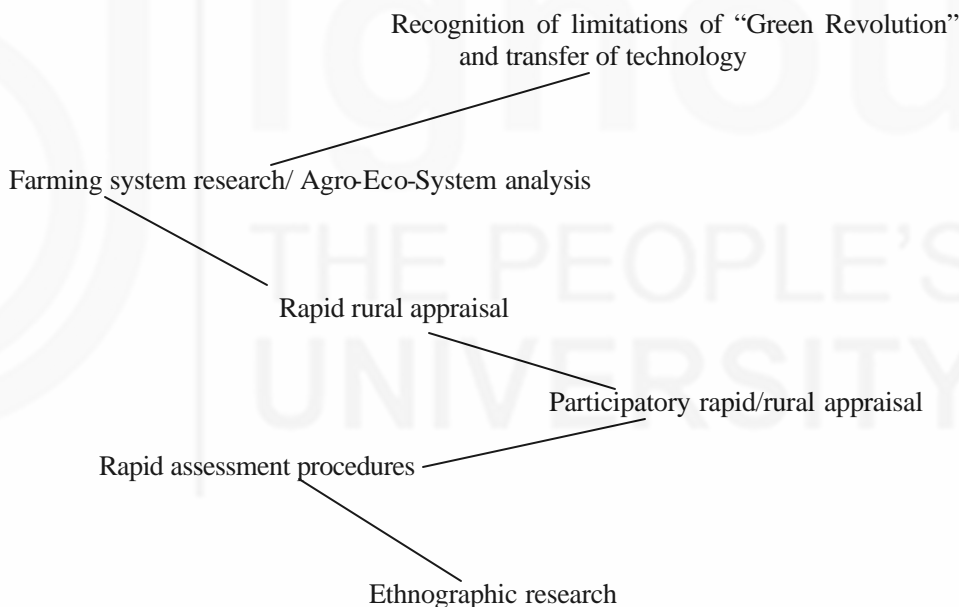


Fig.2.1: Background and evolution of the participatory research, management and development approaches

Indeed, the term PRA, is one of the many labels for similar participatory assessment approaches, the methodologies of which overlap considerably. It is probably more useful to consider the key principles behind PRA, and its “trademark techniques” rather than the name, per se, when assessing its appropriateness to particular situation. For detailed discussion of PRA and its various dimensions please see the section on PRA in Unit 1 of this Block. This is being done to avoid unnecessary repetition.

SAQ 1

- i) Explain the historical perspective of the Participatory Management of Development.
 - ii) Write a note on the evolution of participatory development.
-

2.3 HISTORY OF PARTICIPATORY MANAGEMENT AND DEVELOPMENT APPROACH IN SOUTH ASIA

Rural development has been used mainly as a catchphrase and regarded erroneously as a panacea for rural poverty in Pakistan and many other countries of South Asia and other Third World regions. Many public sector programmes have claimed to specifically address the problems of rural people and their socio – economic development. The experiences and results of the most of these programmes indicate that the benefits have been distributed disproportionately between various rural groups even when the programmes have worked well. Also, these programmes have been ‘prescriptive’ and not ‘participatory’. Most of these programmes were implemented through public sector departments and organisations adopting top-down approaches of management and development.

The prospective beneficiaries, particularly the rural poor, including small farmers and the land less have rarely participated in the planning, management and implementation of various development projects and programmes, mainly run by the respective Governments in Pakistan and other South Asian states. One of the major reasons for adopting the perspective and top-down approaches resides in the structure of social and economic relations in rural areas, where a minority of landlords exercise most of the power at the local level and influence the machinery of the state. The highly differentiated agrarian structure in many areas in which the patron-client relations are visibly asymmetrical-acts as a barrier to the direct participation of a vast majority of the intended beneficiaries in the decision-making processes affecting their welfare and socio-economic development.

One aspect of rural development is political development and the stability of institutions of participatory democracy. Sometimes, it is sought as an end and sometimes as a means to economic growth and social change. In Pakistan in most of the cases, democratic institutions do not exist nor do they emerge spontaneously from traditional political cultures. They need to be deliberately created through conscious and planned interventions. A significant part of this process is the socialisation of rural communities in democratic political behaviour. In this sense, political development requires a full-time and devoted patronage of sympathetic institution builders.

2.3.1 Introduction of Self-Government System

The British ruled the sub-continent for about two hundred years as their colony. This era can be divided into two periods:

- East India Company rule (1757-1857); and
- British Crown rule (1857-1947).

The East India Company ruled the British India exclusively for their military and commercial gains. It was a period of ruthless exploitation and oppression. Two main features of this period are given below:

- No rural development efforts were made in this period;
- The Permanent Settlement (Zamindari System) was introduced in 1793 for facilitating the collection of land revenue. But it depressed the peasants and created a class of landlords. It also affected agricultural production.

A few steps were taken during the later phase of the British rule, from 1880 to 1940, to alleviate some problems of the rural people. But the aim of the British rule was:

- Collection of revenues; and
- Maintenance of law and order.

Four main features of the British colonial administration and their results were:

Features	Results
i) <i>Elitism</i>	: Disparity, privileged few and vast non-privileged.
ii) <i>Paternalism</i>	: Childish dependency; Cult of prayerful petitions.
iii) <i>Neglect</i>	: Meagre allocations for development of rural areas.
iv) <i>Centralism</i>	: Non-participation and Apathy.

The status of the peasants, workers and artisans was weakened due to the oppression and exploitation of the Zamindars (landlords), merchants and moneylenders. Besides, famines prevailed in the land, whereas there was surplus food before the British rule.

The British Government, during its rule in the sub-continent, introduced many political and administrative reforms, including the establishment of Agriculture Department (in 1880); a system for rural self-government (in 1885); and Cooperative Societies for credit (in 1904); and setting-up of Rural Reconstruction Department (in 1938-1944). But these organisations remained largely ineffective and proved to be inadequate for various factors, mainly lack of funds, limited jurisdiction and short term goals, etc.

Lord Ripon introduced a modern framework for rural self-government, with the stated objective of political education only, without focussing on administrative efficiency. However, the implementation of the reforms was entrusted to the provincial governments, which were composed almost exclusively of civil servants.

The circumscribed model of rural self-government was operating throughout the Indian sub-continent. Looking at the areas included in present-day Pakistan, practically in all the Districts of Punjab it had the strongest legal framework (starting from 1883). Some headway had been made in the NWFP and Bahawalpur by 1950. Significant exceptions were the province of Balochistan, all princely states, and the tribal areas. Punjab possessed by far the strongest traditions of rural local government. Not only was this province the first to follow the lead of Lord Ripon's resolution in establishing rural self-governing institutions at the District level, but was also the only province that had established that grassroots village government units known as *Panchayats*, a form of village government that the British had resurrected from India's distant past. However, even in Punjab, over three-quarters of the villages legally eligible for the *panchayat* system was without that system.

2.3.2 Rural Development Initiatives

We will take the example of Pakistan (1947-1971). Like many other countries of South Asia, the role of the socio-economic development professionals, has fallen on the bureaucrats and public servants, who are, neither sympathetic nor capable, any more to act as institution builders. The Pakistani experiment with this model of political development has revealed inherent contradictions and has shown how the rational tendencies of bureaucracy operate to frustrate a major purpose it is supposed to serve, i.e. the development of participatory democracy. Looking at the situation in other countries of South Asian region, almost similar conditions and scenarios emerge during the last few decades, especially in the 1970s and 1980s.

After the creation of Pakistan, universal adult franchise was introduced in place of the extremely restricted colonial franchise. The law of *panchayats* was extended to the whole of Pakistan in 1956. Plans were prepared to make local government laws uniform throughout Pakistan, and an election commission was appointed in order to prepare the ground for holding elections to local bodies. However, subsequent government action was in opposite direction; 24 out of 34 district Councils stood superseded by 1957.

A further complication for the development of rural self-government was the experiment of rural 'community development' called the Village Agricultural and Industrial Development (Village – AID) Programme. The government created a network of new institutions for rural development under Village-AID in 1953; at the same time it withdrew many of the functions that the local government was performing. The *ad hoc* councils created under Village-AID, however, failed to mobilise villagers because they lacked roots in the people, and the programme was discarded in 1961.

Village-Aid was the first programme of the comprehensive village development launched in Pakistan and Bangladesh. This was also the first programme, which laid considerable emphasis on people's participation. But the expected participation could not be achieved due to the lack of proper mechanism. This programme had a short life. It also heavily suffered from departmental rivalries and lack of departmental coordination. However, it left rich experiences for the formulation of future plans and programme.

In 1959, soon after the imposition of Martial Law in Pakistan, the military government introduced the experiment of 'Basic Democracies' as a basis on which local government was to build a positive role in national development. It was also a system of indirect rule.

The experiment of Basic Democracies repeated the folly of placing local governments under the tight control of bureaucrats. Following in the footsteps of their imperial predecessors, the Pakistani bureaucrats again restricted the independence of local councils by remaining as presiding officers, chief executives and the controlling authorities. The experiment of 'guided' democracy, or indirect rule, which ended in 1970, left the local self-government system greatly weakened because it was used to maintain centralised authority and to distribute largesse according to the contributions made to the election of representatives for the Provincial and National Assemblies.

During this period, the respective governments of the South Asian region, including India, Pakistan and Bangladesh introduced a number of rural development initiatives. These efforts created a new environment for rural upliftment through creation of institutional infrastructure and by launching various projects for multi-sectoral development in the region. During this phase the public sector projects also tried to involve the people in the development activities, but the results were not satisfactory to a large extent.

In Pakistan, after V-AID programme and introduction of the system of the Basic Democracies, Rural Works Programme (1963-72), was launched. This programme had origins in a pilot project for community development undertaken by Dr. Akhtar Hameed Khan as Director of the Pakistan Academy for Rural Development in Comilla, presently located in Bangladesh.

The basic purpose of the pilot project in Comilla was to assess the capability of the village people and local government officials to undertake sizable development programmes in their respective areas and to evolve a sustainable working procedure for the implementation and maintenance of the projects.

Some of the other significant steps taken during this period in Pakistan, include the following:

- Union Multipurpose Cooperatives were introduced in 1950 in place of village-based credit cooperatives;
- Zamindari system was abolished through the enactment of the Estate Acquisition Act 1951;
- V-AID programme, which was introduced in 1953, was discarded in 1961, before it could be introduced all over the country;

Genesis and Concepts of Participatory Management

- Nation-building departments were strengthened and field workers were posted at the Block and Union Council level; and
- Several autonomous bodies were set-up with the aim of supplying agricultural inputs, irrigation and flood control, etc.

The Comilla experiment created a new era in the history of Bangladesh and Pakistan, as Akhtar Hameed Khan, in Karachi also replicated this model in the later period, as Orangi Pilot Project (OPP). Besides that:

- A number of other rural development projects were also launched on the basis of this model throughout the country, at various times;
- The concept of Integrated Rural Development came into being through the Comilla Experiment;
- Institutionalisation of the whole process of rural development was the key word of the Comilla Approach; and
- The Comilla Experiment has produced a set of principles and procedures on the basis of which new programmes have been and can be developed for rural development.

India: 1947-1971

In India, the Community Development (CD) Programme was launched in 1952. It was introduced, first as an experimental project, and was made a national programme in 1955 and extended to cover all parts of rural India in a phased manner.

It was basically “government programme with people’s participation”. Community Development (CD) was the first and the biggest programme of comprehensive village development in India, which aimed at multi-sectoral development, through a single agency. By the end of 1966, the entire rural India, (comprising 5.5 lakh villages), was brought under this programme.

This Programme made a deep impact on the rural development in India. Under this programme:

- ‘Panchayat Raj’ was introduced. Elected panchayat bodies were set up at the Block (thana) and Lower (village) levels, which have widened the scope of people’s participation in village development;
- Democratic decentralisation has been effected to a certain extent following the introduction of the CD programme;
- Intensive area development programmes were introduced, which have helped in increasing food production; and
- Several anti-poverty programmes have been launched in different parts of India for socio-economic development of the rural poor.

Pakistan: 1971-Todate

In Pakistan, some of the major programmes introduced during this period include the following:

- The Integrated Rural Development Programme (IRDP), 1972-78, which was based on the comprehensive and systematic (holistic) view of rural development. Two of its programmes were targeted at broadening its popular support in the rural areas: land reform, and a rural development programme, including the IRDP, People’s Works Programme (PWP), and Agro-villas;
- Rural Development Programmes introduced during 1978-88, included: land reforms; reinforcement of five-year development plans. Rehabilitation of local

self-governments in 1979; introduction of Zakat and Usher – religious levies on personal wealth of Muslims; and

- Social Action Programmes (SAP I & II), which were channelled through District Development Committees.

In Pakistan, during the 1970s, the entire local self-government system remained suspended since no elections were held. Local self-government was revived during the 1980's mainly to give legitimacy to an unallocated (military – controlled) government at the Federal and Provincial levels. There have been no elections since 1991, and public officials have replaced almost all of the elected local governments. It is interesting that while there have been four general elections for the National and Provincial Assemblies since 1988, the local self-government system has been allowed to languish without elections. Public servants are running the show in both rural and urban areas, unhindered by elected local representatives.

This brief historical account of local government in Pakistan shows that successive governments have felt obliged to establish some kind of local government institutions to mobilise rural communities. All have sought to achieve this goal under the leadership of professional public servants, but, significantly, none of these attempts have succeeded in producing viable local governments. Above all, rural communities, particularly the vast majority of marginalised and poor people, have not been empowered to take basic decisions at the local (village level) without dictation (or prescription) from their traditional leaders and government officials.

The checkered record of rural self-government in Pakistan has highlighted several inadequacies with regard to direct participation by rural people at the village level in the planning and implementation of rural development programmes and projects:

- The village (*mohallah*) is not the basic unit for the Union Council. The constituency of a Union Councillor does not correspond to the village boundaries: one ward may contain four villages or one village may have four members.
- Since an electoral unit comprises a face-to-face group, local elections have led to strong enmities and division of villages into contending groups. It is almost impossible to have any sort of development cooperation among the village people.
- A local councillor, because of several contestants for the office, usually represents less than half of his/her ward and cannot effectively mobilise the constituency for development purposes.
- A grassroots (village level) organisation, which identifies the real needs and problems of the rural population and which can activate the people to participate directly in development activities, has not been encouraged or supported to develop because of the village rivalries and excessive interference by public officials.

During the same period the phenomenon of participatory development through NGOs and donor driven programmes started and spread rapidly throughout Pakistan. The first two major programmes of this nature were Agha Khan Rural Support Programme (AKRSP), which was started by Shoaib Sultan Khan, in the Northern Areas of Pakistan, and Orangi Pilot Project (OPP), which was launched by Akhtar Hameed Khan, in Orangi Town, Karachi. Both these programmes were launched in the early 1980s. Both the programmes were taken as trendsetters for participatory development, due to the remarkable results and impact.

Later on, especially in 1990s, in Pakistan, a series of rural support programmes were started, following the AKRSP model, at national, provincial and local levels. All of these programmes were of the participatory nature and based on the community organisation and mobilisation models.

Besides these rural supports programmes, in Pakistan, many other projects of the social sectors, also adopted participatory development and management approaches

and involved the communities at various levels, for implementing development projects. These projects, leaving aside a few, have proved more effective, productive and result oriented, as compared to the rural development projects of the past, which were implemented through top-down approaches.

Bangladesh

In Bangladesh, during the post 1971 period, the following significant developments were recorded in the community based rural development projects and participatory management and development sectors:

- All the national programmes of rural development introduced in the 1960s were continued;
- Elected bodies of Union Parishad were suspended for over three years, which affected the local councils and their role in rural development;
- The First Five year Plan (1973-78), Two year Plan (1978-80) and Second Five year Plan (1980-85) were developed and the practice continued in the following years. But the allocations for the rural areas were meagre;
- Some scattered efforts to develop the marginalised groups were also done;
- Much emphasis was laid on “self-help”, “self-reliance”, and “People’s Participation”;
- A number of programmes, like Swanirvor (self-reliance); Canal Digging through Voluntary Mass Participation; Youth Complex; Mass Literacy; Jatiya Mahila Sangstha and Gram Sarkar were introduced during these years and were discarded after some period.
- Grameen Banks were also introduced for the alleviation of rural poverty;
- A large number of NGOs started working in the field of rural development during this period;
- The scheme of Administrative Re-organisation was introduced in 1982 with a view to developing the Block as the seat of decentralised and coordinated rural administration. Upzilla Parishad was entrusted with planning and implementation of local level plans for village development;
- Bangladesh Rural Advancement Committee (BRAC) was established for the grass-root participatory development; and
- A vigorous family planning programme was launched to control the population growth and to enhance the community development process.

All these initiatives, especially the Grameen Bank micro- credit programmes and effective intervention made by the BRAC, produced positive and fruitful results. These programmes promoted the participatory development and management process and helped to reduce the rural poverty through community mobilisation, social organisation, micro credit, skill enhancement and enterprise development programmes in the rural and semi – urban areas of the country.

India: 1971- Todate

In India the Community Development Programme continued to function throughout the country in the post 1971 period, with the same objectives, spreading its scope and area, for helping rural poor and reducing their poverty through multi-sectoral, participatory and community based development initiatives.

During this period, simultaneously, in India, a large number of NGOs have started their activities, to promote the participatory development process and for addressing the poverty issues, especially in the rural and semi-urban areas of the country. The interventions, made by these NGOs, are not only supplementing the government

intervention in the socio-economic sectors, but also contributing remarkably in the poverty reduction and enhancement of the living standards of the poor and marginalised groups and communities.

Looking at the trends of and the interventions in the rural and participatory management and development, in the South Asian countries, and analysing, especially, the socio-economic development initiatives taken during the 1980s and 1990s, it may be realised that this trend would be further multiplied and replicated in all socio-economic projects and sectoral development initiatives during the 21st century. It is hoped that the replication and multiplication of these experiences will not only facilitate the planning and implementation of the development projects at the grass root level, but also help in promotion of the quality of life through poverty reduction, skills and enterprise development, enhancing the income and access to the social services for the poor.

SAQ 2

- a) Explain the following in your own words :
- i) Development perspective in South Asia .
 - ii) Self-Government System.
 - iii) Rural Development Issues .
-

Let us summarise what we have studied so far.

2.4 SUMMARY

This unit has highlighted the participatory management in its historical perspective in relation to the problems of rural people and their socio-economic development. The focus is on the South Asian countries with an intensive and extensive details about Pakistan. Prior to 1947, the British colonial rulers in India hardly paid any attention to the rural development. Their primary aim was to exploit and oppress people, and collect revenue. Hardly any money was earmarked for rural development. Whatever institutional structures were created for rural areas remained non-functional because of the inadequacy of funds alongwith other constraints. India and Pakistan had their respective experiences with the rural participation and local self-government in the post 1947 period. Pakistan started with self-government with the law creating Panchayats way back in 1956 followed by village Agricultural and Industrial Development; Basic democracies; and guided democracy; Integrated Rural Development; Land Reforms; People's Works Programme; Social Action Programme; and District Development Committees. However, most of the rural development initiatives did not ameliorate the conditions of the poor because of the negative role of the bureaucracy. The experience with local self-government system has remained in practice dysfunctional and most of the time remained suspended or inoperative and was allowed to languish while public servants administered both the rural and urban areas.

India has had a mixed track record of rural development. It started with the launching of Community Development in 1952. Some of the important initiatives have been: Panchayati Raj; Several Anti-poverty programmes; Indira Yojana, Integrated Rural Development; and Food for work programmes etc. Community Development programmes have been functioning throughout the country. Development of rural poor, poverty reduction programmes and mutli-sectoral participatory and community based development initiatives have been actively initiated. In this whole process of rural development programmes , NGOs have played a very important role.

However, the rural poverty eradication programmes have had marginal effect in the poverty removal. Bureaucratic bottlenecks, corruption etc. have belied the goals set forth in most of these programmes aimed to bring social and economic justice to people. Zamindar i system, though has been abolished in law, in practice, its

implementation has been circumvented by various ways. Rural debt, rural poverty, farmer deaths, landless labourers are some of the glaring problems. With Globalisation and India's commitments under WTO to liberalise the agriculture sector, it would have serious implication for the rural poor, food security and agriculture sector in general.

Bangladesh had its own experience after its emergence as an independent state in 1971. There have been significant developments in rural developments projects and participatory management and development with a focus on self-rule, self-reliance and people's participation. Its important programmes have been: Canal digging through Voluntary Mass Participation, Youth Complex; Gram Sarkar; Jatiya Mahila Sangathan, Grameen Bank, Bangladesh Rural Advancement Committee (BRAC) etc. Programmes for rural upliftment have continued through successive plans. However, Bangladesh is one of the least developed countries and is faced with serious problem of poverty, particularly rural poverty.

2.5 TERMINAL QUESTIONS

1. Describe the concept of the 'New Paradigm' in the light of the philosophy of Robert Chambers.
2. Discuss the phenomenon of transition from the conventional to participatory approaches.
3. Elaborate the background and evolution of participatory development.
4. Trace the evolution of the PRA.
5. Comment on the usage of PRA and its "trademark techniques".
6. Do you agree with the notion that Participatory Rural Appraisal is a misnomer?
7. Describe the process of inculcation of Participatory Techniques in the Development Projects.
8. Write a comprehensive note on Rural and Participatory Development Perspectives in South Asian countries like India, Pakistan and Bangladesh.
9. Comment on the introduction of the Self-Government System and other measures for Rural Development during the British Period.
10. Highlight the Rural Development initiatives taken in South Asian countries during 1947-1971.
11. Discuss the Participatory Development initiatives taken since 1971 in South Asian countries.
12. Comment on the future of the participatory approaches of management and development in South Asia.

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UNIT 3 STATE POLICIES AND PROGRAMMES: ENVIRONMENTAL CONSERVATION AND SUSTAINABLE DEVELOPMENT IN PAKISTAN

Structure

- 3.1 Introduction
Objectives
- 3.2 Policies and Programmes of Pakistan
- 3.3 National Conservation Strategy
Implementation Arrangements and Strategy
Operating Principles
- 3.4 Community Organisations and NGOs
- 3.5 Institutional Arrangements
- 3.6 Summary
- 3.7 Terminal Questions

3.1 INTRODUCTION

In the previous unit we have discussed the role of participatory management in its historical perspective in relation to the problem of rural people and their socio-economic development. In the present unit we will deal with state policies and programmes relating to environmental conservation in terms of sustainable development.

The most striking feature of the environment from the institutional point of view is that it is a common property. Community institutions are institutions that manage common property. Yet most conventional thinking about resource management takes place at two levels – the individual household and the higher, usually at the governmental level. Correspondingly, current policies and projects focus on the individual and public sector management of environment, admitting private and state property but ignoring common property. One result of such an approach has been known for several decades as ‘the tragedy of the commons’ – the unsustainable use of common resources. The second result is that the strategy is inequitable, since the poorer segments of society depend on common property for substantial parts of their livelihood. In this unit we will examine. The present policies and programmes of Pakistan, Pakistan’s National Conservation Strategy, Elements of National Conservation Strategy (objectives, operating principles and instruments), implementation arrangements, action agenda and implementation strategy, co-operation of community organisations and NGOs, structure of community organisations and support systems.

Objectives

After studying this unit, you should be able to:

- understand the approaches to development and natural resource management in Pakistan;
- understand the managerial and representative vs. participatory community management;
- describe the role of federal government, provincial governments, local bodies and NGOs; and
- discuss institutional arrangements and financial arrangements regarding community organisations.

3.2 POLICIES AND PROGRAMMES OF PAKISTAN

Exploitation of the earth's resources has increased at an unprecedented rate for the last two centuries. In the recent decades its rate of exploitation has reached unparalleled level. Human activities are now affecting some of the most basic climatic and biological cycles of the planet. Pakistan, with a per capita gross national product just one-ninth the world average, is neither a major global polluter nor a large consumer of resources.

It is commonly noted in Pakistan that traditional institutions, for the management of community resources and common problems, have disintegrated or become weak. There is a direct relationship between these two trends – that resources and infrastructure are being destroyed because the social organisation to manage them no longer exists. While traditional institutions for resource management have become weak, new ones have not been effective. Many specialised agencies have been created by the Government and the local government have been strengthened in the 1980s but little intervention has occurred that could qualify as institutional development at the village or neighbourhood levels. The contribution of the private sector to environmental management in Pakistan is regrettably little: a few consulting firms are active, mainly in the fields of engineering and town planning but the local expertise is limited to pollution control.

The government institutions for natural resource management are sectorally organised, in line with the general arrangements for administration and development between the Federation, provinces and local bodies. Co-ordination mechanisms for economic planning and project approval are well established, especially for large infrastructure projects. But generally speaking, the ministries and attached departments have limited capacities for analysis of environmental impacts, many of which are cross sectoral and agencies are not oriented towards joint facilitation of local development. Much more collaboration and coordinated extension is needed to promote the long-term rational use of resources.

Pakistan has no overarching policy that has been primarily and specifically conceived in the interests of conserving and developing its natural resources sustainably. The Perspective Plan (1988-2003) and Five-Year Plans make scant explicit references to the environment and natural resources. Yet there are complex and forceful linkages between economic policies, instruments and allocations and the conservation or degradation of the environment. In the absence of an explicit policy framework, economic and sectoral policies have worked at cross-purposes with respect to environmentally sustainable development and management.

Although specific environmental enactments are few and insufficient, Pakistan is fairly well endowed with 'incidental' environmental legislation – on land use, grazing control, forest conservation, parks and wildlife, fisheries, mineral development, water and air quality, noise, toxic substances, solid wastes, preservation of antiquities and special premises and public health and safety. As they were not enacted with a view towards environmental protection and resource conservation, these laws lack a proper definition of the environment, quantifiable standards and implementation tools, leading to sporadic and arbitrary enforcement.

In many cases, operational regulations under the laws have not been prescribed, penalties are punitive in character and inflation-depreciated fines are not regularly revised, all of which encourage corruption. Administrative agencies and the judiciary lack awareness of environmental hazards and risks. Above all, there is a lack of respect for the law and a lack of political commitment to enact and enforce it.

3.3 NATIONAL CONSERVATION STRATEGY

The Pakistan National Conservation Strategy (NCS) is a broad-based policy statement aimed at achieving environmentally sustainable economic and social development in Pakistan. The NCS was developed over a nine-year period (1983-1992) through the collaborative efforts of the IUCN and the Government of Pakistan. The NCS development process included extensive consultations with thousands of experts, interested individuals, communities, NGOs, and government agencies. The final product, according to several observers, is outstanding, in terms of both comprehensiveness and quality.

The NCS specifies the basic guidelines for an integrated effort aimed at protecting the environment and natural resources of the country. This broad framework provides a comprehensive point of reference for all agencies, departments, private sector companies, financial institutions and donor agencies for undertaking systematic efforts to bring about an effective change for sustainable development.

To be successful, large and complex endeavours require explicit objectives. The National Conservation Strategy (NCS) has three objectives:

- i) conservation of natural resources,
- ii) sustainable development, and
- iii) improved efficiency in the use and management of resources.

Although these objectives are comprehensive, their full implications are not necessarily evident at the outset. Operating principles identify the methods and approaches that will enable these objectives to be reached. The three main operating principles of the NCS are to:

- achieve greater public partnership in development and management,
- merge environment and economics in decision making, and
- focus on durable improvements in the quality of life.

Moral persuasion and leadership, social sanction and economic, legal and regulatory instruments of change – all with their various strengths and limitations – will have to be applied to bring about a hierarchy of value, knowledge, institutional change and technical innovations. Two key value changes needed are restoration of the conservation ethic and a revival of the community spirit.

3.3.1 Implementation Arrangements and Strategy

The National Conservation Strategy is a call for action addressed to senior and local governments, businesses, NGOs, local communities and individuals. But the sustainable development of Pakistan is a huge multi-generational endeavour. Where should we begin? And how should we proceed? It is necessary to set priorities and to begin implementation from undisputed resource management and conservation domains. Yet the priority actions must be those with significant wider economic and social ramifications that would not happen by themselves owing to market or institutional failure. Strategy implies a combination of hitherto desperate elements to achieve synergy and understanding.

The NCS seeks to transform attitudes and practices and to influence national consumption patterns, but it can only be one contributor to inculcating sustainable and socially productive behaviour. Development will profoundly change the nature of Pakistan in the coming decades. The NCS focuses on the influencing investment choices, which are more flexible than the consumption patterns. More particularly, it is designed to take leadership in investments relating to the maintenance of natural resources and to increase the efficiency with which critical non-renewable resources are used. This is literally an investment in having a future, as opposed to investments for a future return, yet it can pay well in economic terms.

3.3.2 Operating Principles

The three objectives of NCS are comprehensive. Their full implications may not necessarily be evident at the outset. Operating principles identify the methods and

approaches that will enable these objectives to be reached. These principles should be compatible with the objectives and they should illustrate, in their application, the approach of the NCS.

The three main operational principles of the NCS as mentioned earlier are discussed in detail as below:

Greater public partnership in development and environmental management

This operating principle has four components, which may also be seen as four sequential measures, ranging from a general base of more awareness to linking channels created and institutionalising participative community management.

- Develop greater public awareness and appreciation of the need for conservation of natural resources and the quality of the environment, using mass media as well as the formal education system;
- Promote environmental NGOs and participative community organisations that can implement environmental conservation programmes and consciousness raising events to achieve greater public awareness and understanding of the importance of environmental conservation and sustainable development;
- Provide for a two-way flow of communication between government, community organisations, and NGOs on matters relating to the conservation of nature and natural resources; and
- Identify and develop an institutional framework that will enable people in urban neighbourhoods and in villages to identify, design in detail, and implement projects and programmes that they desire and they will maintain or improve the quality of their community and its environment. The structure and relationship of this community-oriented framework to other public and private institutions should be designed to maximise co-ordination and co-operation and minimise conflict, since all institutional components have important roles to play and are essential to effective sustainable development. This is the essence of the full partnership between government and NGOs that the NCS seeks to foster.

A merger of environment and economics in decision-making

As economic development and ecological effects are bound together in the workings of the real world, their consideration needs to be similarly integrated in the decision-making. This will require changes in the attitudes, objectives and institutional arrangements at every level:

- Make the central economic planning and sectoral development agencies at the federal and provincial levels directly responsible for the maintenance of ecological systems and processes and for the sustainable use of natural resources. Specialised environmental agencies have a supporting role to play in the provision of technical expertise. But the mainstream departments and agencies alone should be held responsible for the impact of economic development on the environment.
- Set up a programme to identify the minimum requirements in establishing an environmental quality baseline and begin continuous monitoring of the parameters selected.

Durable improvements in the quality of life

To provide a focus that ensures improvement as durable and continues in perpetuity, it is important to match improvements in the quality of amenities and infrastructure with increase in the efficiency of natural resource use and the quality of human capital.

A major threat to the ability of the natural resource base to sustain Pakistan's population and an improved quality of life is the rate of population growth. Thus an important operational principle of the NCS is to reduce the rate of population growth

as quickly as possible. These initiatives entail a significant shift in government development allocations.

Improvements in the quality of life in human settlements must involve the efficient use of raw materials and energy. Their uses should be based on technologies with the greatest practicable recovery and recycling of materials and on the adoption of natural processes (e.g., biomass, direct solar, wind and wave power) as a replacement, complement, or supplement to the use of fossil fuels.

Expenditures required for restoring ecosystems devastated by pollution typically exceed by at least a thousand fold the costs of pollution abatement measures. Durable improvement in the quality of life requires control and prevention of pollution.

Preference should be given to the developments that rely on biological and natural processes rather than engineering or structural works, which are intrinsically capital – or-energy intensive. Biological solutions are frequently slow to establish and therefore need to be planned. Once established, however, they have the ability to operate on low-cost or free inputs, to be self-maintaining and self-replicating and to have increased rather than depreciated value and productivity over time.

SAQ 1

- i) Explain various approaches to development and natural resource management in Pakistan.
 - ii) Write a note on the following in your own words:
 - a) National Conservation Strategy.
 - b) Implementation Arrangements and Strategy
 - c) Operating Principles.
-

3.4 COMMUNITY ORGANISATIONS AND NGOs

Three broad approaches to development in Pakistan exist:

1. The departmental approach;
2. The representative approach; and
3. The participatory approach.

1. The departmental approach

The departmental approach is often used for building infrastructure, such as schools, hospitals, roads, or a dispensary. It continues to be pursued by various government developmental agencies. It is important to note that these activities are usually carried out without the involvement of the people for whom the services are provided. This unfortunately leads people to think that the facility is a gift of government; they are not concerned with the cost of providing the infrastructure or with its operation and maintenance, and end up feeling dependent on the government. Another serious problem with the departmental approach is that it does not allow communities to incorporate changes according to their needs in the blueprints developed by the line agencies technical experts. There is no mechanism, for example, to either construct or maintain irrigation water channels outside the administrative control of the irrigation department.

2. The representative approach

Political representation is essential for many purposes, but it is not a substitute for participation by ordinary citizens in the process of development. Representatives cannot plan and implement the day-to-day economic activities of communities. They cannot substitute, for example, for farmers in the organisation of production, marketing, input supply, credit, and community resources and infrastructure. At the same time, representative approaches are more often than

not divisive and political rather than consensual, whereas consensus is a prerequisite of development at the community level.

The departmental and representative approaches are not successful in reaching people and solving their problems. This is not due to their inefficient working but to their implementation structure and mandates. The Federal and provincial governments have established specialised agencies for training, credit, input supply to create broad institutional base at the grassroots level. At the same time, development agencies are organised on a sectoral or functional basis instead of following an integrated multifunctional approach.

3. The participatory approach

To make optimal use of grassroots opportunities, it is important that the villagers and city dwellers be provided with an environment in which they can establish their own organisations, identify their priorities, organise their resources, manage their development agenda, and forge necessary links for the on-going technical and financial assistance by outside agencies. The systems of local government, development administration, and resource mobilisation are all incomplete without participatory community organisations.

The most important element in energising this local development is a change in the role of governmental departments; the government needs to recognise the potential role of local communities in mobilising capital resources and undertaking managerial tasks for resource management in keeping with the goals of the NCS. It needs to pay considerable attention to people's participation in their work, and to appreciate that community organisations and people's initiatives can complement the governmental initiatives in difficult areas. The government needs to accept and engage the community as partners in development, not competitors, for government alone can never succeed in ensuring the sustainable development.

The government does, however, have an important role in facilitating and encouraging the development of community initiatives and community organisations. It can create an environment in which people are encouraged to find solutions to their problems. It can remove obstacles but at the same time requires mechanisms for engaging the resources, ingenuity, and sense of ownership of communities, and a much greater understanding of people's priorities.

Overall, the provision of intercommunity infrastructure will remain the responsibility of the Federal, provincial, and local bodies. In the first phase, community organisations should emphasise development programmes within their own communities. In the long run, after gaining experience with small schemes, these groups can also play a role in the construction and management of intercommunity infrastructure.

The managerial approach is followed by most of the line agencies and development projects in Pakistan. The participatory approach is being followed by the Pak-German Integrated Rural Development Project in the NWFP and Balochistan, the Agha Khan Rural Support Programme (AKRSP) in Chitral and the Northern Areas and the Orangi Pilot Project in Karachi (See Box 1). Participatory models are also being tested by the Pak-Holland PATA Irrigation Project and the Pak-Swiss Kalam Integrated Development Project in the NWFP and the by the Hyderabad Development Authority's Khuda Ki Basti, a low-income housing project. It is clear that these initiatives are recent and few. Beyond these formally recognised ones, however, the participatory mode is common in many villages, where farmers may get together to scrape and maintain access to a pucca road or to run a custom-based water turn system.

The representative approach is followed in all programmes that depend on the public representatives (including Members of National and Provincial Assemblies, District and Union Councillors and political party office holders)

and in all models of organisations (including official co-operatives and Water User Associations) in which decision-making powers are vested not in the general body but in the executive committees, management boards etc.

All the three approaches – managerial, participatory, and representative – should be part of environmental management as none is a perfect substitute for the other. However, their domains have to be understood on the basis of their efficacy and their impact at various scales and levels.

Activity 3.1

What are the state policies and programmes of your country regarding participatory management of conservation and development (community mobilisation, participation and organisation)?

Box 1

An example of successful participatory management

The Agha Khan Rural Support Programme (AKRSP) in the three northern districts of Gilgit, Diamir and Chitral is a prime exponent of the participatory approach.

Some 1100 village organisations (VOs) now participate in AKRSP. The standard operating procedure for the establishment of VOs is to have the village to identify a productive infrastructure project. The nature of the project is less important than having it as the catalyst around which the participatory organisation can form. It shows villagers as to what they can do when they organise themselves and make use of their talents. The programme includes sending villagers away on courses that teach them special skills – veterinary or irrigation techniques, tree planting, basic management principles or accountancy, or any skill that they lack and are willing to learn on a short course at a training centre.

One important feature of the AKRSP approach is the insistence that the village organisation collect money from each member, no matter how impoverished, to help build a source of credit that the VO can use for whatever purposes it wants without having to satisfy the criteria and hurdles imposed by banks or governments. It also gives the members a feeling of participation in the VO and, since it is their money, they will be inclined to spend it wisely.

AKRSP understands well the limits of community-based management systems (CBMS). The system works best among small farmers and in small groups. According to AKRSP: “maximum workable group size is 100; beyond that it is difficult for groups to manage their activities and decisions, unless VOs or CBMS come together along traditional organisational structures. The implication is that for activities such as range management or forest management, involving activities beyond the scope of individual CBMS, some form of representational system is inevitable.”

SAQ 2

- i) Explain the following in your own words:
- The departmental approach.
 - The representation approach.
 - The participatory approach.

3.5 INSTITUTIONAL ARRANGEMENTS

A satisfactory framework for collaboration between government and community organisations involves agreements on the priorities for sustainable development; on the allocation of resources between government and community organisations on the

agreed-upon priorities; on the implementation roles for the government, and on the approach to be followed in promoting community organisations.

The NCS envisages two sets of priorities, with an implementation mechanism corresponding to each:

- Creation of institutions for common resources: This priority will be addressed by NGOs through the support and collaboration of Federal and provincial governments, local bodies, and other NGOs. These NGOs will be registered under the laws of Pakistan and should complement and supplement the policies, programmes, and new initiatives of the government.
- Other programmes for natural resources and urban waste management: These priorities will be addressed by the Federal Agencies, provincial line agencies and local bodies, working with the new institutions for common resources.

These implementation mechanisms differ in their relationship to the government machinery, but they are expected to follow a common arrangement for the allocation of funds and evaluation of performance, and a common approach to community organisation – the participatory approach to development.

The most important function attached to community organisations is to fill the gap that exists between communities and government in formulation, planning and implementation of projects related to common resources. As these organisations have to function and collaborate on two fronts, they should be created by arrangements through which both communities and the government can own them. Community response towards these initiatives depends greatly on the organisation's success at improving the conditions. The government has to take the first step towards the creation of these organisations with the help of NGOs, and should continuously facilitate their success by providing financial support and policy guidelines.

Role of Federal Government

Three main functions should be handled by the Federal government:

- ❖ formulation of policy guidelines,
- ❖ financial allocations, and
- ❖ provision of an enabling framework.

The Federal Agencies that can perform these functions, in co-ordination with the concerned ministries are the Economic Affairs Division (EAD), Environment and Urban Affairs Division (EUAD), and the Planning Commission, especially its proposed Environmental Cell, the ministries, will send proposals of project in which community participation seems necessary to EAD, EUAD, and Planning Commission to formulate the Policy guidelines, enabling framework, and financial allocation for the community organisation.

Role of Provincial Governments

All the provincial departments should collaborate and co-ordinate with the community organisations on the activities and projects related to natural resources conservation and environment as a whole. Many departments have extension teams to disseminate their specific messages to the communities. These departments can pool their human resources and share their experiences with community organisations. Proper co-ordination between these extension teams and community organisations will be needed to develop an integrated approach for the organisation and development of communities. Provincial governments will also make some financial allocations to community organisations.

The other important function of the provincial governments is to establish provincial environmental councils (PECs). Sitting on these councils will be senior officers of the provincial governments, heads of line departments, local bodies, and NGOs. Their main function will be to monitor and evaluate the performance of community

organisations, line departments, and NGOs. Evaluation reports will be submitted to the provincial governments and published for the general public.

Role of Local Bodies

The most important NCS function for local bodies is to develop a working relationship with the community organisations. While, preparing district development plans, community organisations should be consulted about the incorporation of environmental concerns. Local bodies will also allocate some financial resources to community organisations from their annual development funds.

Role of NGOs

A wide range of NGOs work in different parts of Pakistan on different subjects, and they have an extremely important role to play in creating community organisations. The groups can share their experiences and design joint ventures for broadening their scope of activities. This support is essential as the Federal provincial governments work to foster community organisations as part of the NCS.

SAQ 3

- i) Explain the following in your own words:
- a) Role of federal governments.
 - b) Role of provincial governments.
 - c) Role of local Bodies.
 - d) Role of NGOs.

Structure of Community Organisations and Support Systems

Community organisations seek to help people in rural villages and urban neighbourhoods to undertake development on the basis of participation. Villages and Lane Organisations (VOs and LOs) are coalitions of residents whose common interests are best served by organising as an interest group. The VO/LO will identify the project that would benefit most of the residents and could be implemented by the residents themselves. In return for initial project funds, the VO/LO members commit themselves to the discipline of organisation, collective savings, training in use of new technologies, and implementation and maintenance of the project. All members of the organisation are required to attend weekly or monthly meetings where work done on a project is reviewed, plans are made for the future, and savings are deposited by all members; in short, the VO/LO would be the executing agency for all the village and lane-level projects.

VOs and LOs can be created by directly investing in the Productive Physical Infrastructure, as was done for the creation of Water Users' Associations. A support structure is crucial for these new organisations, lest they collapse after the consumption of seed capital. Two tiers of support structure are proposed – district/city programme offices (DPO/CPO) and technical support units (TSU). They need to organise communities so that they can generate their own revenue through savings to solve their common problems.

Five to fifteen technical support units per district and 5 to 25 per city should be established. Their most important function is to induce the formation of VOs and LOs as the primary vehicle for all development activities. Their responsibilities will include conducting physical infrastructure surveys, collecting information on the status and use of natural resources, performing land use surveys and budget estimates, and planning. One TSU will cover about 100 VOs/LOs.

One DPO per district and one CPO per city should be established. These will perform all programme planning and management functions, and will provide initial funds to a VO/LO as a grant. The main responsibilities will be project formulation; monitoring and evaluation of research, training, and development; co-ordination with Federal Agencies, provincial line departments, local bodies, and NGOs; and supervision and coordination of project implementation in the field.

Financial Arrangements

Rural development in Pakistan is highly subsidised, yet the credibility of existing community organisations has been questioned. In this environment, community organisations have to establish their credibility rapidly; they have to recognise that they will be operating in a buyer's market. They will need the resources with which to see/approach people through new staff, and institutional partners. The demonstration of new approaches will need to be subsidised which should be considered as an investment in institutional development at all levels. With these subsidies, community organisation should aim at bringing about behavioural change. But subsidies will need to be phased out over time as the organisation's approach becomes acceptable, and as they enter the seller's market. The NCS financial arrangements for community organisations are designed with these guiding principles in mind. Continued funding will be contingent on the performance of the community organisation.

The best available example of a technical proposal for the creation of a community organisation is that of the Sarhad Rural Support Corporation, NWFP. Its feasibility study was prepared by a forum of NGOs, senior Ministers, civil servants, donors, and prominent individuals in both Federal and Provincial government. The Aga Khan Rural Support programme served as the focal point for the documentation and preparation of the proposal. The NCS proposes that the Federal government should identify such potential NGOs in different parts of the country that can serve as local points for the preparation of such proposals. Finances for such exercise could be provided by the Trust for Voluntary Organisations (TVO) under the EAD.

Finances required for the creation of community organisations will be the responsibility of the Federal and Provincial governments. Once the organisations are created, they can raise their funds independently from EAD, Provincial Planning and Development departments (P&D), local bodies, and local and international donor agencies.

At the Federal level, these finances can be arranged from:

- the EAD resource pool for NGOs (project-specific bilateral funds for NGOs), and
- the Trust for Voluntary Organisations (funds received from donors without any project title but earmarked for NGO development).

Annual revision to determine the future allocation of Federal funds can be conducted by EUAD and the Planning Division, with the help of local government rural development, provincial P&D, and social welfare departments, and of the provincial environmental councils; the TVO may also want to use these review reports while considering future financial allocations.

At the provincial level, community organisations can raise funds from the provincial P&D and social welfare departments and of the Provincial Environmental Councils (PEC). The result of annual PEC evaluation reports should determine the future allocation of funds by provincial governments and P&D.

Local Bodies should also allocate some funds for community organisations according to the requirements of their development projects. At this level, allocation of funds will be monitored by the district councils.

An independent source of funds for community organisations is domestic and international donor agencies. The only condition should be that the organisations show these grants in their total receipts, so that the public sector evaluation bodies can do comprehensive evaluations.

SAQ 4

- i) Explain the following in your own words:
 - a) Explain the structure of community organisation.

b) Financial arrangements.

Let us summarise what we have studied so far.

3.6 SUMMARY

Natural resource and environmental management issues are complex. The forms of organisations most appropriate to sustainable development are intensely debated and controversial. However, a broad map of the applicability of various institutional forms and instruments at the farm-household, community, departmental, provincial and national levels show that managerial, representative and participatory approaches are required. Insofar as there is a vacuum at the grassroots level in terms of viable community-based management systems, a priority for the National Conservation Strategy should be given to promote such participatory community management.

3.7 TERMINAL QUESTIONS

1. Explain the policies and programmes of Pakistan with regard to environmental conservation.
 2. Explain the objectives and principles of National Conservation Strategy.
 3. Explain the role of federal government.
 4. Discuss institutional financial arrangements regarding community organisation.
-

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UNIT 5 PARTICIPATORY APPROACHES TO ENVIRONMENT AND DEVELOPMENT

Structure

- 5.1 Introduction
 - Objectives
- 5.2 Participatory Approaches
- 5.3 Participatory Development
 - Principles of Participation
 - Constraints to Participation
- 5.4 Community Organisation
 - Advantages of Organisation
 - Disadvantages of Not Getting Organised
 - Functions of Organisation
 - Salient Features of Community Organisation
 - Threats to Community Organisation
 - Community Organisation and Women
- 5.5 Significance of Participatory Approaches in Empowering People for Sustainable Development
- 5.6 Participatory Methodologies in the Empowering Process
- 5.7 Summary
- 5.8 Terminal Questions

5.1 INTRODUCTION

In the first block, we have discussed the concept of participatory management and its genesis. In the first unit of Block 2, we will examine the participatory approaches, participatory development, principles of participation, community organisation, participatory learning, significance of participatory approaches in empowering and people for sustainable development.

Over the last few years, words such as ‘participation’, ‘empowerment’, ‘bottom up planning’, and ‘indigenous knowledge’ have become increasingly common in the world of rural development. Such is their popularity that it is now difficult to find a rural based development project which does not, in one way or other, claim to adopt a participatory approach involving bottom up planning, acknowledging the importance of indigenous knowledge and claiming to empower local people. It is increasingly possible to talk, at least provisionally, of an emerging common orthodoxy in rural development, which is shared by a range of practitioners working in the bilateral, multilateral and non-governmental sectors of the development industry.

Objectives

After studying this unit, you should be able to:

- appreciate the most developed approaches and techniques in Participatory Rural Appraisal (PRA);
- explain five streams standing out as sources of PRA and between which insights, approaches and methods are continuously flowing;
- explain as to why a participatory approach is needed in development;
- explain the role of participation in development; and
- discuss the use of participatory methodologies in the empowering process.

5.2 PARTICIPATORY APPROACHES

For more than two decades, development theorists and practitioners have talked about the need for participation of ordinary people in development. In much of rural development, however, thinking about participation has remained at a very idealistic and ideological level. It lacks analytical tools, practical methods and an adequate theoretical framework. So it has degenerated into a kind of propaganda – words to convince audience, NGOs. Governments have recognised the necessity of involving people in development activities. Sometimes it is the participation of particular categories of people which has to be demonstrated – women, the poorest of the poor, and minority groups. But participation is usually asserted, not demonstrated. Few in the audience have time to examine the indicators, which are in any case poorly developed. Indicators of how participation happens and its effects on participants need to be developed and applied.

Several dimensions of empowerment have been identified, which could help in the development of indicators about participation: a good starting point for developing indicators about participation. Some of them could be: organisation of under privileged; knowledgeable about their social environment; development of their self-reliant attitude; institutional development like mass participation in decision making; ability to handle conflicts and tension and a consensus that all can advance together; evolution of gender equality; awareness that changes were occurring at the grass root level; development of human dignity, popular democracy and cultural diversity.

The most developed approach is Participatory Rural Appraisal (PRA). ‘PRA is a growing family of approaches and methods to enable local people to share with each other and with outsiders, enhance and analyse their knowledge of life and conditions, to plan and to act. It is difficult to define as to what a PRA is. Is it a set of techniques (RRA), or a set of techniques wrapped up in a participatory approach (PRA), or a philosophy and approach to life for a professional’s development? Its core lies in the development, adaptation and application of simple, structured interactive techniques based on game theory and social science research methods which produce accurate information through group work and dialogue.

Five streams which stand out as sources of PRA and between which insights, approaches and methods are continuously flowing are listed as below:

- action-reflection research;
- agro-ecosystem analysis;
- applied anthropology;
- field research on farming systems; and
- rapid rural appraisal (RRA)

Participatory Action-reflection Research

The term ‘Participatory action-reflection research’ is used to encompass approaches and methods, which have, in various ways combined action, reflection, participation and research. These range from action and reflection, an action in which professionals act and reflect on what they do and how they learn, to approaches which use dialogue and participatory research to enhance local people’s awareness and confidence and to empower their action.

Agro-ecosystem Analysis

Drawing on systems and ecological thinking, it combines analysis of systems and system priorities (productivity, stability, sustainability and equitability) with pattern analysis of space (maps and transects), time (seasonal calendars and long-term trends), flows and relationships (flow, casual, venn and other diagrams), relative values (bar

diagrams of relative sources of income etc.), and decisions (decision trees and other decision diagrams).

Applied Anthropology

Social anthropology, in its classical form, has been concerned more with understanding than with changing. Social anthropologists helped other development professionals to appreciate better the richness and validity of rural people's knowledge.

Field Research on Farming Systems

Farming systems research systematised methods for investigating, understanding and prescribing for farming-system complexity.

Field research on farming systems contributed especially to the appreciation and understanding of:

- the complexity, diversity and risk-proneness of many farming systems;
- the knowledge, professionalism and rationality of small and poor farmers;
- their experimental mindset and behaviour; and
- their ability to conduct their own analyses.

Rapid Rural Appraisal (RRA)

RRA began and continues as a better way for outsiders to learn about rural issues. It helps outsiders to gain information and insight from rural people and about rural conditions, which enables them to do in a more cost-effective and timely manner.

SAQ 1

- i) Identify various methods and techniques of participatory rural appraisal.
 - ii) Write a note on the following in your own words.
 - a) Agro-ecosystem.
 - b) Farming systems
-

5.3 PARTICIPATORY DEVELOPMENT

The concept of growth with equity and participation is becoming popular in recent years. Many donor agencies and aid organisations now recommend that governments in the developing countries should adopt popular participation as a basic policy measure in national development strategies and encourage the social mobilisation for community organisations, trade unions, youth, women and other associations in the development process particularly in setting goals, formulating policies and implementing the development plans.

Participation is a process of development, whereby people are given the opportunity to express their voice and choice in decisions, which affect their future. This participation needs to be more action oriented than a token one for the justification of other motives. A study by the International Labour Organisation of "Poverty-oriented" project worldwide showed that the poorest were excluded from activities and benefits. All this shows that there is a need for beneficiaries' participation in a development programme at all levels.

Recent years have seen a growing criticism of development strategies followed for the past three decades with only minor adjustments. These conventional strategies have seen development primarily as a series of technical transfers aimed at boosting production and generating wealth. In practice, conventional projects usually target medium to large-scale progressive producers, supporting the technology, credit and

extension, and advice in the hope that improvements will gradually extend to more “backward” strata of rural society. In many cases, however, the channelling of development assistance to the better off has led to the concentration of land and capital, marginalisation of small farmers and alarming growth in the number of landless labourers, which is simply widening the gap between the rich and the poor.

The basic fault in the conventional approach is that the rural poor are rarely consulted in development planning and usually have no active role in development activities. This is because the vast majority of the poor have no organisational structure to represent their interests. Isolated, under-educated and often dependent on rural elite, they lack the means to win greater access to resources and markets, and to prevent the imposition of unworkable programmes or technologies.

Unless the rural poor are given the means to participate fully in development, they will continue to be excluded from its benefits. This realisation has provoked new interest in an alternative rural development strategy of people’s participation through community organisations controlled and financed by the poor.

Discussion about participation is never easy, mainly because there are so many contradictory and ambivalent notions of the concept and the practices involved. In a very general way, participation may be defined here as:

A complex social, technical and institutional process through which communities may become more fully involved in their own development, more particularly taking an active part in the design, implementation and evaluation of specific development initiatives.

Participation by rural people in the community organisations and other institutions that govern their lives is a basic human right. If rural development was to realise its potential, advantaged rural people had to be organised and actively involved in designing the policies and programmes and in controlling social and economic institutions. There is a close link between participation and voluntary, autonomous and democratic organisations representing the poor. The donor agencies are showing great interest in close co-operation with organisations of intended beneficiaries, and it is being proposed that the assistance be channelled through small farmer and peasant groups.

With their economic survival at stake, many developing countries have been forced to cut back on rural development, giving priority to growth ahead of the alarming concern for participation and equity. Great progress, however, has been made by many development programmes through participatory principles and methodologies.

5.3.1 Principles of Participation

The experience of programmes working on the principles of participatory development has demonstrated that true participation is possible only when the rural poor are able to pool their efforts and resources in pursuit of objectives they set for themselves. The most efficient means for achieving this objective are small, democratic and informal common interest groups composed of 20-30 like minded community members. For governments and development agencies, people participation through small groups offers distinct advantages ranging from economies of scale and efficiency to equity and sustainability. People’s participation is likely to lead to the following advantages:

- **Reduced costs and increased efficiency:** The poor’s contribution to programme and project planning and implementation represent savings that reduce projects costs. The poor also contribute their knowledge of local conditions, facilitating the diagnosis of environmental, social and institutional constraints, as well as the search for solutions.

- **Economies of Scale:** The high cost of providing development services to scattered, small-scale producers is a major constraint on poverty and other development oriented programmes. Participatory groups constitute a grassroots “receiving system” that allow development agencies to reduce the unit delivery or transaction costs of their services, thus broadening their impact on the one hand and give an opportunity of pooling their resources for many collective actions to the community members on the other.
- **Higher productivity:** Given access to resources and a guarantee that they will share fully the benefits of their efforts, the poor become more receptive to new technologies and services, and achieve higher levels of production and income. This helps in building net cash surpluses that strengthen the groups’ economic base and contribute to rural capital formation that in most cases has been used for internal lending and carrying on other joint development schemes.
- **Building of community organisation:** The limited size and informality of small groups is suited to the poor’s scarce organisational experience and low literacy levels. Moreover, the small group environment is ideal for the diffusion of collective decision-making and leadership skills, which can be used in the subsequent development of inter group federations that are known as apex organisations.
- **Sustainability:** Participatory development leads to increased self-reliance among the poor and the establishment of a network of self-sustaining community organisations. This carries important benefits: the greater efficiency of development services stimulates economic growth in rural areas and broadens domestic markets, thus favouring balanced national development. Participatory approaches provide opportunities for the poor to contribute constructively to development.

Through active participation, every one in the group is benefitted to some extent. Decisions are made in the group on the basis of equity and saving is the equity capital of the community.

5.3.2 Constraints to Participation

In their attempts to achieve participatory approach, many developmental project personnel realised the far-reaching consequences of this choice and the necessary adjustments needed to fit it into the existing social, cultural and institutional conditions of different areas.

Several constraints emerge while implementing the programme. Such problems arise, on the one hand, from the opinions of the planners and development agents, and, on the other hand, those stemming from the cultural values and social patterns of the populations of the programme areas.

In some cases, the planners, decision-makers and social organisers who, while advocating some forms of people’s involvement in the development process, continue to think and act according to a perspective that posits people as ‘passive targets’ and not as ‘active participants’ – as objects, and not as subjects of development. This mentality is firmly based on a number of attitudes and certainties. The following beliefs can be encountered as the programme unfolds.

- Programme and target people share common interests so that people’s participation is simply a matter of collaboration by the community with programme officials for implementing an activity;
- Social issues are either irrelevant or can be dealt with on the basis of a good dose of ‘common sense’;

Approaches and Practices

- Involvement of people is important only at the implementation stage, after the major technical parameters of the programme have been decided by the experts;
- A 'participatory approach' simply means that people have to be mobilised quickly and easily in order to meet predefined goals, targets and objectives, with no latitude for them to decide on other goals or objectives;
- Rural communities are backward, primitive, and hostile to change, while their production methods are irrational and detrimental to the environment. Thus, people are viewed, on the one hand, as the problem in development efforts and, on the other hand, in need of technical direction since they do not know what is good for them; and
- Women are not important actors in productive activities, perceived as a predominantly male sphere, and thus may be conveniently ignored as participants in or beneficiaries of technical projects in this domain.

Participation becomes a process through which programme officials have to convince people to adopt what, from a technical point of view, has been identified as good for them, as well as implement what is considered to correspond to the political and economic objectives of the country or province as a whole.

Many problems arise in the process of socialisation, because of specific social and cultural values of the people in the programme areas; hold of feudal lords on local poor, the political autonomy of individual households, male honour, and women's seclusion. All of them influence the participatory approach.

- Most of the developing societies have kinship-based groups, which entail co-operation, solidarity, alliances and obligations, membership based on birth and alliance;
- Local social economy is broken down into independent household with local and familial control of production, devoid of wider organisation or centralisation in the set-up of the productive process;
- Most of the rural communities are heterogeneous; and
- Are elderly dominated societies with an off-farm source of income.

Though these factors need not necessarily create obstacles to participatory form of development, they may significantly slow down the process of involving all the community members and categories of people in the development efforts, especially at the initial stages.

Following are the main elements of a pragmatic, step-by-step participatory approach for tackling the above-mentioned constraints to participation.

- Setting up favourable structures allowing the populations to express their views and opinions;
- Allowing different social categories of a community to meet and discuss problems;
- Establishing a dialogue between programme staff and the community as equal partners;
- Bring changes in the attitudes of development agents, through publications and organisation of workshops and training courses;
- Assessing the constraints realistically and steering clear an alternative approach wherever necessary; and

- Demonstrate participation of the people on pragmatic and sociological situation of the community by producing replicable models and use them as learning examples.

SAQ 2

- i) What do you understand by participation? Explain.
 - ii) Examine various principles of participation.
 - iii) Analyse various constraints of participation.
-

5.4 COMMUNITY ORGANISATION

In order to translate the principles of community development effectively into practice for the attainment of socio-economic and environmentally sound development, the formation of Local Community Organisation is vital for the whole process to follow. Such organisations are local institutions to decide, plan, implement and manage activities in the light of the principles formulated for the comprehensive community development. These institutions may be a mass coalition of village, or an interest group, or a group of like-minded people for the promotion of the groups' interest in the principles of co-operation and democracy.

Such organisations can be created around a single activity of common interest of the community and it can be nurtured over the time by development activities. It is easy to organise but to keep them organised is not an easy task for the social organisers and the community members themselves. They would cooperate when it is profitable. Moreover, they will remain organised if it continues to benefit its members.

The necessary conditions for initiating and sustaining the participatory institutional development process at grassroots level are:

- Steps should be taken to ensure that these measures complement or build upon locally existing institutions and organisations rather than replace them, as there are problems in accepting completely new forms of organisations. Simple transformation or modernisation of "traditional organisations" can also be problematic.
- Group Promoters (GPs) should assist as catalysts in group development and in linking groups to government/NGO services. Community leader's or social organisers role is that of an advisor strengthening the groups leadership, organisation and planning capacity, a participatory trainer teaching basic problem solving and technical skills, and a link person facilitating communication between the groups and government/NGO's development services. Once the groups reach maturity, community leader or social organisers withdraw from the groups.
- Financial support (government or external project) is necessary for financing training of support staff and providing seed money, and or financial topping-ups to self-mobilised savings, and or loans.

Participatory learning method is an interactive learning process engaging the co-operation and problem solving capacities of the poor. It addresses participants at all levels from the local to national. Participatory learning methods are based on participatory rural appraisal (PRA) as well as small-group learning techniques. Ideally a participatory learning exercise for institution building is a phased approach. It aims first at team building and group formation processes with a focus on demand-driven skill development in fields, such as organisational management and leadership. This phase of learning is directed towards and brings together representatives from all institutional layers involved in the programme implementation. The second phase focuses on technical skill development addressing mainly the small self-help groups on topics of direct relevance to the rural poor such as group savings and credit and

small business management and accounting. When learning groups are small, members come from the same socio-economic level and have similar concerns learning of technical skill is easier. Beneficiaries set the demands, not outsiders. The use of group-based, participatory learning methods for strengthening the collective learning, problem-solving and enterprise management skills of the poor have proved to be quite successful and a number of tools for doing this are already available.

5.4.1 Advantages of Organisation

Advantages of organisation can be summarised as follows:

- Solves those problems collectively which are not possible to tackle individually;
- Develop, protect and improve land collectively;
- Investment increases due to pooling of meagre resources through collective action;
- Raises equity capital and controls capital collectively;
- Easy availability and utilisation of services and facilities;
- Co-operative management of capital and credit;
- Collective arrangement for the sale of agricultural produce, thereby minimising expenses and maximising returns;
- Up-gradation of skills, know-how etc;
- Self-arrangement by the community members themselves towards settlement of disputes; and
- Develop a local management system.

5.4.2 Disadvantages of Not Getting Organised

In a nutshell, the disadvantages for the community not getting organised are as follows:

- All the above mentioned advantages will not accrue leading to great losses;
- The condition of land and the economic plight of the communities will further deteriorate;
- The village communities will remain deprived and neglected;
- Exploitation by the middlemen and commission agents will continue;
- People will lag behind in development and progress; and
- The village communities will never stand on their own feet.

5.4.3 Functions of Organisation

Functions and responsibilities of the local organisations are to:

- Promote local economic activity, which would lead to higher income;
- Take-up social projects in order to create harmony and mutual understanding among the people;
- Mobilise savings to provide credit to the community members;
- Arrange reclamation and development of land and irrigation facilities and other productive physical infrastructures and their regular maintenance;

- Identify productive projects and prioritise them according to the need;
- Supply agriculture inputs and other requisites of the community;
- Arrange the marketing of agricultural produce and handicraft products;
- Arrange veterinary and plant protection services and facilities in the village;
- Arrange and participate in the up-grading of human skill training programme;
- Participate in the management of local affairs, settlement of dispute and petty affairs in the village;
- Establish projects like poultry, livestock, dairy, agro-processing industries etc, and encourage similar projects among members;
- Sponsor and supervise schemes of primary health with special emphasis on sanitation, conservation, and cleanliness of environment and potable drinking water.
- Encourage primary education and adult literacy;
- Co-ordinate and co-operate with other departments and organisations for their activities;
- Fix credit limit for members in accordance with equity and social justice;
- Examine the accounts, sanction loans to members, supervise their end-use and effect recoveries;
- Sanction contingent expenditures;
- Decide the terms and conditions on which deposits are to be received and arrange for the payment for return of deposits;
- Acquire and construct buildings or carry out works necessary or conducive to the proper functioning of the council; and
- Any other function likely to promote the welfare and economic betterment of the village community.

5.4.4 Salient Features of Community Organisation

- The members of local organisation should have a clear-cut understanding about the concept of self-help and self-reliance through community development and its own duties and responsibilities within a community organisation.
- The members of a community organisation should have collective and participatory approach towards the solution of their common, social problems.
- They must believe that “all are for one and one is for all” and should have a sense of “we” feeling and collective belonging.
- The community organisation should try to promote the common interest of its members and facilitate them in the attachment of their needs. Minority benefits should be considered minor and secondary factors by community organisations.
- Fortnightly/monthly meetings and savings should be a regular business of the community organisation in order to promote the habit of thrift and savings among the members and to generate capital for seller financing.
- Community organisation should have the spirit of self-management, self-help and self-reliance.

Approaches and Practices

- The community organisation should try to obtain maximum benefits from the package offered by development agencies.
- The community organisation should try to obtain benefits from the packages offered by development agencies and NGOs.
- The community organisations should be free of all political and sectarian issues and its sole objective should be the promotion of socio-economic interest of its members. They, however, should make the community members aware of their right to vote and their understanding as to how they can effectively exercise this right.
- The office bearers should be devoted, sincere and dedicated leaders and willing to develop their communities.
- The community organisation should initiate some socio-economic activities from time to time from their own resources.
- It should establish links with other institutions and agencies for the comprehensive village development.

5.4.5 Threats to Community Organisation

Community organisations can encounter active and passive resistance from many sources like local elite, political leaders, religious leaders and in some cases area administrators. To avoid such resistance, the programme should have an equitable and supportive role for all walks of life and for all governmental and non-governmental organisations in the area. The community workers would have to use all organisational tactics to deal with such people during their interaction and motivational visits.

Subordination

Sometimes the community organisation is dominated by the prosperous farmers, merchants and other businessmen and the organisation is converted to the services of vested interest people and not the whole community. Moreover, in some cases the main cause of the damage or effectiveness of a community organisation may be leadership; and today's leadership might become tomorrow's oligarch to use the local organisation for his own vested interest.

The factor, which leads to domination, is the lack of managerial skills between the leaders and the followers. The major measures for controlling dominance are the training of members of the local organisation in participation, decision-making and other organised activities. Regular follow-up, general conferences of the representatives, papers on different activities and on performance of the local organisation and its wider distribution or reading in the general meetings can improve such situations.

Ineffectiveness

Community organisation might become ineffective to its members in due course of time. This is mainly due to lack of skills in organisation development, accounts and planning.

The other reasons include no risk taking nature of the rural people and uncertainties surrounding the rural life. The community worker will have to train the office bearers in particular and general members in book-keeping, organisational work and resource mobilisation from the community itself through their leaders. Fund raising through donations and savings will considerably improve the effectiveness of a local organisation. Similarly, follow-ups by the social organisers are also helpful in keeping the community organisation effective.

Malpractices

Dishonesty and lack of dedication are the common problems that threaten the survival of a community organisation. Sometimes individuals use community organisation for their own interest or for the interest of their friends and family, at the cost of collective interests of the members. Sometimes the funds are misappropriated. Smaller groups, regular meetings and simplification of the procedures can help in overcoming the malpractices. In smaller groups invariably there is more interaction which reduces the possibilities of malpractices and increases the prospects of handling the funds in a more honest manner.

Similarly holding the general body meeting regularly makes the representation more effective and prevents misappropriation. Simple bookkeeping procedures can enable the community members to understand the financial position of the community organisation and their own liabilities. The important point of the sustainability of an organisation is to encourage and reinforce members' commitment to their organisation and to their sense of responsibility towards the organisation.

5.4.6 Community Organisation and Women

Participation of both male and female partners in development activities is an inherent part of the participatory development and the social organisation process facilitates it. Women's participation in the development of natural resources and other development activities is not possible without an explicit gender awareness, and without building the techniques for understanding and systematically addressing the issue on a wider scale. The programme staff as well as the community has to be sensitised on gender issues and the concept of gender parity needs to be clarified. All programmes should have a clear strategy for organising women in their respective programme areas.

Participation of women in development activities is certainly wider than the promotion of women only. The programmes should focus on the relationship between men and women, their roles, access to and control over resources, division of labour and needs through the community organisations. A clear understanding on these issues leads to household security, well-being of the family, use of natural resources and production and many other aspects of rural life. Failure to take into account women and their role often results in unsuccessful project activities.

Therefore, understanding the gender relationships and adjusting methods and messages for them is critical for full participation by all sectors of the community. Separate strategy for women's participation should be devised to ensure a balanced involvement of men and women in the project activities; however, as far as social organisation of women is concerned, it is important to follow all the following steps for establishing women community organisations.

- Understanding and documenting the differences in gender roles, activities, needs and opportunities in the context of each community development programme;
- Data should be collected and organised to highlight women's key problems, underlying causes of problems for men and women, and the relationship between problems and causes;
- A thorough analysis of the data should be conducted to highlight the learned behaviours of men and women;
- Women participation analysis framework should cover various categories of information such as need assessment, activity profile, resources, access, and control profile, benefits and incentive analysis and institutional constraints and opportunities;

Approaches and Practices

- Specific-training packages should be developed to sensitise the programme staff and the community on gender issues in the context of social and cultural environment;
- Objectives of women participation should be clearly stated in the context of overall objectives of the project. This will help the staff to understand how to get out of conventional approach of thinking only in terms of providing different facilities for women; and
- Special monitoring and evaluation system should be in place to enable the adjustment of women participation, to establish accountability of commitment, and to achieve gender-specific priorities.

The social organisation objectives of increasing women's managerial and organisational capacities, enhancing their self-confidence, and allowing them to control income in their hands, are best met where there is a separate women's organisation. When activities are implemented through the male dominated organisations, the physical and economic objectives of increasing productivity and income or reducing labour time may be met, but the conscientisation effect on women is definitely less or even nil sometimes. By forming an organisation with separate membership and savings accounts, women can initiate a process that enables them to share experience, workload, problems and decision making.

SAQ 3

- i) What is community organisation? Explain necessary conditions initiated for the development process.
- ii) Explain the various functions and responsibilities of the local organisation.
- iii) Write a note on the following in your own words.
 - a) Features of community organisation.
 - b) Community organisation and women.

5.5 SIGNIFICANCE OF PARTICIPATORY APPROACHES IN EMPOWERING PEOPLE FOR SUSTAINABLE DEVELOPMENT

The family of approaches and methods known as Rapid Rural Appraisal (RRA), Participatory Rural Appraisal (PRA), Participatory Interaction in Development (PID), and Participatory Planning and Action (PLA), has gained increasing acceptance during the past decade within development projects. It applies to theory as well as development practice, bringing about a reversal from top-down to bottom-up, from centralised standardisation to local diversity, and from blueprint to learning process. This section focuses attention on what, why and how of such participatory approaches, and their impact on sustainable development. It also makes the case for using such an approach as the intervention strategy for development, be it rural or urban.

Participation basically means taking part or sharing. In the development context it goes further, with implications as to who shares, with whom, and in what context. Participation in development has a long history. Various government and non-governmental organisations, both national and international, have focused attention on participation in a conspicuous manner over the past two decades. The terms 'popular participation' and 'people's participation' have now become a part of the development language in both the sectors.

The term participation, as well as the rationale for these approaches, have been interpreted in a variety of ways. Food and Agriculture Organisation (FAO) argues for

participation in the following manner: Participation by the people in the institutions and systems which govern their lives is a basic human right and also essential for realignment of political power in favour of the disadvantaged groups and for social and economic development. Rural development strategies can realise their full potential only through motivation, active involvement and organisation at the grassroots level of rural people, with special emphasis on the least advantaged, in conceptualising and designing policies and programmes and in creating administrative, social and economic institutions, including co-operative and other voluntary forms of organisation of implementing and evaluating them.

Similar views are reflected by the United Nations Research Institute for Social Development (UNRISD), that the value of participation arises from the inherent strength of participation as a means of articulating genuine needs and satisfying them through self reliance and mass mobilisation. UNRISD used the following definition of participation in one of its publications: Participation involves organised efforts to increase control over resources and regulative institutions in given social situations, on the part of groups and movements of those hitherto excluded from such control.

There are however, significant variations in the usage of the term. According to Chambers, "Participation" is a word, which is experiencing a renaissance in the 1990s. So widespread is its use that some talk of a paradigm shift to participatory development. But he argues that "There are three main ways in which participation is used. First it is used, as a cosmetic label to make whatever is proposed appears good. Secondly it describes a co-opting practice to mobilise local labour and reduce cost. Often this means that they (local people) participate in "our" project. Third, it is used to describe an empowering process, which enables the local people to do their own analysis, to take command, to gain confidence, and to make their own decisions. In theory, this means, that "we" participate in "their" project not "they" in "ours". In this perspective reversing power relations is the key and weak link in achieving participation. He also notes that the gap between concept and actual practice is overshadowed by the use of the term participation in development jargon today, so much so that the meaning of the term needs clarification.

Field experience clearly shows that participation means different things to different people. For some it means people attending meetings, or labour contribution in development work like *shramadana* (free labour). In irrigation rehabilitation, for example, participation in some cases appears to have meant holding meetings to get people's endorsement to what has already been planned by the technical experts. Such meetings, presided over by the decision makers, came to be known as ratification meetings, where the dominant views of those who knew, prevailed over the others. In other instances, participation means group formation for co-operative/collective action for input supply and marketing.

The highest form of participation appears to be self-organisation and self-responsibility and self-actualisation, which results in the empowerment of the people concerned. Participation is considered by some as an essential part of human growth, that is, the development that guides sustainability.

The meaning of participation used in this unit has empowerment and self-responsibility for collective decision making as its final goal. The achievement of such participation needs to be a process in which the rural poor themselves become more aware of their own situation, of the socio-economic reality around them and of the problems. Having understood such problems they take decisions on the steps to be taken in initiating a change in their situation. Development strategies in such a context should be supportive, and accompany this process.

In such a perspective, participation becomes interrelated with a process, which opens a wide spectrum of free and open interactions. In this process, there can be progress as well as failures, but both must be viewed as opportunities to learn for taking better decisions in the future. Participation becomes a learning process for both the villagers

and the development workers. Such a process cannot be determined from outside. Continuing interaction and reflection generates it.

Experiential learning makes the process the people's own, as opposed to the people being mobilised, led or directed by outside forces. Through collective self reflection on their experiences and problems, people become aware of different dimensions of the reality, and of what can be done by themselves to transform it. With this awareness, they decide upon what collective action to take and analyse its results to promote their awareness further. Thus they move on with progressive and advancing knowledge of their evolving reality.

During the early 1970s the development interventions that were carried out with either local or external funding emphasised two types of actors. On one side were those who engaged in the task of identifying development needs, planning development activities, mobilising resources for development, implementation, monitoring the implementation process to ensure that designs, plans and disbursement of resource were taking place as planned. They also evaluated the success or failure after the event, using monetary disbursements, physical achievements or assessing the impact these activities had on the target groups as yardsticks.

On the other side were the beneficiaries for whom and for whose development all these tasks were undertaken. They were only to operate and maintain structures such as minor irrigation reservoirs, wells and rural roads, and to share the cost of the development activities.

The two categories of actors therefore were those who do things and those for whom things are being done; those who do are the empowered, they have knowledge, authority, access to resources and decision making power. Those who are the beneficiaries, lacked authority, were poor and were basically voiceless in the decision making process. The gap that exists between these two groups resulted in mutual mistrust, often leading to antagonism, and had serious implications on the development process.

Therefore bridging this gap between these two parties, namely the doers – the politicians, the bureaucrats, NGO activists, and those for whom things are being done – the peasants, the poor, and the citizenry at large, is identified as a prime need for successful achievement of development activities/projects. Numerous failures have been recorded in a wide spectrum of development activities, owing to the existence of this gap.

The gap can be illustrated by looking at the process through which development activities are usually undertaken. Development work is usually undertaken through projects, with set objectives, a predetermined time schedule, a plan of action, and a budget. Responsibility for implementation is assigned, and the beneficiary clientele comes into the picture only as a peripheral element.

Most of these projects are conceptualised and formulated around the availability of funds. There are many instances where the need for a project to achieve some objective is conceived in the mind of some authority that either has access to funds or enough power to start. After the project is conceived, a pre-feasibility study may be carried out, with data being gathered through traditional methods and a justification for the project worked out. If the initiator of the project is very keen on the project and has enough power, then the projects, which are not really feasible, are manipulated to appear feasible.

Once the pre-feasibility stage is over, a feasibility study is undertaken. The same manipulatory process is carried out in a deeper and more intensive form. If the feasibility study meets requirements, then the project gets off the ground and thereafter the project is implemented. Invariably the project is to benefit a specific clientele but where does the clientele come into the picture in the project planning

process? Often clients are considered a nuisance, because they express justifiable fears about the changes that may result from the project.

Are development projects planned to satisfy someone's ego, to utilise some available funding, or to solve genuine problems? If the objective is to solve problems, all parties affected by the problem should have a say in the solution that is identified. The affected parties should be brought into the project identification and formulation process. But if the involvement of the clientele is desired, how should it be done and what are the methodologies, and processes? It is here that participatory methodologies and implementation become relevant.

The participation of the beneficiaries is needed to achieve success of the projects at a very practical level. A study on rural participation cites an evaluation of over 50 rural development projects, which reveal that participation, and decision-making during implementation is even more critical to project success than participation at the initial stages. Due to lack of participation, a large number of development projects have resulted only in a short-lived progress.

An example can be cited with regard to some minor irrigation projects implemented in the latter half of the 1980s in the districts of Kurunegala and Moneragala in Sri Lanka. In the early 1990s, two to three years after projects completion, the Self Help Support Programme of the Swiss Interco operation undertook an evaluation of some of the completed irrigation projects. The results revealed that about 70% of the minor irrigation tanks rehabilitated were found to be poorly maintained by the farmers, as they were envisaging further external support for maintenance.

When some of the farmers were asked why they allowed the tank bund to get eroded to half its size in certain places, let plants grow uncontrolled, and neglected, the ant hills destroying the bunds, the answer was: we have informed the Field Officers in writing several times but none of them came this way after the construction work was over. This is a clear indication of the lack of involvement in the decision-making and implementation.

Field interaction showed that they lacked a sense of ownership or responsibility for maintaining such structures. There was no organised effort to find alternative means of addressing such issues. The Farmer Organisations appear to have been formed by the intervening organisations to renovate the first set of tanks. When the construction work was over, the need to take collective action for maintenance was not realised.

With this experience, a participatory approach was encouraged with the next set of tanks to be rehabilitated, implemented by two partner organisations in Mahawa and Kurunegala. It took a much longer time to complete the structures, as compared to the earlier experience. The Farmer Organisations were involved from the planning stage, through implementation and monitoring and evaluation, using a participatory approach, PRA. This meant building up the capacity of the Farmer Organisations, and even more so of the field officers who were used to planning and implementing projects on their own for the benefit of the people. The role reversal of these officers did not come about automatically by using the methods alone, but resulted from the follow-up after training in participatory methodology.

This slow process of reflection and action finally allowed information generation, analysis, planning and action by the farmers based on their own decisions. The results can be seen today. Urapolayagama, Heeralugam, villages in the Kurunegala District facilitated by the National Development Foundation, Kandubodagamawewa in Mahawa facilitated by the Sri Lanka Freedom from Hunger Campaign Board, Savings and Credit Groups at Mahiyangana facilitated by Future in our Hands, are examples of successful efforts of this approach. In these instances farmers organised themselves to maintain the rehabilitated schemes backed by groups funds and collective action. The difference in the results and impact of the implementation strategy has been evident.

These experiences also show the importance of the participation of the people concerned in the decision making process throughout the development cycle. A sense of ownership of assets arises when there is participation in planning, designing, implementation, monitoring and evaluation.

5.6 PARTICIPATORY METHODOLOGIES IN THE EMPOWERING PROCESS

The recognition of the importance of participation in the development process has led to the development of a variety of methodologies in order to achieve its objectives in development projects. Current practices in implementing the participatory approaches in development are drawn from a variety of traditions such as Activist Participatory Research, Applied anthropology, Field Research on Farming Systems, Traditions and Methods of Participatory Research, Agro-Eco Systems Analysis and Rapid Rural Appraisal. According to Chambers, it represents a growing family of approaches and methods, which will enable local people to share, analyse and act to enhance their living conditions.

In the Sri Lankan Context, the national network promoting participatory approaches uses the term Participatory Interaction in Development (PID) in order to identify the methodology used in this country. This connotes participatory interaction among all actors in development, while recognising the key role of the people themselves and its relevance at various stages of the development cycle. In promoting the use of this approach in Sri Lanka, the experiences of social mobilisation, such as in the Change Agent Programme that has evolved during the past decade in Sri Lanka has been kept in mind.

PID draws heavily on PRA in the use of visualisation of tools and techniques and changes in the behavioural patterns and attitudes, while focussing on the interaction and process. It is envisaged that such a conceptual outlook promotes sustained participatory development, which will contribute to the empowerment of the people. This approach needs to be treated as an adapted version of participatory development, which is supported by creative ingenuity. Similarly, like the participatory approach, these methodologies are bound to change with experience.

Field experience over many years has shown that PID/PRA tools and techniques have a strong potential for achieving the participation of all actors concerned, particularly the villagers whether literate or illiterate. The key to this is the element of visualisation associated with such tools. The shifts from verbal to visual help even the non-articulate members, such as the under-privileged, women, and children, to participate. It creates a free and open environment for interaction.

The methods and tools often used are participatory mapping and modelling, direct observation and transect walks, seasonal calendars, time lines and trend line's matrix scoring and ranking, wealth and well-being ranking and grouping, institutional diagramming (Venn diagrams), and other forms of analytical diagramming such as different types of graphs. Information generated through these techniques is often supplemented by secondary data, which can be used for crosschecking. Focus group interviews, semi-structured interviews, and key informants are also used in combination with the other methods.

The opportunities for triangulation of information generated are another aspect, which come out very significantly in the use of participatory tools and techniques, and are built on the principle of visualisation. This means that the reliability and the validity of the information generated can be established through crosschecking. Visualised information also allows for the perceptions of different sectors of the populations – men and women, young and old, privileged and disadvantaged to come together on a common basis.

Interaction within the groups, between groups, and sharing with those from different locations, is made more feasible by the use of visual techniques. When farmers from Dambana in Mahiyangana presented their experience in Colombo to some well-educated development workers, they could articulate their views effectively with the use of visuals they prepared themselves. The same was true of the farmers from Urapolyagama in Kurunegala, where they presented their case to the members of the national Network for PID/PRA. Exchange visits between farmer organisations and exchanges between farmers within the group, have become more realistic and understandable with the use of these techniques. Handled carefully and skillfully by a facilitator, they become an instrument for bringing about the envisaged change in behaviour and attitudes, and for breaking barriers between different sections of the population.

Field experience shows that information needed for a situation analysis, or baseline data for establishing indicators for monitoring and evaluation in a participatory manner can be elicited, understood and agreed upon in such a process. Therefore the same tools could be used for interactive monitoring of progress of impact evaluations.

One such example is the experience of the National Development Foundation. In this organisation information generated through a participatory process has been helpful for group interaction during monthly meetings, to compare progress among themselves, with the tools providing the base for information generation analysis and discussion. Such information has proven to be equally effective for joint reviews and evaluations with the intermediary organisations and funding partners. This, however, should not be interpreted to mean that participatory evaluation and monitoring rules out hard data. Hard data can be aggregated or drawn from such basic information by the parties concerned. But the fact remains that the local organisation should do it for the purpose of monitoring.

Wealth ranking exercises are very useful for learning about the social structure and identifying a target group. They must be carefully handled, as they can become sensitive issues. The Farmer organisation of Kanudubodagamawewa in Maho is an example where such analysis promoted the community to organise itself to help the poorer sector for example, the landless poor were allowed to use small plots of paddy land allocated to them by the community for cultivating vegetables during the Yhala season. The analysis of power relations in the local set-up, which is crucial for the empowerment process, is often being done with the use of the flow charts and impact diagramming.

The use of the tools and techniques is limited by the skill of facilitation. Assessing the limits of local knowledge and awareness, and when to bring in technical and scientific know-how available with experts, can be addressed with the analysis of information generated through the use of participatory tools and techniques. The experience of building on what people already know, particularly with regard to farming systems, has shown the possibility of harmonising different types of knowledge at the local level.

None of the above should be taken to mean that the use of such methods automatically ensures participation in the manner expected that leads to empowerment, enabling villagers to conduct their own analysis, and to own the information generated. Many who pay lip service to PRA have a tendency to look at the technique as an end in itself, and not a means for attaining development goals.

The critique that tools and techniques of PID/PRA are only cosmetics to social mobilisation can be challenged in that sense. Why do people use cosmetics? They realise the existence of a shortcoming that can be covered by such an action, or at least to improve on what exists. Such visualised tools and techniques could be considered as a strong medium or a means for social mobilisation to be effective. This is particularly so if the agent wishes to change the role from an activator to a facilitator, who allows the key actors or the community to articulate views, generate information,

analyse, draw conclusion, assess options, take decisions, implement, and monitor by themselves. Therefore, as a concept, it goes much deeper, and becomes complementary to the agent. All such approaches stress the importance of commitment to the process as a means for empowering the people. The complementarity of the approaches needs to be recognised in such a context that they should not be seen as additions for subtraction. Complementarity makes the final product of the empowerment richer, stronger, and mutually reinforcing.

A farmer, in a recent video, is shown taking pride in the fact that they could produce a result, which they never imagined they could. Therefore, it is not merely playing with stones, and sticks, or belittling the literate and the intelligentsia. While it looks like Montessori work, as some say, the basic principle behind the Montessori Method is learning by doing. A participatory approach, with a reversal of roles, is also attributed to experimental learning, in which actors in development are in partnership with those to be empowered. In other words, it helps the potential and enthusiasm inherent in human beings to grow and blossom.

Attitudes and Behaviour

Attitudes and behaviour are an integral part in PID/PRA. As observed earlier, in the project mode of development intervention, over the past half a century, the emphasis was on planned projects being implemented with the involvement of the beneficiaries. This has meant that the implementer has a dominant role, and the beneficiary a passive role. In the use of participatory approaches, these roles are reversed, and the beneficiaries become key actors in development.

An analyst further elaborates this point as follows: the major shift, however, during the era of participatory approaches, in the past two decades is one that recognises people from a professional paradigm centering on things. This emphasis was dominant in projects implemented during the 1950s and 1960s with large infrastructure irrigation works and industrialisation being the major sectors. Another expert refers to it as handing over the stick to the poor from the bureaucracy, implying a reversal of roles.

This means PID, as an approach, emphasises a change in behaviour and attitudes, as well as in concepts, values and methods. This challenges the accepted norms, which is dominant in bureaucracies, professions, careers, and the idea of transfer of knowledge from the expert to the ignorant. It also means loss of central control of power and recognising local diversity and empowerment. Such a role reversal applies to all the steps of the development cycle.

Experience shows that the methods and tools previously described, and the process adopted contribute to reinforcing the behavioural changes among the main actors in development. This aspect of participatory approach is the most difficult to achieve. Sometimes, depending on the behaviour of the so-called facilitator, even a participatory tool or technique may lead to top-down implementation. After many years of conventional bureaucratic behaviour, it is certainly a challenge to bring about these different behavioural patterns.

Frustration, due to non-fulfillment of promises and specific biases of projects to which the community has been exposed for generations, makes this paradigm shift a difficult process for the village. In the eyes of the villager, the outsider is the officer, and the past experience with outsiders often inhibits free and open expression.

However, there are instances where participatory methods have helped people to articulate their views to the politicians and decision makers effectively. Even in the contexts such as the plantation sector, where there is a dominant management set-up, workers have used the results of participatory analysis to open a dialogue with the superintendent.

The culture of collaboration between development partners, based on openness and democratic decision-making is essential for sustained development. This can only be realised through a participatory relationship with the communities. The more experience we gather in the use of such an approach, the more we shall understand its implications. It is important to emphasise the spirit in which these methods are used. It is not the tool or the approach, which is often at fault, but the way it is used. Therefore, improving effective facilitation skills on the part of the development workers becomes critically important. The way in which the approach is implemented can help to prevent biases on the basis of community leadership, gender and the disadvantaged.

Process and Sharing

The third significant element in PID/PRA is the process or the sharing of experience. Participatory approaches, particularly PID/PRA, emphasise the need to think beyond projects. In other words, there is a commitment to a process, and is not limited to a project which is time bound. Such a process will create an environment where people actively pursue development activities, on their own initiative. In other words, experience in field situations reveals that self-organised collective action can evolve as a result of a positive environment, which we, as development workers, may have helped to generate through facilitating a process.

Due to the emphasis given to the process in participatory approaches, there is no direct guideline, which can be applied or replicated. The process of learning takes place both vertically and horizontally. Farmers learn from each other through interaction. Farmer groups share experience through interaction between groups, which leads to local people becoming good facilitators for each other's analysis. Local people, such as farmers and villagers, become confident of their own expertise and acquire skills through the process.

This has made it possible for them to share their experience with other local, national and international organisations. In 1991, villagers from Mahiyangana presented their analysis, how they did it, and the purpose for which it was done, to a large gathering of managerial personnel and decision makers from the governmental and non-governmental organisations at the Bandaranaike Memorial International Conference Hall in Colombo. A similar experience took place in the network for PID/PRA gathering in Colombo, where farmers from Kurunegala presented their case in 1994. In spite of the change in environment from a simple village life to metropolitan Colombo, the farmers remained unruffled by the questions raised by the audience. This shows a clear indication of a high esteem arising from self-actualisation and confidence. They could explain to anybody with confidence what they had analysed, planned, implemented and monitored. Recent training conducted for field officers through farmer resource persons, by Action Aid India, is another example of this form of sharing.

It is pointed out that various technologies, approaches and methods are spread laterally by peers rather than vertically through transfer of technology. Farmer to farmer extension is becoming more prevalent, both within and between countries and ecological zones. In PID/PRA, the best trainers and facilitators for adjoining villagers are those who have already gained experience in the application of the approach.

A villager who has gone through a participatory process of development in his village was asked as to what he would suggest to do differently, if the PDA/PRA process was to be replicated in another village. He promptly replied: 'this is how we did it, and it makes sense to us; others may do it differently. Please ask them to evolve their own system'. This simple statement from a farmer in a remote village in Kurunegala has an in-depth philosophy behind it. It shows trust in the potential, and belief in the evolving nature of the participatory process. However, when reference was made about improved farming practices, he said: 'those could be shared with our colleagues in the next village. Friends from other villages have visited us to learn about intensive rice

cultivation practices from our demonstration plots'. Thus experience spreads from farmer to farmer, and village to village. It is also spreading from non-governmental to governmental organisations and vice versa through national networking. Regional exchanges provide a forum for sharing of these techniques between nations.

Process and Time

A participatory approach is a catch word in the development jargon today. However, when it comes to the progress and monitoring of the projects and programmes, the tendency is to look for easily accomplished and tangible targets. Naturally the development worker gets sandwiched between the community based participatory approach emphasising people and their reality, and the demand for physical and financial targets. This dilemma still prevails, even though participation has entered as a buzzword in the development literature.

An expert's comments on this conflict are as follows: "development workers do not seem to have very much time or patience. Perhaps it is all a result of the invention of the jet engine- if we can get there in only ten hours why do we need ten years to develop the place? On a more serious level, we do seem to want results amazingly quickly. It is however doubtful that the development process can be compressed to meet our ambitions. We used to talk about three year projects; perhaps we should be talking about twenty year programmes. How many rural areas have developed in one generation? We are working with people, people with their own urgencies, priorities and time scales. It is their development that is the measure of success."

This highlights the fact that if people matter in development, there is no short cut. We have to facilitate a process whereby people become sensitive to their problems and express readiness to change their situation by taking responsibility for their own organisations and acting correctively, taking decisions for the desired changes. We, as development workers, need to facilitate such a process and support strengthening of such organisations. This is a long-term process demanding the necessary commitment.

'A great deal of heartbreak which in the past has too often turned over optimistic idealists into later cynics, would be avoided if those who wish to help in development could learn to be content to do good slowly.' As Burkey rightly says, poor people who never had the opportunity of participating in a democratic process require time to learn to formulate and express their ideas, participate in open debate, take collective decisions and follow up with cooperative action. Mistakes can be made into lessons leading to better decisions in the future. Development workers need to remember that behavioural patterns cannot be changed at once. Change must be a gradual process, a process in which the ideas and behaviour of all actors in the development process will most probably change over time.

SAQ 3

- i) Explain the significance of participatory approaches in empowering people for sustainable development.
 - ii) Write a note on the following in your own words:
 - a) Methods and Tools.
 - b) Process and Sharing.
-

Let us now summarise what we have studied so far.

5.7 SUMMARY

In the case of specific grassroots level organisations, the potential of participatory methodology has been proven in many instances. Participatory methods using visual and verbal modes of communication have been effectively used for appraisal,

planning, monitoring and evaluation of the development programmes. But the use of methods alone is not enough to sustain the participation of the community in the development process. Other significant aspects which need to be strengthened include the institutionalisation of the processes, delegation of responsibility, and decentralisation of decision-making and resource allocation.

The anticipated role reversals are extremely significant for the key actors, namely the villagers, to perform effectively.

Participation, in the context of participatory approaches, specifically PID, can be used in a much wider perspective than it is currently used. All actors in the development scene have a role to play - the farmers and villagers who are the prime actors, the facilitators or change agents from government or non-governmental sectors, the decision makers in managerial positions, and policy makers and politicians. The roles of different actors can be geared towards the realisation of the common objective of sustainable development through empowerment of the people. There is a need to create an environment where people themselves are the key actors, and all the other actors play a facilitative and supportive role.

This should rule out the misunderstanding that a bottom up process is one where people do everything by themselves, know everything that needs to be known and consider that modern technology/research has no role to play.

In a participatory approach, there is certainly room for scientific research and technology. The only difference is that we build on what is already known by the farmers as indigenous technology, and there is an opportunity to harmonise or adapt research findings in an acceptable and sustained manner. This means a re-orientation of the conventional extension systems, the field workers' role, and that of the institutions they represent, in order to evolve a system which emphasises support and facilitation for local farming initiatives, which are essential for sustainable development.

5.8 TERMINAL QUESTIONS

1. Explain various approaches and methods of participatory approach.
2. Discuss participatory approach and the principles of participatory development.
3. Write a note on the constraints of participation.
4. Explain various principles of community development.
5. Write a note on the salient features and functions of community organisation.
6. What is Community organisation? Briefly examine the role of women in these organisations.
7. Examine the role of participatory approach in empowering people for sustainable development.
8. Explain the participatory methodologies in the empowering process.

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UNIT 5 PARTICIPATORY APPROACHES TO ENVIRONMENT AND DEVELOPMENT

Structure

- 5.1 Introduction
 - Objectives
- 5.2 Participatory Approaches
- 5.3 Participatory Development
 - Principles of Participation
 - Constraints to Participation
- 5.4 Community Organisation
 - Advantages of Organisation
 - Disadvantages of Not Getting Organised
 - Functions of Organisation
 - Salient Features of Community Organisation
 - Threats to Community Organisation
 - Community Organisation and Women
- 5.5 Significance of Participatory Approaches in Empowering People for Sustainable Development
- 5.6 Participatory Methodologies in the Empowering Process
- 5.7 Summary
- 5.8 Terminal Questions

5.1 INTRODUCTION

In the first block, we have discussed the concept of participatory management and its genesis. In the first unit of Block 2, we will examine the participatory approaches, participatory development, principles of participation, community organisation, participatory learning, significance of participatory approaches in empowering and people for sustainable development.

Over the last few years, words such as ‘participation’, ‘empowerment’, ‘bottom up planning’, and ‘indigenous knowledge’ have become increasingly common in the world of rural development. Such is their popularity that it is now difficult to find a rural based development project which does not, in one way or other, claim to adopt a participatory approach involving bottom up planning, acknowledging the importance of indigenous knowledge and claiming to empower local people. It is increasingly possible to talk, at least provisionally, of an emerging common orthodoxy in rural development, which is shared by a range of practitioners working in the bilateral, multilateral and non-governmental sectors of the development industry.

Objectives

After studying this unit, you should be able to:

- appreciate the most developed approaches and techniques in Participatory Rural Appraisal (PRA);
- explain five streams standing out as sources of PRA and between which insights, approaches and methods are continuously flowing;
- explain as to why a participatory approach is needed in development;
- explain the role of participation in development; and
- discuss the use of participatory methodologies in the empowering process.

5.2 PARTICIPATORY APPROACHES

For more than two decades, development theorists and practitioners have talked about the need for participation of ordinary people in development. In much of rural development, however, thinking about participation has remained at a very idealistic and ideological level. It lacks analytical tools, practical methods and an adequate theoretical framework. So it has degenerated into a kind of propaganda – words to convince audience, NGOs. Governments have recognised the necessity of involving people in development activities. Sometimes it is the participation of particular categories of people which has to be demonstrated – women, the poorest of the poor, and minority groups. But participation is usually asserted, not demonstrated. Few in the audience have time to examine the indicators, which are in any case poorly developed. Indicators of how participation happens and its effects on participants need to be developed and applied.

Several dimensions of empowerment have been identified, which could help in the development of indicators about participation: a good starting point for developing indicators about participation. Some of them could be: organisation of under privileged; knowledgeable about their social environment; development of their self-reliant attitude; institutional development like mass participation in decision making; ability to handle conflicts and tension and a consensus that all can advance together; evolution of gender equality; awareness that changes were occurring at the grass root level; development of human dignity, popular democracy and cultural diversity.

The most developed approach is Participatory Rural Appraisal (PRA). ‘PRA is a growing family of approaches and methods to enable local people to share with each other and with outsiders, enhance and analyse their knowledge of life and conditions, to plan and to act. It is difficult to define as to what a PRA is. Is it a set of techniques (RRA), or a set of techniques wrapped up in a participatory approach (PRA), or a philosophy and approach to life for a professional’s development? Its core lies in the development, adaptation and application of simple, structured interactive techniques based on game theory and social science research methods which produce accurate information through group work and dialogue.

Five streams which stand out as sources of PRA and between which insights, approaches and methods are continuously flowing are listed as below:

- action-reflection research;
- agro-ecosystem analysis;
- applied anthropology;
- field research on farming systems; and
- rapid rural appraisal (RRA)

Participatory Action-reflection Research

The term ‘Participatory action-reflection research’ is used to encompass approaches and methods, which have, in various ways combined action, reflection, participation and research. These range from action and reflection, an action in which professionals act and reflect on what they do and how they learn, to approaches which use dialogue and participatory research to enhance local people’s awareness and confidence and to empower their action.

Agro-ecosystem Analysis

Drawing on systems and ecological thinking, it combines analysis of systems and system priorities (productivity, stability, sustainability and equitability) with pattern analysis of space (maps and transects), time (seasonal calendars and long-term trends), flows and relationships (flow, casual, venn and other diagrams), relative values (bar

diagrams of relative sources of income etc.), and decisions (decision trees and other decision diagrams).

Applied Anthropology

Social anthropology, in its classical form, has been concerned more with understanding than with changing. Social anthropologists helped other development professionals to appreciate better the richness and validity of rural people's knowledge.

Field Research on Farming Systems

Farming systems research systematised methods for investigating, understanding and prescribing for farming-system complexity.

Field research on farming systems contributed especially to the appreciation and understanding of:

- the complexity, diversity and risk-proneness of many farming systems;
- the knowledge, professionalism and rationality of small and poor farmers;
- their experimental mindset and behaviour; and
- their ability to conduct their own analyses.

Rapid Rural Appraisal (RRA)

RRA began and continues as a better way for outsiders to learn about rural issues. It helps outsiders to gain information and insight from rural people and about rural conditions, which enables them to do in a more cost-effective and timely manner.

SAQ 1

- i) Identify various methods and techniques of participatory rural appraisal.
 - ii) Write a note on the following in your own words.
 - a) Agro-ecosystem.
 - b) Farming systems
-

5.3 PARTICIPATORY DEVELOPMENT

The concept of growth with equity and participation is becoming popular in recent years. Many donor agencies and aid organisations now recommend that governments in the developing countries should adopt popular participation as a basic policy measure in national development strategies and encourage the social mobilisation for community organisations, trade unions, youth, women and other associations in the development process particularly in setting goals, formulating policies and implementing the development plans.

Participation is a process of development, whereby people are given the opportunity to express their voice and choice in decisions, which affect their future. This participation needs to be more action oriented than a token one for the justification of other motives. A study by the International Labour Organisation of "Poverty-oriented" project worldwide showed that the poorest were excluded from activities and benefits. All this shows that there is a need for beneficiaries' participation in a development programme at all levels.

Recent years have seen a growing criticism of development strategies followed for the past three decades with only minor adjustments. These conventional strategies have seen development primarily as a series of technical transfers aimed at boosting production and generating wealth. In practice, conventional projects usually target medium to large-scale progressive producers, supporting the technology, credit and

extension, and advice in the hope that improvements will gradually extend to more “backward” strata of rural society. In many cases, however, the channelling of development assistance to the better off has led to the concentration of land and capital, marginalisation of small farmers and alarming growth in the number of landless labourers, which is simply widening the gap between the rich and the poor.

The basic fault in the conventional approach is that the rural poor are rarely consulted in development planning and usually have no active role in development activities. This is because the vast majority of the poor have no organisational structure to represent their interests. Isolated, under-educated and often dependent on rural elite, they lack the means to win greater access to resources and markets, and to prevent the imposition of unworkable programmes or technologies.

Unless the rural poor are given the means to participate fully in development, they will continue to be excluded from its benefits. This realisation has provoked new interest in an alternative rural development strategy of people’s participation through community organisations controlled and financed by the poor.

Discussion about participation is never easy, mainly because there are so many contradictory and ambivalent notions of the concept and the practices involved. In a very general way, participation may be defined here as:

A complex social, technical and institutional process through which communities may become more fully involved in their own development, more particularly taking an active part in the design, implementation and evaluation of specific development initiatives.

Participation by rural people in the community organisations and other institutions that govern their lives is a basic human right. If rural development was to realise its potential, advantaged rural people had to be organised and actively involved in designing the policies and programmes and in controlling social and economic institutions. There is a close link between participation and voluntary, autonomous and democratic organisations representing the poor. The donor agencies are showing great interest in close co-operation with organisations of intended beneficiaries, and it is being proposed that the assistance be channelled through small farmer and peasant groups.

With their economic survival at stake, many developing countries have been forced to cut back on rural development, giving priority to growth ahead of the alarming concern for participation and equity. Great progress, however, has been made by many development programmes through participatory principles and methodologies.

5.3.1 Principles of Participation

The experience of programmes working on the principles of participatory development has demonstrated that true participation is possible only when the rural poor are able to pool their efforts and resources in pursuit of objectives they set for themselves. The most efficient means for achieving this objective are small, democratic and informal common interest groups composed of 20-30 like minded community members. For governments and development agencies, people participation through small groups offers distinct advantages ranging from economies of scale and efficiency to equity and sustainability. People’s participation is likely to lead to the following advantages:

- **Reduced costs and increased efficiency:** The poor’s contribution to programme and project planning and implementation represent savings that reduce projects costs. The poor also contribute their knowledge of local conditions, facilitating the diagnosis of environmental, social and institutional constraints, as well as the search for solutions.

- **Economies of Scale:** The high cost of providing development services to scattered, small-scale producers is a major constraint on poverty and other development oriented programmes. Participatory groups constitute a grassroots “receiving system” that allow development agencies to reduce the unit delivery or transaction costs of their services, thus broadening their impact on the one hand and give an opportunity of pooling their resources for many collective actions to the community members on the other.
- **Higher productivity:** Given access to resources and a guarantee that they will share fully the benefits of their efforts, the poor become more receptive to new technologies and services, and achieve higher levels of production and income. This helps in building net cash surpluses that strengthen the groups’ economic base and contribute to rural capital formation that in most cases has been used for internal lending and carrying on other joint development schemes.
- **Building of community organisation:** The limited size and informality of small groups is suited to the poor’s scarce organisational experience and low literacy levels. Moreover, the small group environment is ideal for the diffusion of collective decision-making and leadership skills, which can be used in the subsequent development of inter group federations that are known as apex organisations.
- **Sustainability:** Participatory development leads to increased self-reliance among the poor and the establishment of a network of self-sustaining community organisations. This carries important benefits: the greater efficiency of development services stimulates economic growth in rural areas and broadens domestic markets, thus favouring balanced national development. Participatory approaches provide opportunities for the poor to contribute constructively to development.

Through active participation, every one in the group is benefitted to some extent. Decisions are made in the group on the basis of equity and saving is the equity capital of the community.

5.3.2 Constraints to Participation

In their attempts to achieve participatory approach, many developmental project personnel realised the far-reaching consequences of this choice and the necessary adjustments needed to fit it into the existing social, cultural and institutional conditions of different areas.

Several constraints emerge while implementing the programme. Such problems arise, on the one hand, from the opinions of the planners and development agents, and, on the other hand, those stemming from the cultural values and social patterns of the populations of the programme areas.

In some cases, the planners, decision-makers and social organisers who, while advocating some forms of people’s involvement in the development process, continue to think and act according to a perspective that posits people as ‘passive targets’ and not as ‘active participants’ – as objects, and not as subjects of development. This mentality is firmly based on a number of attitudes and certainties. The following beliefs can be encountered as the programme unfolds.

- Programme and target people share common interests so that people’s participation is simply a matter of collaboration by the community with programme officials for implementing an activity;
- Social issues are either irrelevant or can be dealt with on the basis of a good dose of ‘common sense’;

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- Involvement of people is important only at the implementation stage, after the major technical parameters of the programme have been decided by the experts;
- A 'participatory approach' simply means that people have to be mobilised quickly and easily in order to meet predefined goals, targets and objectives, with no latitude for them to decide on other goals or objectives;
- Rural communities are backward, primitive, and hostile to change, while their production methods are irrational and detrimental to the environment. Thus, people are viewed, on the one hand, as the problem in development efforts and, on the other hand, in need of technical direction since they do not know what is good for them; and
- Women are not important actors in productive activities, perceived as a predominantly male sphere, and thus may be conveniently ignored as participants in or beneficiaries of technical projects in this domain.

Participation becomes a process through which programme officials have to convince people to adopt what, from a technical point of view, has been identified as good for them, as well as implement what is considered to correspond to the political and economic objectives of the country or province as a whole.

Many problems arise in the process of socialisation, because of specific social and cultural values of the people in the programme areas; hold of feudal lords on local poor, the political autonomy of individual households, male honour, and women's seclusion. All of them influence the participatory approach.

- Most of the developing societies have kinship-based groups, which entail co-operation, solidarity, alliances and obligations, membership based on birth and alliance;
- Local social economy is broken down into independent household with local and familial control of production, devoid of wider organisation or centralisation in the set-up of the productive process;
- Most of the rural communities are heterogeneous; and
- Are elderly dominated societies with an off-farm source of income.

Though these factors need not necessarily create obstacles to participatory form of development, they may significantly slow down the process of involving all the community members and categories of people in the development efforts, especially at the initial stages.

Following are the main elements of a pragmatic, step-by-step participatory approach for tackling the above-mentioned constraints to participation.

- Setting up favourable structures allowing the populations to express their views and opinions;
- Allowing different social categories of a community to meet and discuss problems;
- Establishing a dialogue between programme staff and the community as equal partners;
- Bring changes in the attitudes of development agents, through publications and organisation of workshops and training courses;
- Assessing the constraints realistically and steering clear an alternative approach wherever necessary; and

- Demonstrate participation of the people on pragmatic and sociological situation of the community by producing replicable models and use them as learning examples.

SAQ 2

- i) What do you understand by participation? Explain.
 - ii) Examine various principles of participation.
 - iii) Analyse various constraints of participation.
-

5.4 COMMUNITY ORGANISATION

In order to translate the principles of community development effectively into practice for the attainment of socio-economic and environmentally sound development, the formation of Local Community Organisation is vital for the whole process to follow. Such organisations are local institutions to decide, plan, implement and manage activities in the light of the principles formulated for the comprehensive community development. These institutions may be a mass coalition of village, or an interest group, or a group of like-minded people for the promotion of the groups' interest in the principles of co-operation and democracy.

Such organisations can be created around a single activity of common interest of the community and it can be nurtured over the time by development activities. It is easy to organise but to keep them organised is not an easy task for the social organisers and the community members themselves. They would cooperate when it is profitable. Moreover, they will remain organised if it continues to benefit its members.

The necessary conditions for initiating and sustaining the participatory institutional development process at grassroots level are:

- Steps should be taken to ensure that these measures complement or build upon locally existing institutions and organisations rather than replace them, as there are problems in accepting completely new forms of organisations. Simple transformation or modernisation of "traditional organisations" can also be problematic.
- Group Promoters (GPs) should assist as catalysts in group development and in linking groups to government/NGO services. Community leader's or social organisers role is that of an advisor strengthening the groups leadership, organisation and planning capacity, a participatory trainer teaching basic problem solving and technical skills, and a link person facilitating communication between the groups and government/NGO's development services. Once the groups reach maturity, community leader or social organisers withdraw from the groups.
- Financial support (government or external project) is necessary for financing training of support staff and providing seed money, and or financial topping-ups to self-mobilised savings, and or loans.

Participatory learning method is an interactive learning process engaging the co-operation and problem solving capacities of the poor. It addresses participants at all levels from the local to national. Participatory learning methods are based on participatory rural appraisal (PRA) as well as small-group learning techniques. Ideally a participatory learning exercise for institution building is a phased approach. It aims first at team building and group formation processes with a focus on demand-driven skill development in fields, such as organisational management and leadership. This phase of learning is directed towards and brings together representatives from all institutional layers involved in the programme implementation. The second phase focuses on technical skill development addressing mainly the small self-help groups on topics of direct relevance to the rural poor such as group savings and credit and

small business management and accounting. When learning groups are small, members come from the same socio-economic level and have similar concerns learning of technical skill is easier. Beneficiaries set the demands, not outsiders. The use of group-based, participatory learning methods for strengthening the collective learning, problem-solving and enterprise management skills of the poor have proved to be quite successful and a number of tools for doing this are already available.

5.4.1 Advantages of Organisation

Advantages of organisation can be summarised as follows:

- Solves those problems collectively which are not possible to tackle individually;
- Develop, protect and improve land collectively;
- Investment increases due to pooling of meagre resources through collective action;
- Raises equity capital and controls capital collectively;
- Easy availability and utilisation of services and facilities;
- Co-operative management of capital and credit;
- Collective arrangement for the sale of agricultural produce, thereby minimising expenses and maximising returns;
- Up-gradation of skills, know-how etc;
- Self-arrangement by the community members themselves towards settlement of disputes; and
- Develop a local management system.

5.4.2 Disadvantages of Not Getting Organised

In a nutshell, the disadvantages for the community not getting organised are as follows:

- All the above mentioned advantages will not accrue leading to great losses;
- The condition of land and the economic plight of the communities will further deteriorate;
- The village communities will remain deprived and neglected;
- Exploitation by the middlemen and commission agents will continue;
- People will lag behind in development and progress; and
- The village communities will never stand on their own feet.

5.4.3 Functions of Organisation

Functions and responsibilities of the local organisations are to:

- Promote local economic activity, which would lead to higher income;
- Take-up social projects in order to create harmony and mutual understanding among the people;
- Mobilise savings to provide credit to the community members;
- Arrange reclamation and development of land and irrigation facilities and other productive physical infrastructures and their regular maintenance;

- Identify productive projects and prioritise them according to the need;
- Supply agriculture inputs and other requisites of the community;
- Arrange the marketing of agricultural produce and handicraft products;
- Arrange veterinary and plant protection services and facilities in the village;
- Arrange and participate in the up-grading of human skill training programme;
- Participate in the management of local affairs, settlement of dispute and petty affairs in the village;
- Establish projects like poultry, livestock, dairy, agro-processing industries etc, and encourage similar projects among members;
- Sponsor and supervise schemes of primary health with special emphasis on sanitation, conservation, and cleanliness of environment and potable drinking water.
- Encourage primary education and adult literacy;
- Co-ordinate and co-operate with other departments and organisations for their activities;
- Fix credit limit for members in accordance with equity and social justice;
- Examine the accounts, sanction loans to members, supervise their end-use and effect recoveries;
- Sanction contingent expenditures;
- Decide the terms and conditions on which deposits are to be received and arrange for the payment for return of deposits;
- Acquire and construct buildings or carry out works necessary or conducive to the proper functioning of the council; and
- Any other function likely to promote the welfare and economic betterment of the village community.

5.4.4 Salient Features of Community Organisation

- The members of local organisation should have a clear-cut understanding about the concept of self-help and self-reliance through community development and its own duties and responsibilities within a community organisation.
- The members of a community organisation should have collective and participatory approach towards the solution of their common, social problems.
- They must believe that “all are for one and one is for all” and should have a sense of “we” feeling and collective belonging.
- The community organisation should try to promote the common interest of its members and facilitate them in the attachment of their needs. Minority benefits should be considered minor and secondary factors by community organisations.
- Fortnightly/monthly meetings and savings should be a regular business of the community organisation in order to promote the habit of thrift and savings among the members and to generate capital for seller financing.
- Community organisation should have the spirit of self-management, self-help and self-reliance.

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- The community organisation should try to obtain maximum benefits from the package offered by development agencies.
- The community organisation should try to obtain benefits from the packages offered by development agencies and NGOs.
- The community organisations should be free of all political and sectarian issues and its sole objective should be the promotion of socio-economic interest of its members. They, however, should make the community members aware of their right to vote and their understanding as to how they can effectively exercise this right.
- The office bearers should be devoted, sincere and dedicated leaders and willing to develop their communities.
- The community organisation should initiate some socio-economic activities from time to time from their own resources.
- It should establish links with other institutions and agencies for the comprehensive village development.

5.4.5 Threats to Community Organisation

Community organisations can encounter active and passive resistance from many sources like local elite, political leaders, religious leaders and in some cases area administrators. To avoid such resistance, the programme should have an equitable and supportive role for all walks of life and for all governmental and non-governmental organisations in the area. The community workers would have to use all organisational tactics to deal with such people during their interaction and motivational visits.

Subordination

Sometimes the community organisation is dominated by the prosperous farmers, merchants and other businessmen and the organisation is converted to the services of vested interest people and not the whole community. Moreover, in some cases the main cause of the damage or effectiveness of a community organisation may be leadership; and today's leadership might become tomorrow's oligarch to use the local organisation for his own vested interest.

The factor, which leads to domination, is the lack of managerial skills between the leaders and the followers. The major measures for controlling dominance are the training of members of the local organisation in participation, decision-making and other organised activities. Regular follow-up, general conferences of the representatives, papers on different activities and on performance of the local organisation and its wider distribution or reading in the general meetings can improve such situations.

Ineffectiveness

Community organisation might become ineffective to its members in due course of time. This is mainly due to lack of skills in organisation development, accounts and planning.

The other reasons include no risk taking nature of the rural people and uncertainties surrounding the rural life. The community worker will have to train the office bearers in particular and general members in book-keeping, organisational work and resource mobilisation from the community itself through their leaders. Fund raising through donations and savings will considerably improve the effectiveness of a local organisation. Similarly, follow-ups by the social organisers are also helpful in keeping the community organisation effective.

Malpractices

Dishonesty and lack of dedication are the common problems that threaten the survival of a community organisation. Sometimes individuals use community organisation for their own interest or for the interest of their friends and family, at the cost of collective interests of the members. Sometimes the funds are misappropriated. Smaller groups, regular meetings and simplification of the procedures can help in overcoming the malpractices. In smaller groups invariably there is more interaction which reduces the possibilities of malpractices and increases the prospects of handling the funds in a more honest manner.

Similarly holding the general body meeting regularly makes the representation more effective and prevents misappropriation. Simple bookkeeping procedures can enable the community members to understand the financial position of the community organisation and their own liabilities. The important point of the sustainability of an organisation is to encourage and reinforce members' commitment to their organisation and to their sense of responsibility towards the organisation.

5.4.6 Community Organisation and Women

Participation of both male and female partners in development activities is an inherent part of the participatory development and the social organisation process facilitates it. Women's participation in the development of natural resources and other development activities is not possible without an explicit gender awareness, and without building the techniques for understanding and systematically addressing the issue on a wider scale. The programme staff as well as the community has to be sensitised on gender issues and the concept of gender parity needs to be clarified. All programmes should have a clear strategy for organising women in their respective programme areas.

Participation of women in development activities is certainly wider than the promotion of women only. The programmes should focus on the relationship between men and women, their roles, access to and control over resources, division of labour and needs through the community organisations. A clear understanding on these issues leads to household security, well-being of the family, use of natural resources and production and many other aspects of rural life. Failure to take into account women and their role often results in unsuccessful project activities.

Therefore, understanding the gender relationships and adjusting methods and messages for them is critical for full participation by all sectors of the community. Separate strategy for women's participation should be devised to ensure a balanced involvement of men and women in the project activities; however, as far as social organisation of women is concerned, it is important to follow all the following steps for establishing women community organisations.

- Understanding and documenting the differences in gender roles, activities, needs and opportunities in the context of each community development programme;
- Data should be collected and organised to highlight women's key problems, underlying causes of problems for men and women, and the relationship between problems and causes;
- A thorough analysis of the data should be conducted to highlight the learned behaviours of men and women;
- Women participation analysis framework should cover various categories of information such as need assessment, activity profile, resources, access, and control profile, benefits and incentive analysis and institutional constraints and opportunities;

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- Specific-training packages should be developed to sensitise the programme staff and the community on gender issues in the context of social and cultural environment;
- Objectives of women participation should be clearly stated in the context of overall objectives of the project. This will help the staff to understand how to get out of conventional approach of thinking only in terms of providing different facilities for women; and
- Special monitoring and evaluation system should be in place to enable the adjustment of women participation, to establish accountability of commitment, and to achieve gender-specific priorities.

The social organisation objectives of increasing women's managerial and organisational capacities, enhancing their self-confidence, and allowing them to control income in their hands, are best met where there is a separate women's organisation. When activities are implemented through the male dominated organisations, the physical and economic objectives of increasing productivity and income or reducing labour time may be met, but the conscientisation effect on women is definitely less or even nil sometimes. By forming an organisation with separate membership and savings accounts, women can initiate a process that enables them to share experience, workload, problems and decision making.

SAQ 3

- i) What is community organisation? Explain necessary conditions initiated for the development process.
- ii) Explain the various functions and responsibilities of the local organisation.
- iii) Write a note on the following in your own words.
 - a) Features of community organisation.
 - b) Community organisation and women.

5.5 SIGNIFICANCE OF PARTICIPATORY APPROACHES IN EMPOWERING PEOPLE FOR SUSTAINABLE DEVELOPMENT

The family of approaches and methods known as Rapid Rural Appraisal (RRA), Participatory Rural Appraisal (PRA), Participatory Interaction in Development (PID), and Participatory Planning and Action (PLA), has gained increasing acceptance during the past decade within development projects. It applies to theory as well as development practice, bringing about a reversal from top-down to bottom-up, from centralised standardisation to local diversity, and from blueprint to learning process. This section focuses attention on what, why and how of such participatory approaches, and their impact on sustainable development. It also makes the case for using such an approach as the intervention strategy for development, be it rural or urban.

Participation basically means taking part or sharing. In the development context it goes further, with implications as to who shares, with whom, and in what context. Participation in development has a long history. Various government and non-governmental organisations, both national and international, have focused attention on participation in a conspicuous manner over the past two decades. The terms 'popular participation' and 'people's participation' have now become a part of the development language in both the sectors.

The term participation, as well as the rationale for these approaches, have been interpreted in a variety of ways. Food and Agriculture Organisation (FAO) argues for

participation in the following manner: Participation by the people in the institutions and systems which govern their lives is a basic human right and also essential for realignment of political power in favour of the disadvantaged groups and for social and economic development. Rural development strategies can realise their full potential only through motivation, active involvement and organisation at the grassroots level of rural people, with special emphasis on the least advantaged, in conceptualising and designing policies and programmes and in creating administrative, social and economic institutions, including co-operative and other voluntary forms of organisation of implementing and evaluating them.

Similar views are reflected by the United Nations Research Institute for Social Development (UNRISD), that the value of participation arises from the inherent strength of participation as a means of articulating genuine needs and satisfying them through self reliance and mass mobilisation. UNRISD used the following definition of participation in one of its publications: Participation involves organised efforts to increase control over resources and regulative institutions in given social situations, on the part of groups and movements of those hitherto excluded from such control.

There are however, significant variations in the usage of the term. According to Chambers, "Participation" is a word, which is experiencing a renaissance in the 1990s. So widespread is its use that some talk of a paradigm shift to participatory development. But he argues that "There are three main ways in which participation is used. First it is used, as a cosmetic label to make whatever is proposed appears good. Secondly it describes a co-opting practice to mobilise local labour and reduce cost. Often this means that they (local people) participate in "our" project. Third, it is used to describe an empowering process, which enables the local people to do their own analysis, to take command, to gain confidence, and to make their own decisions. In theory, this means, that "we" participate in "their" project not "they" in "ours". In this perspective reversing power relations is the key and weak link in achieving participation. He also notes that the gap between concept and actual practice is overshadowed by the use of the term participation in development jargon today, so much so that the meaning of the term needs clarification.

Field experience clearly shows that participation means different things to different people. For some it means people attending meetings, or labour contribution in development work like *shramadana* (free labour). In irrigation rehabilitation, for example, participation in some cases appears to have meant holding meetings to get people's endorsement to what has already been planned by the technical experts. Such meetings, presided over by the decision makers, came to be known as ratification meetings, where the dominant views of those who knew, prevailed over the others. In other instances, participation means group formation for co-operative/collective action for input supply and marketing.

The highest form of participation appears to be self-organisation and self-responsibility and self-actualisation, which results in the empowerment of the people concerned. Participation is considered by some as an essential part of human growth, that is, the development that guides sustainability.

The meaning of participation used in this unit has empowerment and self-responsibility for collective decision making as its final goal. The achievement of such participation needs to be a process in which the rural poor themselves become more aware of their own situation, of the socio-economic reality around them and of the problems. Having understood such problems they take decisions on the steps to be taken in initiating a change in their situation. Development strategies in such a context should be supportive, and accompany this process.

In such a perspective, participation becomes interrelated with a process, which opens a wide spectrum of free and open interactions. In this process, there can be progress as well as failures, but both must be viewed as opportunities to learn for taking better decisions in the future. Participation becomes a learning process for both the villagers

and the development workers. Such a process cannot be determined from outside. Continuing interaction and reflection generates it.

Experiential learning makes the process the people's own, as opposed to the people being mobilised, led or directed by outside forces. Through collective self reflection on their experiences and problems, people become aware of different dimensions of the reality, and of what can be done by themselves to transform it. With this awareness, they decide upon what collective action to take and analyse its results to promote their awareness further. Thus they move on with progressive and advancing knowledge of their evolving reality.

During the early 1970s the development interventions that were carried out with either local or external funding emphasised two types of actors. On one side were those who engaged in the task of identifying development needs, planning development activities, mobilising resources for development, implementation, monitoring the implementation process to ensure that designs, plans and disbursement of resource were taking place as planned. They also evaluated the success or failure after the event, using monetary disbursements, physical achievements or assessing the impact these activities had on the target groups as yardsticks.

On the other side were the beneficiaries for whom and for whose development all these tasks were undertaken. They were only to operate and maintain structures such as minor irrigation reservoirs, wells and rural roads, and to share the cost of the development activities.

The two categories of actors therefore were those who do things and those for whom things are being done; those who do are the empowered, they have knowledge, authority, access to resources and decision making power. Those who are the beneficiaries, lacked authority, were poor and were basically voiceless in the decision making process. The gap that exists between these two groups resulted in mutual mistrust, often leading to antagonism, and had serious implications on the development process.

Therefore bridging this gap between these two parties, namely the doers – the politicians, the bureaucrats, NGO activists, and those for whom things are being done – the peasants, the poor, and the citizenry at large, is identified as a prime need for successful achievement of development activities/projects. Numerous failures have been recorded in a wide spectrum of development activities, owing to the existence of this gap.

The gap can be illustrated by looking at the process through which development activities are usually undertaken. Development work is usually undertaken through projects, with set objectives, a predetermined time schedule, a plan of action, and a budget. Responsibility for implementation is assigned, and the beneficiary clientele comes into the picture only as a peripheral element.

Most of these projects are conceptualised and formulated around the availability of funds. There are many instances where the need for a project to achieve some objective is conceived in the mind of some authority that either has access to funds or enough power to start. After the project is conceived, a pre-feasibility study may be carried out, with data being gathered through traditional methods and a justification for the project worked out. If the initiator of the project is very keen on the project and has enough power, then the projects, which are not really feasible, are manipulated to appear feasible.

Once the pre-feasibility stage is over, a feasibility study is undertaken. The same manipulatory process is carried out in a deeper and more intensive form. If the feasibility study meets requirements, then the project gets off the ground and thereafter the project is implemented. Invariably the project is to benefit a specific clientele but where does the clientele come into the picture in the project planning

process? Often clients are considered a nuisance, because they express justifiable fears about the changes that may result from the project.

Are development projects planned to satisfy someone's ego, to utilise some available funding, or to solve genuine problems? If the objective is to solve problems, all parties affected by the problem should have a say in the solution that is identified. The affected parties should be brought into the project identification and formulation process. But if the involvement of the clientele is desired, how should it be done and what are the methodologies, and processes? It is here that participatory methodologies and implementation become relevant.

The participation of the beneficiaries is needed to achieve success of the projects at a very practical level. A study on rural participation cites an evaluation of over 50 rural development projects, which reveal that participation, and decision-making during implementation is even more critical to project success than participation at the initial stages. Due to lack of participation, a large number of development projects have resulted only in a short-lived progress.

An example can be cited with regard to some minor irrigation projects implemented in the latter half of the 1980s in the districts of Kurunegala and Moneragala in Sri Lanka. In the early 1990s, two to three years after projects completion, the Self Help Support Programme of the Swiss Interco operation undertook an evaluation of some of the completed irrigation projects. The results revealed that about 70% of the minor irrigation tanks rehabilitated were found to be poorly maintained by the farmers, as they were envisaging further external support for maintenance.

When some of the farmers were asked why they allowed the tank bund to get eroded to half its size in certain places, let plants grow uncontrolled, and neglected, the ant hills destroying the bunds, the answer was: we have informed the Field Officers in writing several times but none of them came this way after the construction work was over. This is a clear indication of the lack of involvement in the decision-making and implementation.

Field interaction showed that they lacked a sense of ownership or responsibility for maintaining such structures. There was no organised effort to find alternative means of addressing such issues. The Farmer Organisations appear to have been formed by the intervening organisations to renovate the first set of tanks. When the construction work was over, the need to take collective action for maintenance was not realised.

With this experience, a participatory approach was encouraged with the next set of tanks to be rehabilitated, implemented by two partner organisations in Mahawa and Kurunegala. It took a much longer time to complete the structures, as compared to the earlier experience. The Farmer Organisations were involved from the planning stage, through implementation and monitoring and evaluation, using a participatory approach, PRA. This meant building up the capacity of the Farmer Organisations, and even more so of the field officers who were used to planning and implementing projects on their own for the benefit of the people. The role reversal of these officers did not come about automatically by using the methods alone, but resulted from the follow-up after training in participatory methodology.

This slow process of reflection and action finally allowed information generation, analysis, planning and action by the farmers based on their own decisions. The results can be seen today. Urapolayagama, Heeralugam, villages in the Kurunegala District facilitated by the National Development Foundation, Kandubodagamawewa in Mahawa facilitated by the Sri Lanka Freedom from Hunger Campaign Board, Savings and Credit Groups at Mahiyangana facilitated by Future in our Hands, are examples of successful efforts of this approach. In these instances farmers organised themselves to maintain the rehabilitated schemes backed by groups funds and collective action. The difference in the results and impact of the implementation strategy has been evident.

These experiences also show the importance of the participation of the people concerned in the decision making process throughout the development cycle. A sense of ownership of assets arises when there is participation in planning, designing, implementation, monitoring and evaluation.

5.6 PARTICIPATORY METHODOLOGIES IN THE EMPOWERING PROCESS

The recognition of the importance of participation in the development process has led to the development of a variety of methodologies in order to achieve its objectives in development projects. Current practices in implementing the participatory approaches in development are drawn from a variety of traditions such as Activist Participatory Research, Applied anthropology, Field Research on Farming Systems, Traditions and Methods of Participatory Research, Agro-Eco Systems Analysis and Rapid Rural Appraisal. According to Chambers, it represents a growing family of approaches and methods, which will enable local people to share, analyse and act to enhance their living conditions.

In the Sri Lankan Context, the national network promoting participatory approaches uses the term Participatory Interaction in Development (PID) in order to identify the methodology used in this country. This connotes participatory interaction among all actors in development, while recognising the key role of the people themselves and its relevance at various stages of the development cycle. In promoting the use of this approach in Sri Lanka, the experiences of social mobilisation, such as in the Change Agent Programme that has evolved during the past decade in Sri Lanka has been kept in mind.

PID draws heavily on PRA in the use of visualisation of tools and techniques and changes in the behavioural patterns and attitudes, while focussing on the interaction and process. It is envisaged that such a conceptual outlook promotes sustained participatory development, which will contribute to the empowerment of the people. This approach needs to be treated as an adapted version of participatory development, which is supported by creative ingenuity. Similarly, like the participatory approach, these methodologies are bound to change with experience.

Field experience over many years has shown that PID/PRA tools and techniques have a strong potential for achieving the participation of all actors concerned, particularly the villagers whether literate or illiterate. The key to this is the element of visualisation associated with such tools. The shifts from verbal to visual help even the non-articulate members, such as the under-privileged, women, and children, to participate. It creates a free and open environment for interaction.

The methods and tools often used are participatory mapping and modelling, direct observation and transect walks, seasonal calendars, time lines and trend line's matrix scoring and ranking, wealth and well-being ranking and grouping, institutional diagramming (Venn diagrams), and other forms of analytical diagramming such as different types of graphs. Information generated through these techniques is often supplemented by secondary data, which can be used for crosschecking. Focus group interviews, semi-structured interviews, and key informants are also used in combination with the other methods.

The opportunities for triangulation of information generated are another aspect, which come out very significantly in the use of participatory tools and techniques, and are built on the principle of visualisation. This means that the reliability and the validity of the information generated can be established through crosschecking. Visualised information also allows for the perceptions of different sectors of the populations – men and women, young and old, privileged and disadvantaged to come together on a common basis.

Interaction within the groups, between groups, and sharing with those from different locations, is made more feasible by the use of visual techniques. When farmers from Dambana in Mahiyangana presented their experience in Colombo to some well-educated development workers, they could articulate their views effectively with the use of visuals they prepared themselves. The same was true of the farmers from Urapolyagama in Kurunegala, where they presented their case to the members of the national Network for PID/PRA. Exchange visits between farmer organisations and exchanges between farmers within the group, have become more realistic and understandable with the use of these techniques. Handled carefully and skillfully by a facilitator, they become an instrument for bringing about the envisaged change in behaviour and attitudes, and for breaking barriers between different sections of the population.

Field experience shows that information needed for a situation analysis, or baseline data for establishing indicators for monitoring and evaluation in a participatory manner can be elicited, understood and agreed upon in such a process. Therefore the same tools could be used for interactive monitoring of progress of impact evaluations.

One such example is the experience of the National Development Foundation. In this organisation information generated through a participatory process has been helpful for group interaction during monthly meetings, to compare progress among themselves, with the tools providing the base for information generation analysis and discussion. Such information has proven to be equally effective for joint reviews and evaluations with the intermediary organisations and funding partners. This, however, should not be interpreted to mean that participatory evaluation and monitoring rules out hard data. Hard data can be aggregated or drawn from such basic information by the parties concerned. But the fact remains that the local organisation should do it for the purpose of monitoring.

Wealth ranking exercises are very useful for learning about the social structure and identifying a target group. They must be carefully handled, as they can become sensitive issues. The Farmer organisation of Kanudubodagamawewa in Maho is an example where such analysis promoted the community to organise itself to help the poorer sector for example, the landless poor were allowed to use small plots of paddy land allocated to them by the community for cultivating vegetables during the Yhala season. The analysis of power relations in the local set-up, which is crucial for the empowerment process, is often being done with the use of the flow charts and impact diagramming.

The use of the tools and techniques is limited by the skill of facilitation. Assessing the limits of local knowledge and awareness, and when to bring in technical and scientific know-how available with experts, can be addressed with the analysis of information generated through the use of participatory tools and techniques. The experience of building on what people already know, particularly with regard to farming systems, has shown the possibility of harmonising different types of knowledge at the local level.

None of the above should be taken to mean that the use of such methods automatically ensures participation in the manner expected that leads to empowerment, enabling villagers to conduct their own analysis, and to own the information generated. Many who pay lip service to PRA have a tendency to look at the technique as an end in itself, and not a means for attaining development goals.

The critique that tools and techniques of PID/PRA are only cosmetics to social mobilisation can be challenged in that sense. Why do people use cosmetics? They realise the existence of a shortcoming that can be covered by such an action, or at least to improve on what exists. Such visualised tools and techniques could be considered as a strong medium or a means for social mobilisation to be effective. This is particularly so if the agent wishes to change the role from an activator to a facilitator, who allows the key actors or the community to articulate views, generate information,

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analyse, draw conclusion, assess options, take decisions, implement, and monitor by themselves. Therefore, as a concept, it goes much deeper, and becomes complementary to the agent. All such approaches stress the importance of commitment to the process as a means for empowering the people. The complementarity of the approaches needs to be recognised in such a context that they should not be seen as additions for subtraction. Complementarity makes the final product of the empowerment richer, stronger, and mutually reinforcing.

A farmer, in a recent video, is shown taking pride in the fact that they could produce a result, which they never imagined they could. Therefore, it is not merely playing with stones, and sticks, or belittling the literate and the intelligentsia. While it looks like Montessori work, as some say, the basic principle behind the Montessori Method is learning by doing. A participatory approach, with a reversal of roles, is also attributed to experimental learning, in which actors in development are in partnership with those to be empowered. In other words, it helps the potential and enthusiasm inherent in human beings to grow and blossom.

Attitudes and Behaviour

Attitudes and behaviour are an integral part in PID/PRA. As observed earlier, in the project mode of development intervention, over the past half a century, the emphasis was on planned projects being implemented with the involvement of the beneficiaries. This has meant that the implementer has a dominant role, and the beneficiary a passive role. In the use of participatory approaches, these roles are reversed, and the beneficiaries become key actors in development.

An analyst further elaborates this point as follows: the major shift, however, during the era of participatory approaches, in the past two decades is one that recognises people from a professional paradigm centering on things. This emphasis was dominant in projects implemented during the 1950s and 1960s with large infrastructure irrigation works and industrialisation being the major sectors. Another expert refers to it as handing over the stick to the poor from the bureaucracy, implying a reversal of roles.

This means PID, as an approach, emphasises a change in behaviour and attitudes, as well as in concepts, values and methods. This challenges the accepted norms, which is dominant in bureaucracies, professions, careers, and the idea of transfer of knowledge from the expert to the ignorant. It also means loss of central control of power and recognising local diversity and empowerment. Such a role reversal applies to all the steps of the development cycle.

Experience shows that the methods and tools previously described, and the process adopted contribute to reinforcing the behavioural changes among the main actors in development. This aspect of participatory approach is the most difficult to achieve. Sometimes, depending on the behaviour of the so-called facilitator, even a participatory tool or technique may lead to top-down implementation. After many years of conventional bureaucratic behaviour, it is certainly a challenge to bring about these different behavioural patterns.

Frustration, due to non-fulfillment of promises and specific biases of projects to which the community has been exposed for generations, makes this paradigm shift a difficult process for the village. In the eyes of the villager, the outsider is the officer, and the past experience with outsiders often inhibits free and open expression.

However, there are instances where participatory methods have helped people to articulate their views to the politicians and decision makers effectively. Even in the contexts such as the plantation sector, where there is a dominant management set-up, workers have used the results of participatory analysis to open a dialogue with the superintendent.

The culture of collaboration between development partners, based on openness and democratic decision-making is essential for sustained development. This can only be realised through a participatory relationship with the communities. The more experience we gather in the use of such an approach, the more we shall understand its implications. It is important to emphasise the spirit in which these methods are used. It is not the tool or the approach, which is often at fault, but the way it is used. Therefore, improving effective facilitation skills on the part of the development workers becomes critically important. The way in which the approach is implemented can help to prevent biases on the basis of community leadership, gender and the disadvantaged.

Process and Sharing

The third significant element in PID/PRA is the process or the sharing of experience. Participatory approaches, particularly PID/PRA, emphasise the need to think beyond projects. In other words, there is a commitment to a process, and is not limited to a project which is time bound. Such a process will create an environment where people actively pursue development activities, on their own initiative. In other words, experience in field situations reveals that self-organised collective action can evolve as a result of a positive environment, which we, as development workers, may have helped to generate through facilitating a process.

Due to the emphasis given to the process in participatory approaches, there is no direct guideline, which can be applied or replicated. The process of learning takes place both vertically and horizontally. Farmers learn from each other through interaction. Farmer groups share experience through interaction between groups, which leads to local people becoming good facilitators for each other's analysis. Local people, such as farmers and villagers, become confident of their own expertise and acquire skills through the process.

This has made it possible for them to share their experience with other local, national and international organisations. In 1991, villagers from Mahiyangana presented their analysis, how they did it, and the purpose for which it was done, to a large gathering of managerial personnel and decision makers from the governmental and non-governmental organisations at the Bandaranaike Memorial International Conference Hall in Colombo. A similar experience took place in the network for PID/PRA gathering in Colombo, where farmers from Kurunegala presented their case in 1994. In spite of the change in environment from a simple village life to metropolitan Colombo, the farmers remained unruffled by the questions raised by the audience. This shows a clear indication of a high esteem arising from self-actualisation and confidence. They could explain to anybody with confidence what they had analysed, planned, implemented and monitored. Recent training conducted for field officers through farmer resource persons, by Action Aid India, is another example of this form of sharing.

It is pointed out that various technologies, approaches and methods are spread laterally by peers rather than vertically through transfer of technology. Farmer to farmer extension is becoming more prevalent, both within and between countries and ecological zones. In PID/PRA, the best trainers and facilitators for adjoining villagers are those who have already gained experience in the application of the approach.

A villager who has gone through a participatory process of development in his village was asked as to what he would suggest to do differently, if the PDA/PRA process was to be replicated in another village. He promptly replied: 'this is how we did it, and it makes sense to us; others may do it differently. Please ask them to evolve their own system'. This simple statement from a farmer in a remote village in Kurunegala has an in-depth philosophy behind it. It shows trust in the potential, and belief in the evolving nature of the participatory process. However, when reference was made about improved farming practices, he said: 'those could be shared with our colleagues in the next village. Friends from other villages have visited us to learn about intensive rice

cultivation practices from our demonstration plots'. Thus experience spreads from farmer to farmer, and village to village. It is also spreading from non-governmental to governmental organisations and vice versa through national networking. Regional exchanges provide a forum for sharing of these techniques between nations.

Process and Time

A participatory approach is a catch word in the development jargon today. However, when it comes to the progress and monitoring of the projects and programmes, the tendency is to look for easily accomplished and tangible targets. Naturally the development worker gets sandwiched between the community based participatory approach emphasising people and their reality, and the demand for physical and financial targets. This dilemma still prevails, even though participation has entered as a buzzword in the development literature.

An expert's comments on this conflict are as follows: "development workers do not seem to have very much time or patience. Perhaps it is all a result of the invention of the jet engine- if we can get there in only ten hours why do we need ten years to develop the place? On a more serious level, we do seem to want results amazingly quickly. It is however doubtful that the development process can be compressed to meet our ambitions. We used to talk about three year projects; perhaps we should be talking about twenty year programmes. How many rural areas have developed in one generation? We are working with people, people with their own urgencies, priorities and time scales. It is their development that is the measure of success."

This highlights the fact that if people matter in development, there is no short cut. We have to facilitate a process whereby people become sensitive to their problems and express readiness to change their situation by taking responsibility for their own organisations and acting correctively, taking decisions for the desired changes. We, as development workers, need to facilitate such a process and support strengthening of such organisations. This is a long-term process demanding the necessary commitment.

'A great deal of heartbreak which in the past has too often turned over optimistic idealists into later cynics, would be avoided if those who wish to help in development could learn to be content to do good slowly.' As Burkey rightly says, poor people who never had the opportunity of participating in a democratic process require time to learn to formulate and express their ideas, participate in open debate, take collective decisions and follow up with cooperative action. Mistakes can be made into lessons leading to better decisions in the future. Development workers need to remember that behavioural patterns cannot be changed at once. Change must be a gradual process, a process in which the ideas and behaviour of all actors in the development process will most probably change over time.

SAQ 3

- i) Explain the significance of participatory approaches in empowering people for sustainable development.
 - ii) Write a note on the following in your own words:
 - a) Methods and Tools.
 - b) Process and Sharing.
-

Let us now summarise what we have studied so far.

5.7 SUMMARY

In the case of specific grassroots level organisations, the potential of participatory methodology has been proven in many instances. Participatory methods using visual and verbal modes of communication have been effectively used for appraisal,

planning, monitoring and evaluation of the development programmes. But the use of methods alone is not enough to sustain the participation of the community in the development process. Other significant aspects which need to be strengthened include the institutionalisation of the processes, delegation of responsibility, and decentralisation of decision-making and resource allocation.

The anticipated role reversals are extremely significant for the key actors, namely the villagers, to perform effectively.

Participation, in the context of participatory approaches, specifically PID, can be used in a much wider perspective than it is currently used. All actors in the development scene have a role to play - the farmers and villagers who are the prime actors, the facilitators or change agents from government or non-governmental sectors, the decision makers in managerial positions, and policy makers and politicians. The roles of different actors can be geared towards the realisation of the common objective of sustainable development through empowerment of the people. There is a need to create an environment where people themselves are the key actors, and all the other actors play a facilitative and supportive role.

This should rule out the misunderstanding that a bottom up process is one where people do everything by themselves, know everything that needs to be known and consider that modern technology/research has no role to play.

In a participatory approach, there is certainly room for scientific research and technology. The only difference is that we build on what is already known by the farmers as indigenous technology, and there is an opportunity to harmonise or adapt research findings in an acceptable and sustained manner. This means a re-orientation of the conventional extension systems, the field workers' role, and that of the institutions they represent, in order to evolve a system which emphasises support and facilitation for local farming initiatives, which are essential for sustainable development.

5.8 TERMINAL QUESTIONS

1. Explain various approaches and methods of participatory approach.
2. Discuss participatory approach and the principles of participatory development.
3. Write a note on the constraints of participation.
4. Explain various principles of community development.
5. Write a note on the salient features and functions of community organisation.
6. What is Community organisation? Briefly examine the role of women in these organisations.
7. Examine the role of participatory approach in empowering people for sustainable development.
8. Explain the participatory methodologies in the empowering process.

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UNIT 6 A MODEL OF URBAN DEVELOPMENT: ORANGI PILOT PROJECT

Structure

- 6.1 Introduction
Objectives
- 6.2 Background of Orangi Pilot Project (OPP)
- 6.3 Programme Details
- 6.4 Autonomous Institutions of OPP
- 6.5 OPP Strategy
- 6.6 Summary
- 6.7 Terminal Questions

6.1 INTRODUCTION

In the previous unit you have discussed about the participatory approaches, development and principles of participation, participatory learning and community organisation towards empowering people for sustainable development. In the present unit, we will discuss a case of participatory management development.

Alternatives to the conventional approach habitat development have been explored in the government as well as the NGO sector. These innovative alternatives include the regularisation of unplanned settlements and support for the direct involvement of communities in the urban and rural resource management. Such NGO programmes as the Orangi Pilot Project (OPP) and the well-known government-led project Khuda Ki Basti identify the directions of sustainable development, and the potential for cooperation between communities, NGOs and the state in planning, operation, and maintenance of civic facilities. In this unit we will study about Orangi Pilot Project area and people, background of OPP, OPP Programmes, role of Akhtar Hameed Khan in OPP, and OPP Strategy.

Objectives

After studying this unit, you should be able to:

- define and list the objectives and method adopted by OPP;
- discuss how OPP approach is unique;
- explain the participation of local communities in OPP sanitation, health and credit programmes;
- discuss as to how joint staff meetings of OPP became a learning experience for professionals, social organisers and technicians; and
- describe the finest achievement of OPP.

6.2 BACKGROUND OF ORANGI PILOT PROJECT (OPP)

Most parts of Orangi Township consist of Katchi Abadis. It is near Karachi, in the Sind province of Pakistan. It covers an area of over 8,000 acres and has a population of about one million living in 94,122 houses. The population is multiethnic, consisting of people from virtually all areas of Pakistan, consisting of mohajirs (immigrants from India), Biharis (immigrants from Bangladesh), Pathan and Punjabi immigrants, and local Sindhis and Balochis. The majority of them belong to the working classes. They are day labourers, skilled workers, artisans, small shopkeepers, paddlers, and low-income white-collar workers. Average family income is estimated at Rs 1,500 per month.

The settlement began in 1965. Land colonisation, house building, development of income-generating activities, were all undertaken by local residents with the help from the informal sector and without any assistance from government agencies. Writing about the energy and initiative of the people of Orangi, Akhtar Hameed Khan (**AHK, a well known authority on Participatory Management in Pakistan**) says, 'Familiarity with Orangi reveals that a town larger than Colombo or Gujranwala receives scanty services from official agencies. The people of Orangi depend mainly on "informal" sources. Land is obtained through dallals (middle-men); credit materials, and advice for housing is obtained from thallewalas (block manufacturers). Self-supporting schools teach their children. Quacks (physical and spiritual) treat their ailments. They continuously resort to the black market or bribe market for business facilities, for welfare amenities and be free from harassment. That this informal sector and its black market is many times the size of the official sector indicates the weakness of government planning for the poor. At the same time it also indicates the vitality of the poor and their skill in the art of survival. Besides, their vitality is demonstrated by the presence everywhere of anjumans (associations), that lobby intensely all the time, presenting claims and guarding gains. It is further demonstrated by the growing consciousness, especially among the younger generation, of their collective vote power. However, this informal sector, in spite of its vitality and energy, cannot effectively overcome the technical and managerial problems that its involvement in development has forced upon it, as it has no access to relevant research or qualified professional expertise.

The direction that the Orangi Pilot Project was to take was clearly spelt out by Akhtar Hameed Khan in 'A Note on Welfare Work', written in February 1980. In this he talked about the problems related with the dislocation of people from their environment and the need to re-establish a sense of belonging, community feeling, and conventions of mutual help and cooperation. He also emphasised the necessity of creating local level social and economic organisations to avoid chaos and confusion. With the strengthening of social organisation many problems related to health, education, and other areas will positively improve. Moreover, the development of social and economic organisations should be done gradually after careful investigation of and acquaintance with local people, their conditions and institutions, may be in a year's time. It should be followed by an evaluation based on the analysis of detailed documentation; two fundamental principles should be followed in the process:

- i) One, the avoidance of any political or sectarian bias; and
- ii) Two, the observance of a populist point of view and the preference for the needs of the common people.

Akhtar Hameed Khan was given an independent charge of the project and was to be his own master. He has been working on the project since 1980. OPP has emerged as an important research institution, which promotes community organisation and self-management. By providing social and technical guidance, it encourages the mobilisation of local managerial and financial resources, and the practice of co-operative action.

- The project would follow the research and extension method which meant that the OPP would first thoroughly analyse the problems of Orangi and the popular methods of solving them, and
- Try to develop, through social-cum-technical research, a better package of advice and offer it to people. This understanding has been followed scrupulously on both sides.

Objectives of OPP

Orangi Pilot Project, from the very beginning, had the following objectives:

- To analyse the outstanding problems of Orangi, and

- Then through prolonged action research and extension education, discover viable solutions.
- The project does not carry out development works, but promotes community organisations and cooperative action, and provides technical support to such initiatives. In the process it also seeks to overcome most of the constraints the government agencies face in upgrading the low-income informal settlements.

It is important for the local communities to participate in local activities. The NGOs should integrate their projects with planning mechanisms of the government, as their solution is impossible without government participation. However, there are three prerequisites for participation:

1. the models developed should overcome the constraints faced by the government agencies in the rehabilitation of Katchi Abadis (or for other development programmes) without requiring major changes in their structure and/or the development and imposition of any radical legislature;
2. overhead staff salaries, and related costs should be in keeping with government expenditure patterns and regulations, and the strategy should respect established state procedures; and
3. proper documentation of the processes of developing the model, the creation of a demonstration area, and effective training materials have to be created, without which replication is difficult, if not impossible.

The OPP has followed these 'prerequisites' scrupulously, and as a result its work is documented by sixty-five progress reports which read like a story book with hundreds of case studies, monographs, extension pamphlets, and posters; and profiles of activists and lane managers. In addition, a large number of books have been published on the Project and thousands of technical reports, maps, and land-use plans for the areas in which the OPP working has been developed.

Cause of Urban Development Failure

Most programmes developed for the poor in the Third World fail because they are designed by professionals who belong to the upper classes and are not fully conversant with the sociology, economics and culture of the low-income communities or conditions in low income settlements. On the other hand, the informal sector, that increasingly caters to the needs of the urban poor in the Third World countries, and the urban poor themselves, do not have access to the technical research and advice that qualified professionals can give. Consequently, the development they bring about is substandard and fails to make use of the full potential of informal sector operators and low-income communities. Therefore, an arrangement has to be made and institutionalised to enable an effective interaction between qualified professionals and research institutions on the one hand, and the informal sector and low-income communities on the other. OPP, it is argued, has succeeded in creating such an arrangement.

Unique Approach of OPP

OPP, unlike many other NGOs, has in a unique strategy shied away from premature media publicity as it may result in unpleasant consequences if the project fails in its objectives.

On the above principles and approach, the OPP has been operating a number of programmes. These programmes include a people's financed and managed low-cost Sanitation Programme; a Housing Programme; a basic Health and Family Planning Programme; a programme of Supervised Credit for Small Family Enterprise Units; an Education Programme; and a Rural Development Programme in the villages around Karachi. On the basis of the research conducted, the following model programmes have been proposed:

Approaches and Practices

- i) A low-cost sanitation programme enabling low-income families to construct and maintain modern sanitation with their own funds and under their own management.
- ii) A low-cost housing programme, which upgrades the block-makers' yard by introducing stronger and less expensive construction materials, and also upgrading the skills of local masons by introducing proper construction techniques. In addition, this programme educates house owners on planning, orientation and low-cost technology.
- iii) A basic health and family planning programme for segregated, illiterate or semiliterate, low-income housewives. The programme has the following objectives:
 - causes of common Orangi diseases and methods of preventing them;
 - contraception;
 - the importance of growing vegetables in their homes;
 - providing immunisation and family planning services; and
 - upgrading existing clinics, providing vaccines, family planning supplies, and training vaccinators and traditional birth attendants.
- iv) A programme of supervised credit for small family enterprise units, which increases production, employment, managerial skills and business integrity. The financial benefits from this programme are used by the beneficiaries to improve their homes and the physical and social infrastructure of their neighbourhood. There is a 97 per cent rate of credit recovery.
- v) A school programme that assists in upgrading the physical infrastructure and academic quality of schools established by private enterprise.
- vi) Women work-centre programme, which organises seamstress and other garments workers into family units dealing directly with the exporters and wholesalers.
- vii) A social forestry programme, which promotes kitchen gardening, nurseries and tree plantation in homes, schools and places of worship.
- viii) A rural development programme, which provides credit and technical guidance to persuade entrepreneurs to develop their arid holdings into woodlots and orchards and to grow forage for milk cattle, thereby enabling them to become commercial producers and traders.

OPP has emerged as one of the best managed NGO projects in Pakistan and has assisted one million people directly or indirectly to improve sanitation conditions. This has been achieved with the minimum external support.

SAQ 1

- i) Briefly explain Orangi pilot project area and people.
 - ii) Explain the following in your own words.
 - a) Objectives of OPP.
-

6.3 PROGRAMME DETAILS

Sanitation

To address the sanitation problem in katchi abadis, OPP adopted the research and extension approach (R&E), first, to ascertain the nature of the problem, and then to propose solutions on the basis of the data and information gathered.

OPP discovered that house owners were both willing and competent to assume the responsibility of constructing and maintaining all sanitary arrangements with their own finances and under their own management. The R&E approach helped reduce costs of construction drastically.

OPP research consisted of simplifying the design, fabricating standardised steel shuttering, surveying and mapping, preparing models, slides and audio visual aids, and lastly, preparing instruction sheets and posters. The extension included funding activists in the lanes, training lane managers and masons, providing accurate plans and estimates, tools and loans for shuttering, and finally, providing social and technical guidance and supervision.

OPP research concluded that costs could be reduced by taking measures such as: simplifying methods of construction; eliminating bribes; providing free technical assistance; elimination of contractor's profits; use of standardised steel moulds which reduced costs of sanitation; construction should be self-financed and self-managed; train lane managers, give them technical knowledge and loans for tools.

The success the OPP can be gauged from the following figures: Statistics from August 1995 show that people in Orangi have laid 5,326 lane sewers and 395 secondary sewers. Sanitary facilities have been provided in 81,378 houses. The impact of this programme is evident from the fact that the sanitation facilities in the area are being maintained by the lane residents at their own cost. Moreover, Orangi residents have become accustomed to a higher standard of sanitation for which they are willing to pay. As a result of the intensive training of masons in the technology of sanitary engineering and the widespread training of lane managers, the skills of Orangi residents are much higher and they no longer have to depend on OPP for social and technical guidance. The difference between Orangi and other katchi abadi is immediately apparent.

The OPP model of low-cost sanitation is now being replicated by NGOs and CBOs, foreign donor agencies (UNICEF, World Bank), as well as by the official agencies.

Low-cost housing

Thallas or block manufacturers are responsible for strong building components and supplying building materials such as cement, steel etc. They also provide credit alongwith advice.

After the success of the sanitation programme, OPP started a housing programme in 1986 following the same R&E approach. Surveys showed that low-income housing in Orangi had several defects. The main building components are manually made, sub-standard, and caused cracks. Defective construction techniques had been used due to lack of expertise. Ventilation and sanitation facilities were inadequate, and the houses needed alternative low-cost roofing and load-bearing walls to make them sturdier. Two years were spent on conducting research and the following two years on the extension of research findings. It consisted of evolving standard construction designs and techniques, preparing standardised steel shuttering, writing manuals and instruction sheets, preparing audio visual aids, and lastly, constructing demonstration models. The extension process included finding block manufacturers willing to participate in research and development, training masons, lending tools, providing accurate plans, estimates and technical guidance, and supervising construction. The R&E process has reduced the cost and improved the quality of construction significantly.

The OPP did not set up its own block manufacturing unit, but gave its research results to private manufacturers. In 1987 four private block manufacturing establishments were mechanised with OPP supervision and loans. By August 1995, they had sold 14.98 million machine-made blocks, of which 60 per cent were to customers outside Orangi. The four mechanised block manufacturing units have repaid the loan in full.

Moreover, following the example of these four, 46 other block manufacturing units have adopted the machine-making process without any loans from OPP.

After improving the blocks, the research focused on alternative roof designs; the process of incremental building created problems for low-income house owners. They built the ground floor room with a tin roof. If, at a later stage, they wanted to add another floor, they had to demolish the old structure entirely because the walls could not bear the load of RCC roofs. RCC construction is also quite expensive. Few could afford the cost of demolition, leave alone RCC roofing. After considerable investment and prolonged research, OPP concluded that block-making establishments could now manufacture and sell roof almost half the cost of RCC and the construction was also easier and quicker.

The first block manufacturing establishment to whom OPP's machines and moulds were handed over as a loan of Rs 55,000 started production in March 1990; within a year it has sold thousands of roof construction materials. A second block manufacturing establishment started operating in 1992 after taking a loan of Rs 75,000. By August 1995, 155 demonstration units have been constructed and there have been numerous requests for more. Others have adopted the package on their own.

OPP has spent a significant amount of time on training masons through class lectures, meetings, instruction sheets, leaflets and manuals and job supervision. Nearly 120 masons have been trained and more are in the process of being trained. As a result there are now skilled masons working in Orangi.

Health

OPP research showed that the incidence of disease in Orangi was extremely high. Typhoid, malaria, dysentery, diarrhoea were very common and infant and maternal mortality rates were also extraordinarily high. There were two principal causes for the prevalence of ill health:

- lack of adequate sanitation facilities; and
- ignorance of health issues among the poor, largely illiterate, female population of the area.

OPP began a health and family planning education programme premised on the following assumptions. Since women were traditional and preferred to stay indoors, the utility of conventional welfare centres was questionable. Instead, OPP introduced a new system consisting of mobile training teams (each including a female health visitor and led by a female doctor), a selected activist family or contact lady every 10-20 lanes, regular meetings at the activist's home, and the formation of neighbourhood groups by the activist.

On the basis of survey research, OPP concluded that the mobile teams and neighbourhood group meetings (at activists' homes) were quite effective. Of the 3,000 families involved in the test sample of this project, 44 per cent now practice birth control. Epidemic disease is controlled, hygiene and nutrition have improved, and over 95 per cent for the children are immunised. In the light of this experience, OPP revised its model in 1991 to reach out to a large number of families. Instead of continuing to visit the same families for a long period of time, OPP prepared a three-month course on the prevention of common diseases, family planning and improved nutrition and hygiene, and kitchen gardening.

Twenty family activists were selected every three months and neighbourhood group meetings were held four times a month in the activists' homes. Up to 15 women at a time attended the training meetings. Immunisation services and family planning supplies were provided at the meetings. OPP discovered that these neighbourhood meetings created greater awareness. Orangi women are now willing to pay for

immunisation and family planning services. In response to this demand, many private clinics were providing these services on payment.

In November 1993, OPP decided to revise the approach of the health programme. To this end, it was decided that Karachi Health and Social Development Association (KHASDA) would undertake mainly the training and supply function, and be responsible for anchoring the programme in schools, private clinics and family enterprise units. KHASDA's daily neighbourhood meetings were terminated and were replaced with training Orangi lady teachers, managers or family enterprise units, and private clinics on primary health and vaccination. Those so trained will regularly hold mothers' meetings in schools, work centres, and clinics and give information on the following: the causes and prevention of common diseases; family planning nutrition and child care; and kitchen gardening. This programme is also being replicated by NGOs in other places in Karachi.

However, it was not at all a smooth sailing. The research and extension approach adopted for the OPP had been applied only to the rural development. NGOs and bilateral and multi-lateral agencies working in the urban areas of Pakistan in the early eighties viewed this approach with skepticism, amusement, or outright hostility. Ironically, the first major conflict between the conventional urban planning and Akhtar Hameed Khan's research and extension approach came from within the OPP itself. This conflict is worth relating as it brings out the inadequacies and the not-too-realistic assumptions on which conventional urban planning is based.

SAQ 2

- i) Explain the following in your own words:
 - a) Sanitation.
 - b) Low cost housing.
 - c) Health.
-

6.4 AUTONOMOUS INSTITUTIONS OF OPP

Between 1983 and 1988, the OPP programmes expanded rapidly. Community organisations, activists, NGOs, and informal settlements in Karachi and other cities of Pakistan started applying to the OPP for help in replicating its programmes, specially its low-cost sanitation programme. To meet this increasing demand effectively, in 1988, the OPP was upgraded into four autonomous institutions:

- i) The OPP Society, for channelising funds;
- ii) The OPP Research and Training Institute (OPP-TRI), which manages the sanitation, housing and social forestry programmes and is responsible for their replication, and is also responsible for training NGOs, government agencies, members of donor agencies, and community organisations and their representatives for all OPP programmes;
- iii) The Orangi Charitable Trust (OCT), which is responsible for managing and promoting the credit programmes; and
- iv) The Karachi Health and Social Development Association (KHASDA), which is responsible for managing the health programme. The rural programme is managed directly by the OPP.

Sine 1987 international agencies have also cultivated the OPP, and in recent years, have tried to replicate the OPP experience by integrating it into the planning process of government projects that they are sponsoring. Meanwhile, in its search for solutions to Orangi's problems, the OPP had to lobby with the concerned municipal and government organisations. The OPP has managed to protect the work of Orangi from government planning with the financial support from international NGOs and

multilateral and bilateral agencies in addition to the BCCI grant. And more importantly, the OPP was able to develop the necessary human resources required for the development and expansion of its work. What these human resources are and how they were developed is perhaps the most important achievement and asset of the OPP.

About OPP Staff

The OPP staff consists of:

- professionals,
- social organisers, and
- technicians.

Professionals

The professionals' work consist of research into the problems of Orangi residents; identification of their own solutions to these problems; and through technical research, the development of a better package of advice. The professionals also prepare extension literature and supervise physical work. All professionals' research has to be compatible with the sociology and economies of low -income residents. The results have to be analysed, maintained and looked after by them.

- **Selection of Professionals**

In the initial stages the OPP tried to recruit experience professionals. However, it soon discovered that such professionals found it very difficult to relate to the OPP's philosophy and methodology. OPP decided to rely on consultants and young graduates who were able to grow with the OPP. It was possible for these graduates to unlearn some of what they have been taught at their universities and learn them as well.

Social Organisers

Their work consists of contacting people, helping to organise them, extending the package of advice relevant to the development work to be carried out or may need to be carried in the future. They also monitor the development work. The social organisers are the link between the people and the professionals and provide feedback to the professionals.

- **Selection of Social Organisers**

The social organisers picked up for the development work from the community would have an element of radicalism; have been involved in the Orangi project; and had the capacity to communicate with the people.

Technicians

The technicians consist of plumbers, and surveyors. They work with the social organisers, supervising physical work and helping to extend the package developed by the professionals. They work alongwith the social organisers as a team. The technicians have to work with the professionals so that they can understand the package of advice and report back to the professional on the technical problems with the package.

- **Selection of Technicians**

The technicians are also recruited locally. The plumbers and surveyors are residents of Orangi, working in this field before they joined the OPP.

Joint Staff Meetings (learning experience)

The professionals, social organisers and technicians come from different backgrounds. As they had different view points, it was essential that they develop a common viewpoint regarding the work they were being asked to support. It is here that Akhtar Hameed Khan played his role as a teacher. Weekly meetings for the entire staff were held and the week's work was discussed at these meetings along with its sociological, technical and economic aspects. Every member presented his/her report. Jobs, which included the writing of experiences assigned at these meetings, and the work assigned in the previous meetings was reviewed and evaluated. This exchange in itself was an enormous learning experience for everyone. It was further enhanced by Akhtar Hameed Khan's analysis and advice, and the manner in which he related the micro-level issues presented by the staff, discussed threadbare the negotiations he had with the international agencies, government officials, and institutions, or with national and local politicians. Financial matters were also discussed, and nothing was kept secret from the staff. In addition, every member of the staff was encouraged to write, and these writings were published in the magazine of the OPP.

Through these meetings, Akhtar Hameed Khan not only managed to pass on his vision to his staff members, educate them regarding the close link between social and economic issues, but also develop technical issues, and upgrade their skill; this shared vision was not only based on a common development vision, but also embodied in it the values of diligence, frugality, modesty, and transparency that he has struggled to uphold throughout his turbulent life.

After the upgrading of OPP into four different institutions in 1988, each institution has separately continued this tradition of weekly meetings, in which the same process is followed. However, Akhtar Hameed Khan was not present in these meetings, although he regularly met the heads of the different institutions so as to continue his role as a teacher. Each institution now brings out its own newsletter and progress reports.

Capacity building of the OPP Staff

Due to the above process of co-ordination, professionals, social organisers and technicians find no difficulty in relating to each other. As a matter of fact, some of the social organisers have acquired the skill of the technicians, and most technicians have become excellent social organisers. They had also upgraded their skills, with OPP support, have taken courses in surveying and mapping, and others have acquired skills in computer sciences. Thus, with its limited manpower, the outreach potential of the OPP has been considerably enhanced.

However, OPP's human resources development has not been limited only to the Orangi staff. Over 5,000 lanes have financed and managed the construction of their own sewerage lines through OPP advice. Each lane elected, selected or nominated its lane manager. These lane managers and their assistants collected and managed the money of the people, and also organised the construction of the sewerage system with the active participation of the lane residents. Many of the lane managers subsequently became involved in other programmes of the OPP, and have developed as effective extension agents. They are now promoters of the OPP concept of development through community participation and self-help.

Through this process, people have learnt about sanitation and construction technology. As a result they now prevent government contractors working in their localities, or contractors appointed by them individually or by their community organisation, from doing substandard work or work that is technically at fault. This has made the relationship between local government, the informal sector, and the people more equitable. It has also led to the expansion of the health, credit and housing programmes.

The development of human resources is impressive. The OPP finds it difficult to deal with the increasing number of requests for assistance for the replication of its programmes. To overcome this problem, the OPP has started training young people and students from the settlement where it is working, as technicians. These young people are trained to survey and map the settlements; to develop physical design; and as inoculators for immunisation programme. They receive training through an apprenticeship with the OPP-TRI for a period of time. Funds for this training are provided by a number of international NGOs. The surveyors and designers being trained will, it is hoped, set up their own offices and become self-sufficient by charging fees from their clients or from the local organisations that will seek their support. Similarly, the inoculators will also become associated with the private clinics that exist in large number in the low-income settlements in Pakistan.

As a result of this human resource development, the OPP-TRI can carry out its training activities and give technical support to NGOs, CBOs, and government agencies. All the staff members (professionals, social organisers, and technicians) collectively participate in the training exercise and where necessary, lane managers and extension agents are brought in. The Orangi area, which has been the scene of the OPP's activities for the last fifteen years, serves as a demonstration area. As a result, every trainee, irrespective of his social class and educational background, can relate to the trainers at the OPP-TRI.

During the late eighties, a very large number of government officials visited the OPP for orientation or as part of their mid-career training. Akhtar Hameed Khan felt that the model developed by the OPP would be picked up by young officers, and thus the crisis that the state-working-class relationship faced would be overcome.

SAQ 3

- i) Explain the following in your own words:
 - a) Autonomous Institutions .
 - b) Orangi Pilot Project Staff.
 - c) Capacity building of OPP Staff.
 - d) Training.
-

6.5 OPP STRATEGY

The OPP's strategy is now clearly defined. Its main function is to support small grassroots NGOs, community organisations and young activists to organise and promote the OPP methodology and programme. For this the OPP conducts training and guides them and helps them in acquiring small funds so as to free their staff members and activists from being pre-occupied with earning a livelihood. In addition, OPP helps to arm these groups with knowledge and ideas so that they can monitor, supervise, and keep accounts of their work and by presenting the government with economical and appropriate options for those aspects of development that they cannot undertake themselves. Although the OPP still intends to continue working with the government, it feels that government departments can only be activated by informed and organised communities, and not by agreements and by an enhanced understanding between government, NGOs, and international agencies. To fulfill this role, the OPP institutions are adequate, and with the expansion of OPP work, the training of local people, and continued links with academic institutions, the number of people, professionals, technicians, and social activists, involved in this work are rapidly increasing.

It is important to place the OPP models in the larger context of Pakistan so that their relevance can be understood. The formal sector in Pakistan provides only 180,600

housing units per year in the urban sector, against a demand of 428,000. The annual deficits of 257,400 housing units are taken care of by the creation of squatter settlements and informal subdivisions of agricultural land. As a result, there are approximately 3,000 squatter settlements in Pakistan. They have a population of nearly seven million, which is about twenty-two per cent of the total urban population of Pakistan. In addition, over twelve million people live in settlements created out of the informal subdivisions of agricultural land, ecologically unsafe areas, or wastelands on the city fringes. Conditions in the low-income informal settlements are estimated at over ten per cent per year against a total urban growth of 4.8 per cent. These figures define the crisis.

Comparison between the OPP Programmes and Government Programmes

Government programmes for the physical, social and economic development of these informal settlements have failed miserably. The KAIRP manages to regularise and upgrade only one per cent of these settlements every year. As a result, it will take one hundred years before the existing settlements can be developed. On the other hand, the OPP's housing and sanitation programme has brought about major environmental changes, and over eighty per cent of Orangi Township has built its own sanitation system. Due to the sanitation system and the OPP's health programme, infant mortality has fallen significantly between 1984-1991. In the same manner the number of Orangi schools, increased without any assistance from the government or external sources, to over seventy-eight per cent as against an estimated Karachi average of sixty two per cent.

Finest achievement of OPP

One must mention that the role of working-class women in this changing world has determined a number of programmes that Akhtar Hameed Khan has promoted. He writes: 'under the pressure of the urban-industrial civilisation, which the people of Orangi have willingly adopted, and the pressure of the double-digit inflation of our mismanaged economy, the role of women is changing dramatic ally. It is becoming impossible to live in the old patriarchal style. The people have responded by encouraging their females to be free economic workers rather than confined dependents. Houses are modified into workshops. Family enterprises are sprouting in every lane. In such enterprises, females constitute, if not the majority of workers, at least a substantial minority. He continues, 'I have carefully observed these working women, these female teachers, these girls students; surely they are a new phenomena. They are not purda-nashin like my mother. And yet, in spite of their emancipation, they retain the modesty of their culture. Although they are not wrapped in a chadar, nor confined in a chardiwari, like my mother; yet essentially their feminine conduct is as modest as my mother's. I consider these working women, these female teachers, these girls students, as the finest achievement of Orangi people, as a shining example of belonging to both past and present; as the best preparation for entering the next century.'

SAQ 4

- i) Briefly explain the OPP Strategy.
 - ii) Identify the distinction between OPP programmes and the Government.
 - iii) Write a note on the finest achievement of OPP.
-

Let us now summarise what we have studied so far.

6.6 SUMMARY

There are numero us projects being undertaken by various NGOs in an attempt to fill the void left by the government's (in) action with regard to shelter issues and the provision of basic necessities. Several of these deserve special mention like the Orangi

Approaches and Practices

Pilot Project (OPP) in Karachi; the Khuda Ki Basti project near Hyderabad; BUSTI in and around Karachi; the Karachi Administrative Women's Welfare Society (KAWWS); urban waste management programme (implemented by the HRMDC) in Peshawar; and the Aga Khan Housing Board for Pakistan (AKHBP) projects in Karachi and in the NWFP.

The OPP sanitation, health, and credit programmes are being replicated by a large number of community organisations in Karachi, Gujranwala, Lahore, Sialkot, Faisalabad, and Okara. In addition, the sanitation and health programmes are also being developed in collaboration with the donor and/or government agencies in Karachi, Sukkur, and Hyderabad, and in a large number of rural settlements in Sindh.

6.7 TERMINAL QUESTIONS

1. Explain the Orangi Pilot Project and its impact on sustainable development.
2. Explain the main objective of OPP and its impact on sanitation and health.
3. Discuss the role of NGOs and Community organisations in the OPP development.
4. What is capacity building? Explain it.
5. Explain the following in your own words.
 - a) Urban Basic Services .
 - b) Finest achievements of OPP.

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UNIT 7 WOMEN'S PARTICIPATION IN COMMUNITY DECISION MAKING: A CASE STUDY OF PAKISTAN

Structure

- 7.1 Introduction
 - Objectives
- 7.2 Women in Development
 - Education and Communication
- 7.3 Women, Population, Health, and Environment
 - Women and Water
- 7.4 Women's Participation in Community Decision-Making
 - Women's Economic Contribution
 - Women's Access to Education
 - Women Trained as Extension Workers and Technical Staff
- 7.5 Summary
- 7.6 Terminal Questions

7.1 INTRODUCTION

In Unit 6, you have learnt about the numerous projects being undertaken by various NGOs in an attempt to fill the void left by government's action regarding shelter and provision for basic necessities. In this unit we will discuss the role of women's participation in the community decision making.

Women, because of their reproductive function, have been defined as nurturers, a role that encompasses the responsibility of provision of food. In subsistence economies, where the entire dependence of daily existence is on natural resources, women have played the dual role of not only nurturing their families but also the environment. The well-being of the former is heavily dependent on the well-being of the latter. In this unit we will examine women in development, overall approach for empowering women, women, population and health, women and water, five needs which can enhance women's participation in the community decision making and role of women in NGOs for the protection of environment.

Objectives

After studying this unit, you should be able to:

- explain a **community based participatory approach** with an emphasis on organising grassroots groups that can help equip women to analyse and understand their own socio-economic environment that involves creating awareness, building confidence, and moving towards self-reliance, thus enhancing the capacity to change;
- assess the status of women with specific reference to Pakistan;
- discuss as to how education and communication are necessary for empowering women; and
- explain as to how five needs can enhance women's participation in the community decision-making.

7.2 WOMEN IN DEVELOPMENT

Development must improve the quality of life of both men and women and increase equity among classes and gender. Recently there has been a growing awareness of the specific role that women play in the process of promoting social and economic development and of the differences between men and women in the use and

management of natural resources. Women have always contributed significantly to primary environmental care: they bring their extensive knowledge, skills and perspective of the environment to both life-supporting activities, including water and fuel collection and household chores, and to productive facilities, such as agriculture and small-scale industries. This means that access to and control over natural resources including land, fuel, fodder, minor forest products and water are critical for women. Biodiversity and the quality of the environment are also essential in this context. Other factors that affect women's environmental management are their decision-making power, their access to appropriate training and technologies, their development options (including employment and income generation) and the macro-micro linkages on policy level.

Since the creation of man, there have always been distinct roles that are performed by youth, men and women in society based on gender. Gender can be defined as a dynamic and culturally determined social pattern created by men and women to define their relationships with each other and with their environment. It is these relationships that determine the decisions and activities that in turn have been affected in both the management and utilisation of the environment for sustainable development. It has been observed and accepted that there is an undesirable imbalance that has developed between men and women and has affected the performance of their roles. In many cases, this has either distorted or hampered development with often-adverse effects on the environment. Efforts have, therefore, been made internationally and nationally to speed up development.

However, with industrialisation and globalisation, development centred economic development models have been imposed destroying indigenous sustainable development practices, which have been practiced over centuries by various communities, especially women. The mechanisation of agriculture, shifting of power to men by portraying them as the operators of technology and hence major producers, leading to the marginalisation of women have affected their role. In the meantime, dual economies of subsistence and industrialisation continue to exist; while the latter continues to practice unsustainable levels of extraction and pollute the existing resources, women are forced to continue their role as nurturers at the household level, extracting whatever meagre natural resources are left. The result is that patriarchy and globalisation have severely eroded women's role as caretakers of the environment.

The massive migration of people resulting from capitalist agriculture, and environmental disasters have led to further degradation and polluting our cities; women, torn from their social support, have to exist in these new malfunctioning systems. They are thus truly the victims of the development and environmental crisis. The ultimate irony is that, in this new scenario, they are considered as a contributing element to unsustainable environmental practices.

Women in the rural environment know their priorities that they have less power, and that they are accorded no space to voice their demands is another issue. Given a chance, they are more than capable of asking for and managing the resources to the best interests of all. It is indeed with the drive of a highly ecologically and economically exploitative system that women have lost control over sustainable management of resources.

Most women in Pakistan live in rural areas. Women who constitute about 48% of the nation's population are largely illiterate, usually marry early, bear innumerable children, and suffer from anaemia. In most parts of the world, women outnumber and outlive men, but not in Pakistan. In addition, they have no say or control over their lives, have low self-perception and are viewed as dependents.

Despite these low indicators of development, women have traditionally performed the essential tasks of nurturing and serving their families. In rural areas this has meant growing and preparing food, fetching water, gathering fuel, caring for domestic animals, and contributing wherever possible to the family budget. In urban areas, the

basic responsibilities are no different. Most of the work women do is unpaid and, therefore, unrecognised and unappreciated.

The poverty of about 40 percent of Pakistan's population, particularly in rural areas, has added implications for women. These managers of water, forest, livestock, fuel, sanitation, and subsistence agriculture invariably find themselves bearing the burden of the vicious cycle of resource depletion, poverty, and dependence on the earth and its resources.

Women's low social status precludes any significant decision making in their daily lives. Only when women have achieved some level of development, individually or collectively, through better education, health, and income do they perceive themselves in the position of making key decisions.

Given the state of Pakistan's environment, its general poverty and fast dwindling natural resources, and the reality of women's existence, the challenge is to mobilise women and channel their activities and energies in a manner that enhances their social status as well as ensure sustainable development. Unless development is seen as a process that allows women to express their potential fully and provide opportunities to them to control their own lives and the surrounding environment, the transformation of women from passive victims to active participants will not take place. And any conservation strategy in this regard will invariably fail.

Given the objective of empowering women and drawing them into the conservation mainstream, the urgent need is to design special strategies and interventions for women. But the range of constraints on them must be borne in mind. The biggest obstacle is women's seclusion and lack of mobility, which is a major factor that prevents their access to education, skills, and other resources, including financial. The other major obstacle is the stereotyping of certain roles as appropriate only to women.

Devising a package of projects or programmes to overcome these hurdles requires an understanding of three fundamental principles.

- First, neither the 'showroom' nor the 'delivery' approach has succeeded in achieving women's development goals. The former requires potential beneficiaries to locate and ask for the service being offered; the latter offers services as charity. Instead, a different approach is needed, one that can reach out to the needy in their localities, remove dependency, and create confidence and strength.
- Second, the approach has to understand the complexities of the social and economic processes within which a particular community of women resides. As Pakistan is a stratified society, class/clan/caste, sex, location, and other factors strongly influence the roles, interactions, nature of work, and so on in communities. Any intervention must vary from villages to cities and towns, from plains to mountains, from poor to the better off. Although the deprived and economically underprivileged who have the closest links with and dependence on the environment are usually the priority groups and potential agents of change, others also have to be drawn into the development process as actors and mobilisers (see Table 7.1).
- Third, the most essential component of this approach is the catalyst -- an individual, officially supported person, or NGO. The role requires sensitivity, commitment, and identity with the women being worked with. It will need special training programmes for community development work and methods for organising women in groups. The catalyst or mobiliser will need to create awareness; help from groups at the village, or lane level; set priorities with the help of the group on immediate issues to be addressed; and arrange for any technical expertise needed. In addition, he/she will need to assist in the continuous monitoring and evaluation of the programmes to identify bottlenecks and find ways with the group to overcome them.

Table 7.1: Integrating women in development

Sector	As Actors	As Clients
Education	Teachers' trainers, extension workers; as mothers, instilling consciousness, respect for nature, conservation habits	Students, women trainers
Communication	Media directors, producers,	Special programmes on women and environment issues
Research and technology	Researchers at independent research organisations; women's rights organisations, technical institutions	Impact studies on renewable resources and depletion and pollution on women; learning from women's experiences
Administrative and legislative	Administrators, policy makers, Family Court judges, High Court judges, lawyers	End of discriminatory laws, progressive legislation on family and labour affecting women; affirmative rules of no taxes on widows, single women
General economy	Agricultural workers, industrial workers, self-employed unpaid family help, service sector	Recognition as wage-earners: minimum wage benefits; incentives for skills, credits, project planning
Grassroot	Social Organisers with greater access inside homes, catalysts	Women's groups around economic, health, education activities
Population	Acceptable population control agents	Rights to control life, to make decisions, to space births

Being women, the catalysts have the advantage of access to women's homes. They can enter a community to discuss health, sanitation, education, income generation, or a combination of these topics. As external change agents, these field activists need to be viewed as paid professionals and not just as voluntary workers, a term too closely associated with social work of the welfare delivery approach.

In addition to these external agents, religious organisations, teachers, and mothers can be mobilised and trained to convey conservation ethics. For instance, women preachers can learn to raise consciousness on environmental issues. Similarly, teachers can be used to impart relevant information after being trained. The trainers for women will have to be women. If mothers are to be mobilised, they will need better levels of literacy as well as hygiene, health, and nutrition; knowledge of and access to family planning; improved skills; and environmental awareness.

The programmes based on these principles must be holistic rather than fragmented, integrating various aspects of women's lives with conservation objectives. Several key steps for implementing such a programme have been identified (see box 1) as below:

Box 7.1: Implementing women in development programme

➤ Identify clearly the target beneficiaries.
➤ Create or strengthen the village, or lane organisation through participatory activities.
➤ Involve women in conventionalising programme and putting them into operation.
➤ Understand the specific social situation of the target group for example, the women's mobility, seclusion, or lack of education.
➤ Understand the women's activities and needs from their perspective— whether it be poultry or dairy production, wood gathering, water carrying, cooking, or income generation.
➤ Recognise and respect women's experiential knowledge and abilities, such as their knowledge of local plants or herbs, health system, and skills and crafts.

Given that most environmental issues affect women and that women's perception of these is in direct correlation of their level of development, the focus must be on improving the latter. Fundamental solutions suggested by women in the village meetings and the workshop includes the need for systems of equitable development and distribution and realistically planned development policies. Others were for raising women's consciousness and providing opportunities for improving health, education, and income generation.

Here the emphasis is on the importance of each package being an integrated one containing information, technology, provision for raising capital inputs, organisational skills, and self-management system. Each should enable awareness, collective action, and increased production, and should lead to an improved quality of life for women and their families within a sound environment.

Education and Communication

Education can be a valuable tool for creating awareness and enhancing status, and it has tremendous potential to mobilise and empower women.

At the formal level, the immediate requirement is to increase the number of girls' schools, especially in rural areas. The Seventh Five Year Plan had made a commitment to increase primary school enrolment of girls from 2.9 million in 1987-88 to 5.9 million in 1992-93 (increasing coverage from 41 to 70%). Similarly, the proposal to make a school available within a radius of 1.5 kilometers should help overcome cultural constraints on females.

Relaxing the age limitation and academic requirements for primary school teachers to meet with the shortage of females in this field and incentives such as free books and meals, scholarships, and uniforms to encourage parents to send girls to school are also needed. For women who marry early and later desire to pursue education, the age limit for entering educational institutions should be relaxed. NGOs, which are already involved in the adult and women's literacy programmes, should be supported to expand into rural areas, where literacy level is an abysmal 7%.

For education to become relevant to women and their lives, courses and course contents require considerable restructuring. In addition, the curriculum has to incorporate regional specifics. Similar decentralisation initiatives in the Himalayan regions of Garhwal and Kumaon linked education to people's life support systems and led to women's involvement in planting tree nurseries and active afforestation, with schools providing the seedlings.

At the higher level of education, women, environment, and conservation should be introduced as a focus area in Women's Studies Centres. These centres are being established in the five major universities (one in each province and one in Islamabad). They have been set up, in the initial period, to generate information for materials on the basis of which courses can be formulated in the future and, ultimately, women's perspectives can be mainstreamed into all educational disciplines. Just as conservation and sustainability concerns must be brought into all courses throughout higher education, as recommended earlier, they must be introduced in women's studies.

The Open University programmes could be specially designed to educate, inform and mobilise girls and women who are unable to enter formal institutions. Adult literacy programmes and efforts like the Baldia School Teachers' Association in Karachi should also be actively supported and publicised. This group holds literacy classes for girls and women in certain localities to suit the convenience of students and teachers, who are the literate women of the neighbourhood.

The manner in which women are projected in the visual, audio, and print media is critical. Women working in the conceptualisation and production of programmes can make sure to portray women as active participants in agriculture, industry, community work, and health care, rather than as sex objects.

Special programmes to communicate environmental issues and their relevance to women are imperative for raising awareness. Some of the extra efforts needed are videos, audiocassettes, and special literature to broaden the information base and raise the level of awareness, and workshops for women in areas where existing development projects operate. Such workshops must be designed to elicit the maximum participation of women.

SAQ 1

- i) Briefly explain the role of women in development.
 - ii) Explain the following in your own words:
 - a) Integrating women in Development.
-

7.3 WOMEN, POPULATION, HEALTH AND ENVIRONMENT

Women have the right to the enjoyment of the highest attainable standard of physical and mental health... Good health is essential to leading a productive and fulfilling life and the right of all women to control all aspects of their health, in particular their own fertility, is basic to their empowerment... However, health and well-being elude the majority of women.

(Beijing Platform for Action, paragraphs 89 and 92)

Population is perhaps the most important factor in any "women in development programme" because of its implications on women's health, nutrition, and productivity. In theory, women ought to be the agents of population control but in reality, they are not. Women's acceptance of family planning is linked closely with their status in society and the control they have on decisions regarding reproduction.

Programmes to increase economic productivity, enhance skills and education, bring monetary returns and control over earning, improve health facilities, and raise awareness regarding the advantages of fewer children and births with spacing can be effective in bringing about a change in the population growth. Other important ways to control population growth are: to promote acceptance of late marriages and incentives for having fewer children. For greater effectiveness, all the measures to promote population control have to be addressed to men with equal force.

In addition, preventive health measures for women and children need to be introduced. Information on child spacing and the dangers of frequent pregnancies has to be provided to young women and mothers. The role of mothers as key health providers must be recognised. Time saving technologies to alleviate women's workload, which can give more time to health and hygiene responsibilities, should be developed. Trained paramedics and highly trained medical staff, for high-risk situations, should be accessible to pregnant women. Community based programmes should be implemented to have health extension workers.

Given the extremely low literacy level of women in Pakistan and their crucial role in natural resource use and management, programmes for women are a priority. They can train new extension workers who can act as demonstrators and community mobilisers and can increase employment for women. This has been conceived as a multi disciplinary course covering community organisation, public health, home economics, human ecology, adult education, industrial arts, and agriculture.

Training in the health sector is equally important. Traditional birth attendants, lady health visitors, paramedics, and nurses are in short supply in Pakistan. Similarly, there is a chronic shortage of female veterinary doctors, agriculture and forestry extension agents, and mid level technically trained workers in other fields.

The Pakistan Forestry Institute for women along with some NGO's has already drawn up an extension-training package in forestry for women. The programme covers establishment of nurseries, selection of trees for family compounds, tree care, seedling production, and transplanting. This should become a regularly offered course of the Forestry Department. NGOs working in the women in development field in rural areas have shown keen interest in sending people to the training. In view of the importance of afforestation programmes, as well as women's own fuel and fodder requirements, forestry related programmes have the potential for expansion.

In Sri Lanka, participation in management of forestry has been carried in a vigorous manner by the Sri Lankan women. The following is an example of that. The village of Kinchigune Sri Lanka was famous for its rice farming. With fertile soil and plenty of water from clear mountain streams, the village was surrounded by forests that provided medicinal herbs and other forest products to nearly 40 families residing there. The village was virtually self-sustaining. In 1987 the residents were given short notice to leave Kinchigune village because a hydropower project was to be developed there. The 40 families were resettled on a tea plantation. Each family was given 1.5 acres of land planted with tea interspersed with coconut to compensate for the loss of their land. The people did not know how to grow or market tea and there were no forests for fuel wood, game animals or medicinal plants. They were reduced to subsisting on purchased rice and dried fish. The new village had only one drinking water well; they had to go to another additional wells, but these were in poor condition, unhygienic or claimed by other people. The other villagers acted hostile towards them; the farm animals they had brought with them were stolen and slaughtered by thieves in the neighbouring villages.

Kamini Meedeniya Vitarana is the president of Rut Rakaganno (The Tree Society) and a senior environment scientist with the Environmental Foundation. As part of a study, she interviewed the resettled women, who were in a state of cultural shock. With her guidance and encouragement, they formed the Samanalagama United Women's Association. In their joint efforts, the women cleaned up one of the neglected wells and secured the right to the common use of the wells. Applying in the name of Rut Rakaganno, the society then obtained a plot of land from the government to grow fuel wood and medicinal plants. With advice from the forestry department and the Ayurvedic Research Institute, the women are planting trees and plants for fuel wood and medicinal purposes.

Rut Rakaganno provided liaison with the government departments. Environment Foundation contacts made the project work much easier. The families also formed a

society to jointly market their tea and obtained help from the Regional Tea Small Holdings Authority. Women are mostly responsible for the tea crop, so they are key players as well. The women now receive higher prices for their tea, are less dependant and have better access to clean water. Efforts are being made to organise a nursery school so that women will be free for some part of the day to take part in the community activities. Girls from adjoining villages have also joined the society.

There are various linkages between gender, population, development and the environment. They are the first to suffer from environmental degradation. Therefore their role as custodians of the environment should be strongly supported.

Principle 21 of Rio Declaration 1992 States: Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development.

In Pakistan, the movement for education and training for women has largely been restricted to the schemes of the Social Welfare Departments. Formal schemes leading to a certificate or diploma are available in 107 girls' vocational institutes throughout the country, with facilities for 11,000 women. Thousands more receive non-certifiable training in approximately 1,230 institutions in the country. The Agency for Barani Areas Development operates 19 technical training centres for women in 11 districts of the rain fed areas of rural Punjab. The ministry of industries runs training centres through the provincial small industries corporations and boards.

The National Education and Training Centre in Islamabad is the national scheme of the Women's Division under which training in non-traditional areas is given to enhance the professional skills of women and to create a corp of 'trainers'. Courses primarily deal with managerial areas, such as running a day care centre, setting up community project, increasing community participation, and monitoring and evaluating projects.

Many more institutions are needed for training women to take up income generating opportunities in urban and rural areas. Without waiting for new ones to be established, however, some existing ones can be streamlined. The formal schemes leading to certificates and diplomas (in polytechnics, for example, technical training centres, and vocational institutes for girls) can be radically changed to include courses that contain sustainable development components and enhance women's employable skills. Since formal employment is not always possible (either because of lack of opportunity or cultural constraints), self-employment for women should be focused upon.

7.3.1 Women and Water

Women play an important role in water management. They often collect and manage the water in the households as well as in the fields. Due to this, women have a considerable knowledge about water resources including reliability and quality. Despite their importance and multiple roles, women are currently not adequately involved in management. Not enough attention has been given to women as the primary human resource and the ultimate users of water.

In the developing countries, women and children often spend eight or more hours a day in fetching polluted water from supplies which, because of drought, become increasingly distant. Women and girls are also responsible for preparing and cooking food, cleaning utensils, washing children, disposing of babies' faeces and scrubbing toilets. Involving women in the planning, creation and maintenance of water and supply facilities is, therefore, crucial.

Women make multiple and maximum use of water sources. Given their multiple and often competing needs, such as water for livestock and for human consumption, as well as time and resource constraints, women cannot avoid contaminating water supplies despite their best efforts. Poor water access and quality affect not only crop

and livestock production, but also affects their health and that of their families. All types of water related diseases affect millions of people each year. Women take care of the people who are ill due to diseases like malaria, onchocerciasis and diarrhoea. They do their own labour and labour of those who fall ill as well.

Involving women in the planning, operation and maintenance of water supply and management is therefore crucial as:

- With safe, reliable and convenient water supply, they will be able to rechannel vast amount of time, energy and labour into more productive pursuits.
- With education and provision of a clean water supply, women will learn that the suffering, diseases and death caused by dirty water can be avoided and family health and hygiene improved by using pure water.

Women are the most reliable source for the identification of water resources. Women should be consulted when investigations for development of water resources are undertaken in a community. Their knowledge of water sources and water quantity during wet and dry seasons, and their assessment of smell, taste, colour and convenience, can assist in the final choice of sites. They may also be aware of alternate sources.

The health benefits arising from improved water supplies may not be fully realised unless there are complementary inputs in the field of sanitation. Inadequate sanitation or sewage treatment plays a part in the transmission of many water related infections. In Pakistan, integrated water and sanitation programmes have been successful, partly because women have been trained as sanitation promoters. Not surprisingly, women are the most effective promoters and educators in programmes where they are the primary focus, as they generally understand more intuitively the problems and issues faced by other women and can communicate with them more openly. They are also more sensitive to social pressure from other women to do a good job.

Women can participate in the local water and supply management in four major areas:

1. Site management as individual managers;
2. Care takers;
3. Local administrations; and
4. Self-sufficient system.

SAQ 2

- i) Write a note on the following:
 - a) Women, Population and Health.
 - b) Women and Water.
 - c) Explain the role of women in the NGO's in the protection of environment.

7.4 WOMEN'S PARTICIPATION IN COMMUNITY DECISION MAKING

If project manager were to be asked whether rural women in Pakistan should be involved in the decisions affecting rural water supply, in many cases the answer is likely to be "Yes... but". Yes because domestic water supply has traditionally been considered to be within women's domain. They are the ones who usually have to satisfy the family's needs for water for a variety of purposes: cooking, washing, drinking, bathing, sanitation and care of livestock; in some areas of Pakistan women reportedly spend more than five hours per day fetching water over steep mountainous terrain, balancing heavy containers on their heads and by hand, and often carrying children at the same time.

Whether or not the arduous physical task of hauling is done by women alone or is shared with children and others in the village, ultimately it is the woman who is responsible for the family's water supply: it is she who determines how much is needed, how it will be stored, how it has to be used and by whom. Protecting the water from contamination and rationing its use thus becomes a matter of direct concern of women. The health of the whole family depends on how wisely a woman regulates the storage and use of water within the home and this in turn depends on the ease with which she can access the water required for family use, in the quantity needed and of a quality she considers acceptable even if only judging by its taste and appearance.

In all of these actions concerning water storage and use, women are clearly the decision-makers. But are they also involved in community level decisions related to water supply? For example, do they have a say in the choice of a site for the pump, or in selecting among technology options or in establishing a tariff system for water use? In most cases, while their role as the community's main water users is clear, what is not clear is whether and how they can play a broader decision making role outside the family without violating the norms of the socio-cultural context in which they live.

In exploring this matter further, several factors should be taken into account. They are discussed below as a set of "needs" for women's advancement.

7.4.1 Women's Economic Contribution

As in most developing countries, rural women's work in Pakistan is generally considered to be routine, confined to domestic chores and therefore their contribution to the nation's economy is not adequately reflected in the productive labour statistics. In reality, however, they are found to play an important role in the economic life of the village. This is confirmed in a number of formal or informal assessment studies conducted in recent years.

For example, in many parts of the country, rural women are responsible for processing farm products, rearing animals and poultry, keeping gardens, and producing textiles and clothing, all of which is done in addition to fetching water, gathering fuel and fodder, disposing of waste, maintaining building and nurturing and raising the family in statistical terms. Agha Khan Rural Support Programme (AKRSP) finds that women provide over 50 percent of the total labour used in farm activities, in the Northern Areas. In the Northwest Frontier Province (NWFP) the Malakand Social Forestry Project notes that the care of livestock is the sole responsibility of women throughout the Malakand Agency, except for a few households where this responsibility is shared. According to a survey conducted by the Barani Agricultural Research and Development Project in 5 districts of NWFP, 85% of the rural women participate in agricultural work and are responsible for 25% of the production of major crops and 30% of the food crops. Women's contribution to the total agricultural income is estimated to be in the order of 25-40% (World Bank, 1989).

Since the value of women's economic contribution is not fully recognised and appreciated, they are often by-passed in project planning. This tendency can be seen very clearly from the following observation of experiences in the agricultural sector in Pakistan.

Despite the fact that women do carry out many independent activities in agriculture, their role is usually defined as "helping the men". In fact they themselves tend to define their role in this way. Since their decision-making power is limited, even when it concerns their own activities and time allocation, they are usually not considered as independent actors in the production process. This dependency represents a serious constraint on the ability of the project to approach women as a target group, particularly when extension recommendations involve the use of external inputs or adopting new technologies.

Rural women's productive roles are likely to vary considerably with differences in the economic situation of their families and with the degree to which ethnic or cultural norms restrict them to the family compound. Various studies have shown that in Punjab the input of females in economically productive activities declines with the rise in economic status as determined by the size of the land holding. Similarly one study indicates that under equal ecological and economic circumstances, the female participation rate of rural women is lower in the more conservative Pakhtun areas of NWFP and Baluchistan, as compared to Punjab. However, regardless of how limited their productive roles may be, even the least of such activities, if it is to be done efficiently and bring returns, requires the use of intelligence, good judgment and basic managerial skills for which the persons involved, regardless of gender, deserve credit. Where such credit is not being given, it follows that fair opportunity for improving skills will not become available. This disparity needs to be rectified.

Male community members must be enabled to see that by acknowledging and attaching value to women's economic contribution, everyone stands to gain. A fair minded assessment of gender roles should open the way for women to receive the much-needed technical assistance and resources of which, at the moment, they get an inadequate share. Technical and moral support will help in improving women's task performance, resulting in more efficient time use and larger gains to their immediate families. By enhancing women's access to resources, through a credit scheme, the UNICEF sponsored programme in Baluchistan has shown that qualitative indicators like women's sense of self worth can be radically improved, thus giving them the opportunity to become direct beneficiaries of the development process in a non threatening way.

The PAK/German Integrated Rural Development Programme in Mardan, NWFP, has followed a strategy of practical demonstration in order to convince the male members of the community regarding the economic viability of women's activities. By initiating a joint credit scheme targeting both male and female, the programme has been able to establish the credibility of female borrowers. In the same villages, the repayment rates of female borrowers were observed to be higher than those of male borrowers. Moreover, in the savings programme, women have been active partners, and have thus directly contributed towards the financial capacity of the community.

The Orangi Pilot Project (OPP) programme has demonstrated that major strides in the role of women can be made once the community is convinced of the value and importance of women's contribution to development, for example, the self-support activities in the Orangi area have led to the sprouting of hundreds of family enterprise units in the lanes, some with OPP guidance and others spontaneously. Women have become active workers and partners in these enterprises. OPP finds that the multiplying family enterprise units highlight a great social change in the traditional life style of the community. Not only is the number of working females increasing rapidly, but also women entrepreneurs are coming forward. In fact, among the OPP clients, 283 family enterprise units are run by women managers.

7.4.2 Women's Access to Education

Ideas and idealistic views are commendable for they are the motives for progress, and the world would indeed be a sad place without them. But one has to be realistic and pragmatic too, for instance, leaving aside the enlightened sections of the society, our rural community is the worst example where girls are confined to their traditional roles; they should have an equal right to education, employment and most importantly, the right to choose when to give birth to human life; but quite surprisingly they cannot have a say in the planning of their family. Environmental challenges mostly stem from growing population and growing poverty. There is a dire need to control population and eradicate poverty. Both are challenging tasks. The answer lies in the empowerment of women: in giving them the right to choose the quality of life striving towards restoring gender balance and consequently sustainable eco-balance in the context of social ecology.

The alternative is to help develop understanding of the problems associated with unequal gender participation vis-à-vis ecological management and ecological issues. Socio-economic statistics need to be collected and analysed so as to formulate a cohesive gender strategy for eco-management, re-defining social responsibilities of both genders.

The first step towards achieving an alternative ethical culture is a culture where education is accessible to everyone. Without this the effectiveness of other factors decreases. No doubt, gender mainstreaming through policy, political will and collective social responsibility is the answer to create a road towards sustainable development. But no society can become economically sound, socially viable and environmentally friendly unless it is enlightened enough to take drastic and radical steps. Proper education is the pivot, which can take forward the torch of ecological management, that has the capacity to make and break a society and culture and envision a better tomorrow. Gender sensitisation through proper awareness and education is the primary step, which can restore gender balance in executing environmental theories to practice and in moving towards a sustainable environment.

Girls' education generally tends to be of low priority in the village communities of Pakistan. As a result, literacy rates among rural women are extremely low, in some areas barely three to four percent. Two reasons are commonly given for differentiating between girl's and boy's education:

- Girls are needed at home by their mothers to look after younger siblings and to help with household chores; and
- Schooling involves costs. It makes more sense for low-income families to invest in the education of boys who have better prospects of using their education to salaried jobs.

In certain areas, however, greater value is now being attached to girls' education. It is felt that education will help to make them better mothers and will provide them with greater confidence. In a survey conducted by Action Aid, such positive attitudes towards female literacy were seen to be fairly common in the Kalinger area. In one village, a father who was determined to educate his daughter, was noted as saying:

“The difference between an illiterate and an educated person is like the difference between a donkey and a parrot. The parrot as a bird is wise and quick to learn, while the donkey will go backward if you push forward and forward if you push backwards.”

Although being illiterate is not synonymous with being ignorant, it is easy for an illiterate person to feel inferior vis-à-vis others who have had more exposure to formal education and who are more articulate and better connected. Socialisation factors, which create feelings for inadequacy, unworthiness and timidity, can hold back village women from taking an active part in the community decisions, especially those involving negotiations and contractual agreements with the authority figures.

The traditional methods of teaching have often proved discouraging to adult women who have little time to spare and little patience to learn phonetic skills as such. Women's education has to be informal, lively and functional if it is to arouse their interest and sustain their motivation. The available participatory techniques for adult learning need to be fully explored and new approaches designed, keeping in mind the specific needs, constraints and potentialities that apply to rural women in different areas of Pakistan.

Many innovative approaches are being tried to improve literacy among young girls and women. One such programme is the LGRDD/UNICEF pilot project targeting cotton pickers in the Multan area. Adult literacy centres have been established to support the organisation of female youth groups, which have now become the main implementers of the approach at the field level. The success of this project can be

measured by the fact that the female youth groups actively identify and plan the components of the literacy programme.

The OPP experience gives encouraging evidence that traditional barriers to girls' education can be overcome. For example, out of 509 schools in the Orangi area, 443 (87%) are now co-educational and only 66 (13%) are segregated. This expansion of opportunities for girls' education has been accompanied and supported by a corresponding increase in female teachers. Out of 1818 teachers in 1991, 1318 (75%) were women and 457 (25%) men.

Furthermore, traditional attitudes can be overcome by involving communities in the selection of teachers. The Basic Education Project for girls, being sponsored by UNICEF in the Thatta district, has shown that constraints like non-availability of female teachers can be superseded if the community is allowed to nominate their own teachers.

Special situations arise when services and resources which women need, e.g., clean water supply, access to sanitation, medical services, come in conflict with the prevailing cultural norms. For example, in case of illness, women may need urgent medical attention but in the absence of female professional medical staff, health problems may have to go unattended and often become chronic. In addition, when health care facilities are available outside the village, women may not have access to them (except in emergency situations) due to restrictions on their mobility. The same applies to other services such as agricultural extension, technical training or market for local product. This restriction applies in particular where accessing these services involves direct communication with males.

Similar ethical dilemmas may arise in connection with women's access to water supply. When selecting the site for a new water source, e.g., a hand pump, sometimes a public place may be selected for the convenience of all without taking into account local restrictions which would bar women's use of that site.

The extent to which women's mobility is restricted varies, of course, from one ethnic group to another. In pakhtun areas where the rules of conduct are particularly strict, the setting of a pump poses a problem, as the following observation indicates:

"In Loralai ... due to strict purdah observance, installing a hand-pump outside the compound will probably mean a constraint for women to fetch water. In theory more people will have access to the pump but practically such a public place may be hardly visited by women; they will prefer to walk longer to an alternative water source if less exposed to possible passers-by. Sometimes a wall around a pump may be a solution to overcome women's hesitancy but certainly not so in many cases. In Kharan and Chagai, the village and its direct surroundings is considered to pose a great risk for a woman. In pakhtun areas similar free movement for ladies is unthinkable."

Since women are the main users of the water source and they are the ones required to observe cultural restrictions of whatever kind, it should make sense to consult women before selecting a definitive site for the improved water source. In a number of sanitation projects, it has been demonstrated that by involving women in the process of technology choice and site selection, acceptance levels and effective use of the facilities can be improved. For example, in the UNICEF Northern Areas Sanitation project, it was found that when women actively participated in the project, there was an increase in both the implementation through the meeting of targets and in the utilisation rates of sanitation. To the contrary, in the case of the Mardan Integrated Rural Development Programme, it was found through a field survey, that in one village only four out of the total toilets constructed were being used. A major factor that had contributed to this outcome was the oversight on the part of the project staff in terms of including the women's group in planning and implementation. Sensitivity to the need for involving women and the use of simple participatory educational techniques can, in fact, foster rural women's participation in the comparative assessment of process for helping them gain skills in problem solving.

The heavy workload, which the rural women carry, is seldom questioned either by the women themselves or by their community at large. It is generally accepted that this is their destined (or at least socially sanctioned) lot, as daughters, wives, and mothers. The women themselves may not wish to question their lot in life. As one project report illustrates:

“It is very difficult to ask women if they are happy with their situation or not. By saying they are not happy they would implicitly say that Allah has not given them a good life or that their parents or husband is not good for them. For these reasons, women were indirectly asked if they were satisfied with their position by asking them if they would like their daughters to have the same life as they.”

Three types of solutions are being tried by innovative development agencies in Pakistan to reduce women’s hardships and to increase their problem-solving capacity:

- One is to increase women’s access to labour-saving technology such as nut cracking machines introduced by AKRSP in the Northern areas. AKRSP’s WID and technical sections collaborate in developing and disseminating packages designed to decrease women’s workload and increase their earning capacity. However, some problems with acceptance are reported.
- A second solution is to initiate separate demonstration projects for women such as poultry raising and vegetable growing (also by AKRSP) or women’s nurseries to produce high value animal fodder (by the Malakand Social Forestry project, NWFP). These activities are carefully monitored so as to assure an experience of success. This practical proof of what they can achieve empowers women to take new initiatives on their own.
- These measures, however, have sometimes run into problems. In some instances, village men have interfered by either appropriating the technology for their own use or by attempting to take over the management of demonstration plots such as women’s fodder nurseries. This is where the assisting agency has had to take a firm stand in discussing the problem with the male village leadership.

Most important, women’s feeling of powerlessness is being counteracted by promoting the formation of women’s organisation (WOs), sometimes starting with informal discussion groups at the neighbourhood level. WO’s are, in most cases, separate entities from the regular Village Organisation (VO). However in some areas, due to opposition from the male villagers, no separate WO’s have been encouraged; instead VO’s have a women’s section. Although cultural and religious differences tend to inhibit the spread of WO’s to some extent, the principle of encouraging women to participate in development activities is said to be gaining ground.

One such programme that can be cited, as an example of successful female involvement is the PAK/German Integrated Rural Development Programme in Mardan. Women’s participation in income generating activities like forestry, poultry raising and fruit cultivation was promoted by actively supporting women’s organisations through a process based on mutual trust and self respect in terms of initiative taking and follow up, in male village development organisation (VDO), e.g. in one village the project had to withdraw support from the VDO due to lack of interest and commitment, while in the same village, the women’s section of the programme assisted the women’s group to successfully implement income generation projects through poultry breeding and fruit plantation activities and savings and credit schemes.

7.4.3 Women Trained as Extension Workers and Technical Staff

To expedite improvements in rural women’s situation, it is imperative that Women in Development (WID) programmes must be able to attract and retain female staff of the calibre and attribute acceptable to local communities. This has not been easy for

obvious reasons, such as the shortage of resources and facilities of training female development staff and the difficulties which women extension agents often encounter at the village level i.e. both physical hardships and problems of acceptance by villagers themselves. There are ways to overcome these problems by training more women from within the village itself.

Several agencies are also making special efforts to train female professionals and auxiliary staff to help research and involve rural women in development programme. For example, the Pak-German Promotion of PHED NWFP organised a three-day workshop for Lady Health Educators from the health Department and other agencies to train them in conducting health and hygiene education. The trainees were provided with a kit of materials that help them initiate village-based training for women. Their function is to promote hygiene education practices in villages where water supply schemes are being implemented by PHED under the integrated concept.

To overcome the shortage of female staff several innovative solutions are being tried:

- Some NGOs have attempted to involve women extension workers from other line departments, e.g., Health or Social Welfare.
- To get around the problem of finding literate women for extension work, one project gets the cooperation of school going boys to help their illiterate mothers in doing the paper work required for extension tasks.
- As the level of literacy for females has improved in the Northern Areas, many male managers of women's organisation are now being replaced by female ones.
- In one village, the role of the manager has been expanded to include village accounting activities. Every fortnight, the female manager is now required to audit the records and accounts of different women's organisations and male village organisations in the area.

In all instances, the consent and support of male members of the community has been assured from the start. To overcome issues of female mobility, mobile teachers' training unit has been set up in Baluchistan, which focuses on training female teachers within the districts.

Local distrust of outside female workers is also found to decrease with time. The following excerpt from a field report is an example:

“During an in-depth interview a woman was asked if she has appreciated the hygiene education visit. Her answer was the following: ‘It was the first time for us that we were visited by women we did not know at all. First our men did not like it but we said it is good that they come. Then they accepted it. You have made an entry point for us.’”

SAQ 3

- Explain the following in your own words.
 - Women's participation in community decision-making.
 - Women's economic contribution.
 - Women as extension worker.

Let us now summarise what we have learnt so far.

7.5 SUMMARY

Women are the main victims of environmental degradation. They are sound managers of natural resources. Women are close to nature and in constant contact with the environment. There is a need to enable women to participate in the decision-making.

Approaches and Practices

It is well documented that development programmes that ignore women either failed or have had negative social impact, as they are based on an inadequate and only partial understanding of society. Due to women's vital role in production and reproduction, the programmes and policies targeted at the community have their greatest impact on women. Yet this gender-specific impact is too often ignored by planners, overlooked by field workers, and bypassed in project implementation.

Five needs which can enhance women's participation in community decision-making, are:

- To recognise women's economic contribution;
- To increase women's access to education;
- To consider cultural limitations when planning resources needed by women;
- To reduce women's drudgery and to free their time; and
- To increase the number of women trained as extension workers and technical staff.

Human beings are at the centre for sustainable development. They are entitled to a healthy and productive life in harmony with nature. Women have often played leadership roles or taken the lead in promoting an environmental ethic, reducing resource use and reusing and recycling resources to minimize waste and excessive consumption.

(Beijing Platform for Action, paragraphs 246 and 250)

7.6 TERMINAL QUESTIONS

1. Briefly explain the role of women in development.
2. Explain the objective of empowering women.
3. Explain the following in your own words.
 - a) Education and Communication
 - b) Women and Water.
4. Explain different approaches to enhance women's participation in the community decision-making.
5. Examine the role of women in the protection of the environment.

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UNIT 8 PRACTICAL ACTION

Structure

- 8.1 Introduction
 - Objectives
- 8.2 The Challenge
- 8.3 Field Practice and Ethics
- 8.4 Practical Action
 - Tactics for Tourists
 - Rapid Rural Appraisal
- 8.5 Reversals and Reality
- 8.6 Reversals in Learning
- 8.7 Summary
- 8.8 Terminal Questions

8.1 INTRODUCTION

In the Unit 7 we have highlighted the role of women's participation in community decision-making as case study in Pakistan. Also we have discussed that they are sound managers of natural resources and as such they are close to nature. In the present unit we will discuss the evaluation of participatory appraisal with a view of necessity and utility of rapid rural appraisal.

Power and poverty are polarised at the extremes, with a global over class and a global underclass. An evolving consensus converges on well-being, livelihood, capabilities, equity and sustainability as interlinked ends and means. Huge opportunities exist to make a difference for the better. The challenge is personal, professional and institutional, to frame a practical paradigm for knowing and acting and changing how we know and act, in a flux of uncertainty and change. In this unit we will examine reversals and reality, practical appraisal for outsiders, field practice and ethics, reversals in learning, and putting the first last.

Objectives

After studying this unit, you should be able to:

- explain reversals, with shifts of orientation, activity and relationships away from past normal professional practice, six stand out: from closed to open; from individual to groups; from verbal to visual; from measuring to comparing; from higher to lower; and from reserve and frustration to rapport and fun;
- discuss PRA and the evolving paradigm implication and demand changes, which are institutional, professional and personal;
- describe common and serious errors of practice and ethics;
- list ways of tackling problems by improving rural development tourism; and by developing and using techniques for rapid rural appraisal; and
- explain putting the last first means reversals in learning.

8.2 THE CHALLENGE

Participatory Rural Appraisal (PRA) confronts the dominance of uppers. A well coordinated PRA generates synergies; the three pillars – methods, behaviour and attitudes; sharing and partnership-reinforce each other; and participatory training sets the style for participation in the field and adoption of the behaviour and principles of PRA, like the methods, can spread and catalyse other good changes. Empowerment is achieved through identifying the weak and enabling them to gain skills, confidence

and knowledge. They then analyse, monitor and evaluate, make presentations, become consultants and trainers, organise themselves, and negotiate the resolution of conflicts.

The PRA and the evolving paradigm imply and demand changes, which are institutional, professional and personal.

- Institutional change needs a long-term perspective, with patient and painstaking learning and reorientation.
- Professional change needs new concepts, values, methods, and behaviours, and new curricula and approaches to learning.

Personal change and commitment have primacy, and can be sought experientially. Learning to change, and learning to enjoy change, are fundamental to PRA.

The Challenge presented here is to the powerful, i.e. to the structures of power. The personal, professional and institutional changes entail reversals of much that prevails as normal. The changes are radical. For they are not just to put the last first, which is altruism but to put the first last, which is disempowerment.

Reversals would be absurd if pushed to anarchy, dismantling the state, abolishing bureaucracy, removing all rules and controls. They would be improbable if uppers have always to lose. They would be immoral if driven to extremes, which made lowers into new uppers. But what is sought is not revolution. It is reorientation, retaining some hierarchy while loosening constraints and freeing actors. The final theme is that reversals are sane, not improbable but practicable.

The experience and philosophy of PRA are part of this, and a source of learning, insight and inspiration. PRA has spread with alarming speed, across boundaries of disciplines, professions, organisations, communities, countries, and continents. In doing so, it has repeatedly confronted the relations of uppers and lowers. Issues have been raised concerning the concepts, values, beliefs, methods, behaviour, and cultures.

8.3 FIELD PRACTICE AND ETHICS

Many errors occur in field practice. The following are some of the common and serious errors of practice and ethics:

Dominating

Dominant and superior behaviour is the most widespread error. We start with unavoidable remarks and signals, regarding colour, sex, language, accent and age that complicate the action. Dominant behaviour includes verbal, through lecturing, interrupting, criticising, contradicting, preaching, pontificating and putting forward ones own ideas, telling lowers what they ought to think, and overbearing; and non-verbally, through dress, body language, facial expressions. Dominant and superior behaviour damages participatory processes.

Rushing

The work 'rapid' may have been needed in the late 1970s and early 1980s to offset the long-drawn-out learning of traditional social anthropology and counter that of the large-scale questionnaire. RRA came to be seen as a short cut. But by the late 1980s rapid has become a liability. In practice, PRA facilitators often, take too little time; they fail to explain who they are, why they have come, what they can do, and what they cannot do; they are in a hurry to get on with the methods, not taking time to earn trust and gain rapport.

Routines and ruts

Repetition breeds regular habits. There are many ways the local people can map models, do transects, diagram, rank, and score. But rigidity easily sets in, with the idea that there is only one right way. PRA facilitators in any organisation, or even region, have shown signs of slipping into unvarying standard practices, overlooking other options and missing the creativity of inventive interaction.

Gender and upper-to-upper bias

The community members who often interact with visitors are usually men. Under the pressure of time, and for convenience, it is easier to encounter and consult them, or only a few others. Unless carefully offset, the familiar bias to elite in, will manifest itself. If it is offset by a generalised and populist concern and gender-blindness and the neglect of women and girls. Differences between gender, groups, ages and occupations are easily overlooked. Those left out are the women, the poor, children, those of inferior status, the marginal, the destitute, the disabled and the refugees.

Taking without giving

PRA methods have frequently been used for ‘extractive’ research. Outsiders can often induce local people to give up time to processes. The lower, the analysts feel, may enjoy and be empowered by discovering their own abilities and knowledge. But as with all research involving local people, there are ethical questions about unequal relationship and the cost of people’s time.

Arousing unmet expectations

PRA methods and processes can engage local people for long periods in intense and creative activities. These lead to expectations of future action, especially where appraisal and planning are involved. While this is not a new experience to most communities and not peculiar to PRA, it remains an issue of serious concern and self-questioning among facilitators.

Moreover there are problems like providing training for financially challenged small NGOs overcoming the language elitism of English, French, Spanish and Portuguese; changing donor and government procedures; networking and sharing of South-South experiences; approaches and methods for training in behaviour and attitudes; and above all moving from a ‘doing phase’ to a ‘being phase’.

The writing on PRA issues by academics point out that PRA methods are used only briefly and neglect the process as such. Many experienced practitioners are striving to achieve another reality of PRA, that is inventive through interaction, practical in application, rigorous through self-criticism, and empowering through process.

8.4 PRACTICAL ACTION

Practical appraisal for outsiders

While academics are inclined towards longer, unhurried appraisals, the practitioners need instant information to meet the deadlines of seasons, budgets, committee meetings, and ministers. Shortage of time is likely to contribute to the antipoverty bias of rural development tourism and to careless and misleading investigation. These problems of practical appraisal can be tackled in two ways:

- by improving rural development tourism; and
- by developing and using techniques for rapid rural appraisal.

8.4.1 Tactics for Tourists

For the outsiders who are concerned with rural poverty and who practice rural development tourism, measures can be taken to offset the anti-poverty tendencies.

Urban, tarmac and roadside biases can be countered by areas by visiting not only project but also other areas and by non-scheduled stops; by deliberately seeking out the poorer people, by meeting women, taking time to see those who are ill and could not be at the clinic, by asking about those who have left or who have died; by introspection to see the limitations of professional conditioning, by learning from other disciplines, by being observant, and by asking open ended questions.

Spending longer and going further

In many ways the poorer people are at the end of the line. They take the longest to reach; they are the last to speak; they are the least organised and the least articulate. They often keep a low profile. While some are migrants, women often hide from male visitors. It is after the courtesies, after the planned programme, after the tourist has ceased to be a novelty, that contact becomes easier.

Being unimportant

The cavalcade of cars, the clouds of dust, the reception committees and the protracted speeches of the VIPs generate well-known problems. By contrast, the visitor who comes by bicycle or on foot fits more easily and disturbs and distracts less. Unscheduled visits and avoiding the impression of having influence over the benefits, which a community might receive, reduce the dangers of misleading responses and impressions.

8.4.2 Rapid Rural Appraisal

Questionnaires, surveys and statistical analysis limit the investigations. The realities of rural deprivation are often missed. The challenge is to question the conventions of academic purity and find better approach. Rapid Rural Appraisal (RRA) is one of the techniques that is cost-effective for outsiders.

These techniques have been widely practiced and recognise the trade-off between the cost of information gathering, and its quantity, accuracy, relevance, timeliness and actual use. Using 'dirty' as a term meaning not cost-effective, they try to avoid both the 'quick-and-dirty' of incompetent rural development tourism and the pathological 'long-and-dirty' of some questionnaire surveys.

The opportunity presented by RRA is the avoiding of lengthy methods to save the budget and time setting. The techniques of RRA that are carefully developed and used, can raise awareness and understanding of rural poverty, and improve actions to counter it.

8.5 REVERSALS AND REALITY

Most of those who have innovated the PRA have been practitioners, concerned with what works and what will work better. They have been searching not for new theories or principles but for new and better ways of learning and of relating to local people. For them, the power and utility of RRA and PRA, undertaken with rapport and self-critical rigour, are common experience and empirical facts: they know that they work, and can lead to better local development. But the "why" questions remain, leaving issues to explanation.

At the practical level, much of the explanation can be found in shifts of orientation, activity and relationships that are different from the past normal professional practice. Six stand out- from closed to open; from individual to groups; from verbal to visual; from measuring to comparing; from higher to lower; and from reserve and frustration to rapport and fun.

From Closed to Open

The pervasive shift or reversal is from closed to open. This can be expressed as form etic to emic, from the knowledge, categories and values of outsider professionals to those of insider local people. The reversal is like a turning inside out, and expression and presentation of inner personal, family, community and local realities to outsiders and the outside world. These are not known to the outsiders in advance. While questionnaires, interviews, semi-structured interviews are more open, PRA adopts mapping and diagramming. In a semi-structured interview there can be a checklist for reference, but not a pre-set sequence of questions; and a value can be set on probing, on pursuing leads, on serendipity. In conversations there can be greater freedom and equality. In PRA methods such as participatory mapping and modelling, matrix ranking and scoring, the insiders can not only feel free to express their knowledge and values but are also encouraged and enabled to do so. The shift is from pre-set and closed to participatory and open.

From Measuring to Comparing

Normal professional training is to make absolute measurements. So if trends or changes are to be identified, or conditions compared between households or between places, measurements are made either at different times, of different things or in different places. Schoolteachers often value correct measurements more than independent judgement in their pupils. Our preoccupations with numbers drive us to ask 'how much.' For sensitive subjects like income, such questions usually lead to suspicion and generate misleading data.

Often, there is a need for practical purposes through values, which are relative and not absolute. Comparisons without measurements have advantages: involving reflection and judgements, they are easier and quicker to express; they can be elicited for trends and changes without formal baseline data; and they are less sensitive, as has been shown by wealth and well-being ranking, and by seasonal analysis – how income comparisons are easier to gauge and less threatening to reveal than are absolute figures. Comparisons, as with matrix ranking and scoring, can, in a short time, elicit complex and detailed information and judgements of value which are inaccessible by other methods. Moreover, trends and comparisons lend themselves to visual sharing, with all its potential gains in participation, cross-checking and progressive approximation and learning; comparing is usually easier, quicker, cheaper and less sensitive than measuring.

From Individual to Group

Normal investigations stress individual interviews. Professionals' need for numbers is met by questionnaire surveys; individual or household schedules generate commensurable statistical data. In PRA, discussions with individuals can and do take place, but there is relatively more attention to groups and participatory analysis by groups.

Group dynamics can present problems, such as dominance by one person or an influential lineage, faction or ethnic group, or by men. Facilitators do have a repertoire of ways of handling this; by requesting for a separate discussion; social mapping and diagramming to learn about social groups; and sequences of meetings with separate groups, often with women. Personal commitment and sensitivity on the part of facilitators is the most important factor. How best to convene and facilitate groups remains an area for learning and invention.

At the same time, the advantages of groups have been undervalued. Typically, group members have an overlapping spread of knowledge, which covers a wider field than that of any single person. Groups can also generate numbers with observable mutual checking through self-surveys, whether verbal or visual.

Contrary to many outsiders' beliefs, sensitive subjects are sometimes more freely discussed in groups, for example individuals would not wish to discuss some topics alone with a stranger. Several sources have indicated that village women in parts of India, freely discuss intimate sexual matters in groups. Among Bhutanese refugees in Nepal, it was found that with participatory methods in groups, refugees shared sensitive information about illegal activities more willingly and accurately than in the conventional context of participant-observation and semi-structured interviewing.

From Verbal to Visual

With traditional questionnaire surveys and semi-structured interviewing, most of the transfer or exchange of information is verbal, and often one-to-one. This contrasts with participatory mapping and diagramming where the information shared is visual, and often created as a group activity.

With visual analysis, there is a change in the relationships and processes. The topic and method may be determined, or at least suggested, by the outsider, but the outsider's role is not to extract through questions but to initiate a process. The outsider is a convenor and facilitator. The insiders are factors and analysts and determine the agenda, categories and details. Information is built up cumulatively and cross-checking is often spontaneous. If a dozen women diagram a census map of the small community, showing women, men, children, handicapped persons, and so on, not everything may be known by any one woman, but each item may be known by several of them. Groups often build up collective and creative enthusiasm, fill in gaps left by others, and add and correct detail. Debate can be lively because of each member's participation. The visuals then present an agenda for discussion, and it is the visuals rather than the people that are interviewed.

Visual methods can also be empowering for those who are weak, disadvantaged and not literate. In the ability to create and understand symbols, three types stand out: alphabetical literacy, meaning reading and writing; visual literacy, the way people understand pictures; and diagram literacy, the ability to understand maps and diagrams. Many local people may not understand the written work, and have difficulty with pictures, maps and diagrams brought from outside. But almost all local people can map and diagram for themselves. In the words of a Zimbabwean villager: 'one does not need to be able to write in order to be able to translate thoughts into concrete actions'. The faculty of being able to map and diagram may include all except some of the handicapped in community, without privileging those who are literate. So it is easier for almost all to take part, and understand maps and diagrams, which are prepared by them.

Visual diagramming can then be an equaliser. All those who participate—children, women, men, poor, rich illiterate, literate – can similarly understand what is being shown. Describing the experience of the Neighbourhood Initiatives Foundation (NIF) in the UK, Tony Gibson (1992) has pointed out that in conventional processes 'the talkers nearly always win.' But with a physical model of their neighbourhood, timid people can put down their ideas. Often people who put down an idea wait for others to talk first about it, and then say themselves, "I agree with you". Similarly participatory mapping and matrices by marginalised groups enable them to express their preferences and proprieties.

Good facilitation in participatory mapping and modelling often requires that the facilitator hand over the stick. The action is with those who map and diagram. After the early stages, outsiders have to keep quiet, observe the process, and not interrupt. In the NIF experience, roles are reversed. Instead of professionals presenting their plans for residents' comments,

"the residents are consulting the professionals to establish the range of options, the limitations, the possibilities – so that they can reach their own informed conclusions. The experts are on tap, not on top."

Table 8.1: Verbal and visual compared

	Verbal (interview, conversation...)	Visual (map, model, matrix, diagram...)
Outsider's mode and role	Probing investigator	Facilitating initiator and catalyst
Insider's mode and style	Reactive respondent	Creative analyst and presenter
Investigative style	Extractive	Performative
Insider's awareness of outsider	High	Low
Eye contact	High	Low
The medium and materials are those of:	Outsider	Insider
Detail influenced by:	Etic categories	Emic categories
Information flow	Sequential	Cumulative
Accessibility of information to others	Low Transient	High Semi-Permanent
Initiative for cross-checking	Outsider	Insider
Ownership of information	Appropriated by outsider	Shared; can be owned by insider
Utility for complex analysis	Low	High

The shift from verbal to visual is one of the emphasis in PRA. Maps and diagrams are part of the repertoire. They can be facilitated on their own early in interactions. They can also be part of semi-structured interviews or conversations, introduced as a means for local people to express, share and analyse their knowledge. They then present an agenda for discussion. Interviewing the matrix,' and interviewing the diagram' have not only proved the most fruitful, but also the most neglected stages of a discussion and diagramming process. With the visual, a whole new set of questions and discussions arise which do not happen in the verbal'. The PRA experience suggests that combinations of visual and verbal, with early primacy to the visual, can help to bring in those normally marginalised, and can express much of the complexity and diversity of local realities, and that verbal and visual combined express more than either on its own.

From Higher to Lower

In both medium of expression there is a shift from higher to lower. In the medium of expression, practitioners of PRA have debated on the relative advantages of paper or ground for participatory visual analysis. One view has been that in mainly literate cultures, as in China, Jamaica, Sri Lanka and the UK, it is appropriate for diagramming and analysis from the beginning to be on paper. Some have argued, before the experience, that the ground is an insult to people who are educated, and that it is patronising for a facilitator to encourage the use of the ground. Cultures and conditions vary but to date these reservations have proven to be unfounded. Ground and paper both have pros and cons, as summarised in the Table 8.2.

Table 8.2: The advantages of ground and of paper

Ground	Paper
Democratic, less eye contact and dominance	Permanent
Inclusive, more can take part	Portable
Friendly for marginalised people, non-literates, women etc.	Easy to copy
Easy to alter and add	Easy to display
Size less limited	Can be updated
Wide range of materials	Usable for participatory monitoring and evaluation
Can be 3 dimensional	More authoritative (with officials, policy-makers etc)
Fun and creative	
Local ownership	

Note: Advantages only are given, as the advantages of one are the disadvantages of the other.

Most importantly, the ground is an equaliser. The media and materials are often those of insiders – soil, stones, sand, seeds as counters, sticks as measures, vegetation and so on. Eye contact, and insider’s awareness of the outsider are low. It is elitist, valuable and linked with literacy. All the same, the non-literate can use paper and pens to map and diagram. In Pakistan, in March 1992, several non-literate women drew systems diagrams of their farms and households with internal and external flows and linkages. For people who do not read and write, the ground is usually better. It belongs to all and is costless, familiar, fun and easy to alter. Paper empowers those who hold the pen; the ground empowers those who are weak, marginalised and illiterate.

Personal relationships differ when analysis takes place on a wall, a table or the floor. In the Visualisation In Participatory Programmes (VIPP) approach, much of the participation is through writing on cards. These are grouped and ordered, usually pinned or stuck on a board or wall. The wall has advantages of visibility and items on it have some permanence. But with analysis on wall, there is a tendency of one person to take over, making the process slow and limiting the participation. The process can even become tedious.

In contrast, the ground is freer and faster. When cards are placed on the floor, they are easier to rearrange and more accessible to all. It is for all to intervene, by work or action, to express their reality, with the flexibility of moving items. Participants tend to think much more about what is being expressed than about who is expressing it.

Sequences are often the key. In terms of medium, the advantages of both ground and paper can be captured by starting on the ground and then redrawing on paper. So a ground map can be redrawn on paper, and cards can be sorted and ordered on the ground. The maps and cards alike can be stuck up and displayed more visibly on a wall.

From Reserve to Rapport

The shifts and reversals outlined so far generate and reinforce a further reversal, that of relations, from suspicion and reserve to confidence and rapport, and often from frustration to fun.

With outsider-insider interactions, there is a scale of formality-informality, from the short-term structured interview with questionnaire, through the semi-structured

interview with checklist of subtopics to the open-ended conversation. With interviews, and sometimes also conversations, outsiders ask questions and probe. The outsider maintains control, and largely determines the agenda and the categories. The interviewee responds, conscious of an interaction with a person who is seeking information.

RRA and more so PRA stress the process of gaining rapport. An initial reserve of local people towards outsiders is common. Their responses are often prudent in order to avoid loss and hopefully gain benefits. Some social anthropologists have expressed skepticism about the relative speed with which rapport can be established. For their deeper and more fully emic understanding, there is a case for more lengthy immersion. But the experience with both RRA and PRA is that when outsiders behave well and methods are participatory, good rapport can come quickly. This is paradoxically through outsiders taking time, showing respect, explaining who they are, answering questions, being honest and interested, and asking to be taught, being taught, and learning.

Some earlier participatory research also suffered from being long-drawn out. The pilot project in appropriate technology for grain storage in Bwakira Chini village in Tanzania involved an outside team living in the village for eight weeks. This was considered a short period of dialogue. But even so the application of the dialogical methodology was time-consuming and tiresome.

The contrast with RRA is sharp. Professional conversations are mutually stimulating and interesting. Of cattle keepers in Nigeria who ranked browse plants, Wolfgang Bayer (1988: 8) wrote that: 'Pastoralist were very willing to share their knowledge about browse plants with us and appeared to enjoy the interviews as much as we did'. Reflecting on the comparison between a topic RRA and a questionnaire survey on forestry and fuel wood in Sierra Leone, Andy Inglis (1991: 40) wrote that the RRA approach enabled respondents 'to enjoy a professional chat about their livelihood or kitchen habits, instead of being subjected to an intrusive questionnaire.'

With PRA approaches and methods, the contrast is usually even sharper. Data are not collected by outsiders, but expressed and analysed by insiders. What is shared is often unexpected and at times fascinating. For insiders, the creative act of presentation and analysis is usually a pleasure, and a process thinking through learning and expressing what they know and want. In matrix scoring for trees or varieties of crop, using the ground and seeds, it is a common experience for the outsider to become redundant as the process takes off. People debate and score on their own, oblivious of the outsiders.

The process is often enjoyed, and found interesting and useful. Quite often, dissatisfied with their first attempt at a map, local people scrub it out and start again with concentrated enthusiasm. Again and again, villagers in India have lost themselves in mapping and modelling, and outsiders have to learn not to interview, not to interrupt, and not to disturb their creativity. There is pride in what has been made, and pleasure in presenting it to others.

SAQ 1

- i) Explain the following in your own words.
 - a) Gender and Upper to Upper bias.
 - b) Practical action.
 - ii) Bring the distinction between reversals and reality.
-

8.6 REVERSALS IN LEARNING

Putting the last first means reversals in learning. The objectives of the rural developers include 'We must educate the farmers' and 'We must uplift the rural poor'. Outsiders have first to learn from farmers and from the rural poor. But many outsiders are

hindered from such learning by their educational attainment, urban status, and roles as bearers and dispensers of modern knowledge. The staff working in rural areas distance themselves from rural people, showing their separate style and standing through clothing, shoes, vehicle, office, briefcase, documents, and manner and speech. Hierarchy, authority and superiority prevent the learning 'from below'. Knowledge of one sort perpetuates ignorance of another.

Conventional learning through formal schooling, university courses, and staff training can contribute to these reversals through changes in syllabus. One example is to illuminate the problems and rationality of small farmers through insights. There are two methods, which deserve to be developed and included in courses and training.

The first of these is learning directly from rural people, trying to understand their knowledge systems and eliciting their technical knowledge. This is still rare as a part of education and training. The second is trying to experience the world as poor and weak person. The problem here is to enable professionals to step over and see and feel the world from the other end. The humanistic psychotherapies may have methods to offer for this, but their application to the training of rural development professionals has so far been little.

a) Sitting, Asking and Listening

Sitting, asking, and listening are as much an attitude and a method. Sitting implies lack of hurry, patience, and humility; asking implies that the outsider is the student; and listening implies respect and learning. Many of the best insights come this way. Relaxed discussions open up the unexpected.

The pooling of knowledge and mutual stimulation of a small casual group can be an excellent source of insight. The composition of a group can also be designed for a purpose. It is not only the outsider who holds initiative or who gains, but all who take part can influence the direction of the discussion, and be absorbed in learning. Evening meetings may be ideal, going on into the night, when the outsider's presence is less obtrusive and distorted responses less likely.

b) Learning from the Poorest

The poorest are usually considered to be the most ignorant, those from whom there is least to learn. But how much do outsiders know about how the poorest cope? To enable the poorest to do better, one has to understand how they manage at present. And on this the poorest are the experts – they know more than the ignorant outsiders who have not bothered to try to find out.

Learning from the poorest is rarely any part of anti-poverty programmes and projects; yet it is a key to enabling them to improve their lot.

c) Learning Indigenous Technical Knowledge

There are many ways for outsiders to learn from the rural people. There is a comprehensive approach of a social anthropologist concerned with knowledge systems, including concepts and patterns of thought. There are less complicated approaches including compiling the glossary of local terms, and games, quantification and ranking.

d) Joint R and D

Other reversals in learning can come from the location and mode of research. The strong reasons for carrying out much agricultural and agricultural engineering research jointly with farmers in their fields and under their conditions are now widely accepted. Research conducted outside the rural environment (on a research station, in a laboratory) often entails heroic simplifications or gross distortion. In the past, much agricultural research undertaken without the small farm and the small farm family has had the wrong priorities and has generated misleading

‘findings’. There are, to be sure, some stages or forms of research, which require stringent controls or special equipment, which only a research station or laboratory can provide. But professional biases weigh heavily towards working in research station and laboratory instead of in field condition.

e) Learning by Working

For many outsiders, there is scope for learning by physically working with farmers and others, and doing what they do.

Putting the first last

This means putting first those who are poor, physically weak, isolated, vulnerable and powerless, and their priorities and the things that matter to them. Norman Uphoff (1992) has taken this further making a case for rehabilitation of the concept of altruism and generous behaviour. He has identified a continuum of orientations toward self and others (Table 8.3) from aggressive behaviour (destructive of others), through selfish behaviour (in which one’s gain is another’s loss), to generous behaviour (in which all gain) and finally sacrificial behaviour (which is self-destructive). The generous or altruistic person gains either from the satisfaction, which is seen to be inherently good. Putting the last first is generous or altruistic behaviour in either or both of these senses. It has a positive-sum orientation in which all can gain.

Table 8.3: Continuum of orientations toward self and others

(a)	(b)	(c)	(d)
Aggressive Behaviour <i>(destructive of others)</i>	Selfish behaviour <i>(zero-sum orientation)</i>	Generous behaviour <i>(positive-sum orientation)</i>	Sacrificial behaviour <i>(self-destructive)</i>

Source: Uphoff, 1992:343

Disempowerment as loss

Putting the first last goes further and confronts issues of power. With altruism and generous behaviour, the first remain first: uppers remain uppers. Putting the first last is more radical. For it means that those who are uppers and powerful step down, disempower themselves, and empower others. It means putting the first (oneself) last, or at least lower. It implies that uppers have to give up something and make themselves vulnerable. It sounds like sacrificial behaviour, a zero-sum in which uppers, the powerful, have to lose.

That such loss could be accepted on any scale may seem improbable. In personal terms, it looks contrary to normal self-regard and self-protection. Ideologically, it conflicts with the pervasive ethos of the neo-liberal market and of the materialism and global greed of the mid-1990s. The very language we use expresses a zero-sum mindset. It treats power as a commodity where one’s gain is another’s loss: it is something we lose, surrender, give up, are stripped of, or hand over. If we are socialised into wanting more of every thing, then we want more power.

Professionally, reversals can also be seen as threat. For professional uppers, ‘lowers can do it’, and to imply loss of self-esteem, status and control. To recognise and privilege lowers realities can seem a Pandora’s box – the expression of complex and multiple realities. Criteria, categories and demands might cause the simple standard bricks of central citadels to crumble. The fear of freedom afflicts not only fascists but also daunt those whose dominance is grounded in denials of democratic diversity.

Politically and personally, those who are most reluctant to give up power are often those who have done wrong. They fear exposure, punishment and revenge, and feel that to protect themselves they must retain control. They are also victims of their own

wrongdoing, trapped by fear of retribution for what they have done and been. For them, disempowerment is dangerous. The challenge is to find ways uppers can free themselves from these traps.

Disempowerment as gain: effectiveness, liberation, fulfillment and fun

Fortunately, disempowerment is often a positive sum, in which all gain. This can take several forms.

Effectiveness

Instrumentally, disempowerment offers new roles with new effectiveness in development. To facilitate the participation of others is often practical and cost-effective. The errors of “all power deceives” diminish. Local realities, which are complex, diverse, dynamic and unpredictable can be better expressed and local needs better met. Equity can be served in empowering the weak. Good change can be more sustainable when it is locally owned. In many ways, uppers can gain because empowering lowers is so practical. Against expectations, it often works.

Liberation

Power on a pinnacle is lonely. Centralised control of more than the minimum is stressful. In contrast, decentralisation, spreading responsibility and enhancing trust can defuse tension. Relationships are more equal, with mutual exchanges, learning, partnership, friendship and collegiality. Openness, honesty and realism are foundations of peace of mind.

A striking contemporary example is the extraordinary forgiveness of black Africans manifested in Kenya, Zimbabwe and South Africa after colonial and white domination. Before independence in Kenya, and before majority rule in Zimbabwe and South Africa, many whites in those countries were consumed with fear. They could not believe that ‘giving up and handing over’ power and control could lead to anything but violence and revenge. As of now they are almost completely wrong. So far, in several senses, almost all have gained from the disempowerment of the whites. A great gift of Africa to humankind has been to make manifest the healing powers of magnanimity. Like Mahatma Gandhi earlier, Nelson Mandela today towers as an inspiration.

One can ask then, in how many other conditions and places, in political systems, organisations, communities and families, similar fears may be tragically unnecessary, perpetuating pain for lowers and fear for uppers, and how often there is an alternative of positive synergy where lowers’ forgiveness generates uppers’ relief and gratitude, and where disempowerment liberates.

Fulfillment and Fun

As many teachers know, enabling others to learn, grow and fulfill themselves is in itself fulfilling. So too, in a PRA mode, empowering others through facilitating their analysis, planning and action, some of the fulfillment, too, comes from processes which people enjoy. Until recently with PRA, the word ‘fun’ has scarcely been used in development. Faced with horrors of war and extremes of cruelty and deprivation, fun may sound self-regarding or even frivolous. But creativity, play and laughter are part of what most people value and wish for themselves and for others; and they are quite often part of PRA processes.

The most seminal learning from the PRA experience comes from going beyond the altruism and generosity of putting the last first to the exhilaration of putting the first last; to responsible disempowerment, eased by the forgiveness of lowers and enhanced by the fulfillment of uppers. In reversals of dominance – stepping down, handing over the power facilitating – uppers have means and opportunities for taking pleasure in

empowering lowers to do that; putting the first last is not a threat but a fulfillment, a liberation, a gain.

For well-being which is sustainable, equitable and responsible, the prison of power is one problem, while the material possessiveness is another. A great methodological challenge for the twenty-first century is to find good ways to enable those with more to be better off with less.

SAQ 2

- i) Explain the following in your own words.
 - a) Learning Indigenous Technical Knowledge.
 - b) Disempowerment as loss.
-

Let us summarise what we have learnt so far.

8.7 SUMMARY

For participatory appraisal, the outsiders have to change their ways of learning about rural conditions. The problem of time and timelessness can realistically be tackled by those involved in two ways: by improving rural development tourism, and by developing and using techniques for Rapid Rural appraisal.

Tactics of tourist include:

- Offering the anti poverty biases.
- Spending longer and going further.
- Being unimportant.
- Rapid Rural appraisal.

Reversal in learning:

- Sitting, asking and listening.
- Learning from the poorest.
- Learning indigenous technical knowledge.
- Joint R and D.
- Learning by working.

8.8 TERMINAL QUESTIONS

1. Explain the following in your own words.
 - a) Field Practices and Ethnics.
 - b) Rapid Rural Appraisal.
2. What do you mean by reversals and reality? Explain.
3. Write a note on the reversals in learning.

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UNIT 9 ORGANISATIONAL CHANGE FOR SUSTAINABLE DEVELOPMENT

Structure

- 9.1 Introduction
 - Objectives
- 9.2 Organisation vs Institution
- 9.3 Evolution of Need for Organisational Change
 - What is Organisational Change
 - Evolution of need for Organisational Change
- 9.4 The Change Agent: Role and Skills
- 9.5 Change Approaches
- 9.6 The Creation of Capacity for Change
 - Capacity Development
 - Content of Change
 - Contexts of Change
- 9.7 Role of Leadership and Innovation in Organisational Culture
 - Leadership
 - Innovators and Organisational Culture
- 9.8 Implementation Process: Stages
- 9.9 Participation in Organisational Changes: Challenges and Mainstreaming
 - Downstreaming Participation
 - Upstreaming Participation
 - Issues of Mainstreaming
- 9.10 Case Studies of Organisational Change
- 9.11 Summary
- 9.12 Terminal Questions

9.1 INTRODUCTION

Change is inevitable in the history of any organisation. Organisations that do not change or keep pace with the changing environment suffer from entropy and soon become defunct. Organisations have an internal environment, but exist in an external environment. The internal environment is in terms of the task, structure, technology, social (people) and economic variables, while the external environment is in terms of the larger social, political, economic and cultural factors. To function effectively, organisations have to achieve an equilibrium within the internal variables in active interaction with each other and also with the external environment. However this equilibrium is not static but dynamic. Therefore, organisations have to modify and change to adapt themselves to the changing internal and external environment. Thus no organisation can stand still and “tread water” for very long.

Organisational changes are needed at all levels in the development cycle – grass root/community based organisations, intermediary organisations, both government and non-government, and also at policy making levels. Imbibing participatory methods in institutions to enable development of local institutions is an important first step towards changing power relations. In the organisational adjustment process, experience shows that misfits tend to leave the system and the resulting environment is more conducive to a participatory approach.

In the present unit, you will study about the need for change and process of organisational change. The capacity development to bring change is discussed at length. Further, the role of participatory approach to strengthen the organisational change is highlighted.

Objectives

After studying this unit you should be able to:

- explain as to what is change,
- discuss role and skills of change agents in organisation,
- describe the process of organisational change, implementation of change and its restraining forces,
- discuss the capacity development in organisation culture,
- appreciate the participation in organisational change, and
- discuss some of the issues and challenges in the context of participation in organisational changes.

9.2 ORGANISATION vs INSTITUTION

Before discussing about organisational change and institutional development, let us first examine the terms “organisation” and “institution”.

- **What is an organization?**

An organisation is a system consisting of four interacting subsystems: structure, technology, people and task. The goals of an organisation, generally are: survival, stability, profitability, growth and service to society. From one organisation to another, the goal or goals may differ depending upon at what stage of development the organisation is.

- **What is an institution?**

Institution may be defined as a responsive, adaptive organisation which is a product of social needs and pressures. It is a part of the larger system i.e the community or the society and is a forward looking, adaptive and proactive part of the community. Esman and Blaise (1966) define Institutions ‘as organisations which incorporate, foster and protect normative relationships and action patterns and perform functions and services which are valued in the environment’.

Now let us compare organisation and institution in terms of their goals, structures and functions.

- **Organisation vs. Institution**

An organisation comes into existence in order to achieve a goal or a set of goals. Since no one individual can achieve the goal or set of goals by himself, a number of individuals come together. There tends to be a division of work wherein the overall goal or objective is broken down into sub-goals and they, in turn, into activities to be performed by each of the individuals thus giving rise to differentiation in power, authority, role and responsibilities. These differentiated functions are coordinated, in terms of rationally conceived role relationships, and a normative order.

This rationally conceived hierarchisation has to be maintained over time to achieve the overall objective. Maintenance of the normative order is, therefore, an important sub-goal of the organisation. As goals have to be achieved economically and efficiently, optimum utilisation of resources such as men, material and money is yet another important sub-goal of the organisation.

While organisations aim at maintenance of internal order and efficiency in goal realisation, institutions extend beyond these goals. Institutions have the relatively more permanence than organisations. Organisations are organic, they have a birth, growth and finally, decay. Institutions are more enduring, have capacity of continuous growth, ability to cope and adapt under diverse pressures and pulls to make thrust into the future, in addition to having an impact on the society or community in which they

exist. They perform services and functions which are valued in the community or society and also play the roles of a change inducing, a change-protecting agent within the community. While all institutions basically start as organisations, it is only a few organisations that can survive, grow and adopt to achieve finally an institutional status.

SAQ 1

How does an institution differ from an organisation in its structure and objectives?

9.3 EVOLUTION OF NEED FOR ORGANISATIONAL CHANGE

For the growth and expansion of an organisation, change is inevitable. In this section, we will explain the word change and the evolution of its need, for organisational modification.

9.3.1 What is Organisational Change?

The internal and external environments can be best represented as field of forces operating within and external to the organisation. *Change* is an alteration in the existing field of forces which tends to affect the equilibrium. Modifications in the job performance, changes in rules and procedures, bringing in new technology, alterations in the organisational structure, change in leadership etc., do affect the internal equilibrium. Similarly, stiff competition from competitors, modifications in government rules and regulations, political changes, economic fluctuations etc., affect the organisations' equilibrium with the external environment.

Organisations can deal with these changes effectively by bringing about an alteration or change among these forces (internal – external) so as to reduce tension. This is possible by understanding the total array of forces operating on a particular equilibrium. Diagnosis and manipulations of the relevant forces is to be in terms of obtaining as much participation and commitment as possible from those directly and indirectly affected by the change. Finally organisational culture must be changed to reinforce and maintain the new equilibrium achieved by manipulating or modifying the forces.

9.3.2 Evolution of Need for Organisational Change

The late 1990s and the early twentieth century was an era of substantial change in institutional arrangements and organisational policies. It is an era for radical decisions. One of the important skills the development managers need is that of promoting and managing organisational change. This is true for all agencies – donors, governments, NGOs and the private sector. In donors, governments and the private sectors, organisational change appropriate to the new paradigm will be heavily constrained by other overriding political and organisational objectives. Part of the challenge will be to influence these wider organisations to change their practices insofar as they have an impact on development. Given the unbundling, which is now characteristic of public sector reform, this should not prove impossible.

It is clear that bureaucracy, in either its classic or its degraded form, cannot work well in the new paradigm. The possibility of reform is affected by contexts and culture. **In South East Asia, where the influence of the private sector is strong, the reform of bureaucracy is likely to be more repaid compared with South Asia where a public sector culture dominates even the private sector to a degree.** A strong public sector may vary considerably in its culture and functioning. The key difference is the degree to which it is rule and procedure-bound or led by purposes to which the rules are subordinate. Success in development invariably requires a degree of risk-taking (innovation, rule-breaking, etc.) which is very difficult to achieve in a rule-

bound working environment. In several Sub-Saharan African countries, the public sector has been so decimated and become so donor-dependent, that the reform of structures has become a way of life. However, the reforms introduced so far have been inadequate in the direction of development, being aimed largely at other objectives like cost cutting and retrenchment.

A rejection of the bureaucratic mode does not imply the rejection of all its features. Accountability is a critical issue, but can be assured in ways other than upward reporting and accounting. Horizontal (peer review) accountability is more important. Balancing accountability upwards and downwards, and mutual understanding between financing agencies and participating groups, communities and organisations is a challenge for organisations working in the new paradigm. Merit recruitment systems are vital, but can be achieved more effectively without the centralised, bureaucratic procedures associated with a massive public service. Criteria such as local experience, trust of local people and use of local language, which are not normally considered appropriate, may be of greater relevance.

Hierarchy, as a principle of organising, however, is rejected. Even the hierarchy implicit in contracts is often inappropriate. Contracts (public-private; donor-NGO; government-NGO; NGO-Community-based Organisation (CBO), CBO-group/community) are useful devices for clarifying and regulating inter-organisational relationships. However, the development of trust and partnership in a relational contract is usually important in rural development. Trust is mutual, and implies a lessening of hierarchy, if not a total absence of it.

Organisational change is directed at generating an interactive, outward-looking organisation, able to promote the capacity and institutional development of partners especially at the local and associational levels, as well as its own. Management needs to recognise the requirements of different organisations and avoid tendency to create mirror organisations. Organisation should value individuals in key positions giving them high levels of discretion and support. Organisation needs to generate, participatorily useful information about their activities: this is the key to their strategic thinking process. The latter sounds very grand, and can be very complex but may also actually be quite simple. It needs to be simple in many situations. An outward-looking organisation will seek to involve others in its functioning through, for example, participation on an Executive or Advisory Board, or through establishing an external monitoring team, or simply by participating in discussions and networking. This is important not only in renewing the ideas and energies available to the organisation, but also in explaining its functioning to others, and in seeking to work with other agencies.

9.4 THE CHANGE AGENT: ROLE AND SKILLS

The change agent, may be defined as “a professional person who influences innovation-decisions in a direction deemed desirable by a change agency” (Rogers & Shoemaker (1971). It is the manager’s job to introduce and implement a change so that the desired innovation-decisions are effected in the organisation.

The change agent is generally said to fill seven roles in the change process (Rogers and Shoemaker, 1971).

1. He develops a need for change on the part of his clients. The client system is made to realise the importance and benefits of the intended change.
2. He establishes a change relationship with them. The clients feel that the change can be effectively brought about with the help and support of the change agent.
3. The change agent is able to identify the problem faced by the client after he diagnoses their problems. He may list them down. Also he is able to anticipate problems likely to be faced by the client during and after the change process and think of ways and means of minimising them.

4. The client is made to feel the need for change. The change is not thrust on him. The client understands the relevance and necessity of change and is willing and supportive of the change.
5. A blue print of action for implementing the change is prepared. The support of the client system is enlisted in translating the planned change into action process.
6. The change agent stabilises change and prevents discontinuance. Any change is moving the organisation towards a newer equilibrium from the earlier one. If the new equilibrium is not maintained, the organisation is likely to revert to the earlier equilibrium and the change effort will be a failure, however well planned and executed it may be. The client system should be made to realise the importance of this and the new patterns of behaviour have to be stabilised.
7. Achieves a terminal relationship with his clients. No change agent can continue to be associated with a change effort too long. At some time, during the change process, the client should feel confident to take over and maintain the change effort. That would be an opportune time for the change agent to terminate relations with the client system. There is no undue dependence on the change agent and the client system will carry on the activity with confidence.

Thus change agent should have specific cognitive and action skills. He should be able to analyse the situation in the context of perceiving a need for change. He should be able to conceptualise and evaluate the problems, causes etc. on an objective basis and effectively play the role of a consultant, counsellor and facilitator.

9.5 CHANGE APPROACHES

The change approaches are varied. A suitable approach is used upon the problem factors – both internal and external – to the organisation and to a certain extent on the skills possessed by the change agent. The most commonly used change approaches, as identified by Griener (1965), are:

The Decree approach: The boss decides. It is a unilateral authoritative announcement of the required behaviour or change issued by a person with formal authority.

The replacement approach: It is removing the stumbling block. Organisational personnel in significant positions who directly or indirectly resist the intended change are replaced with new people who believe in the desired change.

The structural approach: Certain desirable changes are brought in the organogram. Consequently the degree of responsibility and the role-set relationships of certain focal persons change and may lead to better resolution of problems.

- The data discussion approach: Relevant information concerning the change and its intended effects is presented to motivate the individuals to discuss the change efforts.
- The group decisions approach: (the democratic way). Change is in terms of participation and consensus on a predetermined course of action.
- The group problem solving approach: Identification of the problem and problem solving is through group discussion.
- The T-group approach: Interpersonal relationships are improved for better teamwork and thereby organisational effectiveness improves by lab training. The sensitivity training method aims at understanding oneself and the others.
- Emulative approach: Subordinates emulate their superiors with regard to goal setting, work activity etc.

These approaches enable the change agents to harness the social power with the organisation and effect change towards better work relationships and managerial effectiveness.

After this brief account of change approaches, let us examine the model of strategic change, relevant to the context of participatory approach.

Model of strategic change

This model of strategic change was originally developed by Pettigrew and Whipp (1991) as a means of generating insight into why some private sector organisations were better able than others to manage strategic change and improve their competitive performance. The model was based on empirical case studies.

It is a reminder that change takes place in a historical, cultural, economic and political context. The original model suggests five interrelated factors that are important in shaping performance.

1. Environmental assessment.
2. Human resources as assets and liabilities.
3. Linking strategic and operational change.
4. Leading change.
5. Overall coherence.

It suggests that successful change is a result of the interaction between the content or what of change (objectives, purpose and goals); the process or how of change (implementation); and the organisational context of change (the internal and external environment).

The study elucidated factors associated with the achievement of a higher rate of strategic service change by health care organisations. Eight interlinked factors listed below served to differentiate the higher from the lower performers.

- Quality and coherence of local policy (analytic and process components)
- Key people leading change (especially a multidisciplinary team)
- Co-operative inter-organisational networks
- Supportive organisational culture, including the managerial subculture
- Environmental pressure, moderate, predictable and long-term
- Simplicity and clarity of goals and priorities
- Positive pattern of managerial and clinical relations
- Fit between the change agenda and the locale

There was a pattern of association between the eight factors but there were no simple cause-and-effect relationships.

This was a major piece of empirical research which added to the basic literature and have had few projects on this scale since then. It provides a diagnostic checklist which can be used to assess the likely reception of a particular intervention in a specific locale.

SAQ 2

- a) Which factors influence the success of “Change”? How does a change agent contribute to the change process?
 - b) Examine the different approaches to change in an organisation.
-

9.6 THE CREATION OF CAPACITY FOR CHANGE

Organisational change is about the creation and destruction of capacity. It should be recognised that there are negative capacities – the capacity to block criticism, debate and change, delay action, deny access, restrict information, and exclude stakeholders. Change is as much about removing negative capacities as creating the positive ones.

Change can be seen as a process, with a specific content, in a particular context.

The content may be straightforward – one simple, easily achievable goal; start easy but get difficult – an initial change which necessarily leads to others; or be difficult from the outset – with multiple goals and purposes which change as time passes. The capacity for change is variable within organizations – between departments and between individuals – as well as among organisations linked in hierarchy or network. Leaders who bring change need to understand why this is so, and develop their strategies for change in the light of this analysis. Content and context interact in a process. In the following subsections you will study about the content and context of change.

Before proceeding further, let us examine the concept of ‘capacity building’ or ‘capacity development’ in the following subsection.

9.6.1 Capacity Development

Capacity development is the process by which individuals, groups, organisations, institutions and societies increase their abilities to:

- i) perform core functions, solve problems, define and achieve objectives; and
- ii) understand and deal with their development needs in a broad context and in a sustainable manner. UNDP, 1997.

The concept of “capacity development” came into existence during the 1990s with the growing realisation that poverty and sustainable development could not be addressed through technical and economic solutions alone. Organisational theory and development management, as well as sociology, political science, and economics have influenced thinking around the term. Capacity development is generally understood to be an endogenous process through which a society changes its rules, institutions and standards of behaviour, increases its level of social capital and enhances its ability to respond, adapt and exert discipline on itself.

Thus, ‘capacity development’ is broad and it attempts to be all-embracing. It addresses development at different levels of society, it deals with entities of different size and scope, and with different stages of the development process. It attempts to link previously isolated approaches, such as organisational development, community development, integrated rural development and sustainable development, into the umbrella concept.

Capacity is understood as “the ability of individuals, organisations and societies to perform functions, solve problems and set and achieve their own objectives”. In this sense it is about the self-organisation of a society and the will, the vision, the cohesion and the values to make progress over time.

Lavergne and Saxby (2001) identify a set of the so-called ‘core capacities’ which individuals, organisations or society as a whole need to possess in order to realise their human and social potential to the highest possible level. They recognise the importance of the technical skills, knowledge and human resource development, but go beyond that by addressing also intangible capacities such as managing and resolving conflicts, or building networks and relationships.

Governments, donors and NGOs have started to embrace the concept of capacity development. However, there is a tendency to emphasise different elements of the concept resulting often in conceptual and operational confusion. Let us discuss some of the overlapping concepts and approaches that lie behind the concept.

This approach sees an entity, an organisation, or a set of organisations as the key to development. It focuses on identifying and developing the elements or components of

the capacity within an organisation, such as skills, systems, leadership, etc. Building on the systems approach, most organisational development literature discusses both the internal working of an organisation, as well as its relationship with the external environment. Organisations are seen as processing systems that change both the individual and the group capacities into organisation results. This approach is closely related to the well-developed theory on organisations and organisational change. It has been valued not only for its use within the context of organisational change processes but also criticised for its limited focus.

The institutional approach

The institutional approach aims to develop the capacity to create, change, enforce, and learn from the processes and rules that govern society. It deals with more than organisations, only. The institutional approach stimulates the creation of knowledge of and access to the formal and informal “rules of the game” and puts a stress on the elements such as laws, regulations, attitudes, etc. It adopts a macro perspective and deals with the issues which underlie most development problems, such as norms, cultural values, incentive systems and beliefs. The problem with the approach is that the boundaries between ‘institutional change’ and ‘capacity development’, which put a stress on the change of a society’s rules, institutions and standards of behaviour, can not always be clearly distinguished.

The system approach

The system approach provides a multidimensional idea on capacity development: society is viewed as a combination of multilevel, holistic, and interrelated systems, in which each system and part is linked to another. Thus, it approaches capacity development as intervening at multiple levels and actors, in power relationships, linkages and processes. This systemic approach is explained in Bolger (2000), which suggests four levels of capacity (the individual, organisational, network/sectoral and the enabling environment) and stresses the need to be cognizant of, and responsive to, the relationships among them. The advantages of this approach are that it is comprehensive and flexible, it emphasises linkages and recognises processes, and it uses a broad conceptual and theoretical framework. On the other hand, this makes it difficult to distinguish capacity development from general understanding of development. Working with this approach normally requires further conceptual clarification, depending on the respective capacity development interventions and change process.

The participatory process approach

Unlike the other approaches, which focus on a specific entity for capacity development, this approach stresses the means used to achieve development goals. This approach is based on the view of people-centred, non-hierarchical development that calls for capacity development which is participatory and empowering, and in which ownership is a central element. The use of foreign models should be abstained and attempts should be made to identify and use local expertise, to work from the grassroots and to develop a domestic model. The approach embraces change and learning through participatory processes – primarily at the individual level as core values. The risk is that not sufficient consideration is given to quantitative and qualitative changes brought about by capacity development. The participatory process approach may overlap with the organisational, institutional and systems approaches.

9.6.2 Content of Change

There are many types of change most involve sets of interrelated changes. A deep change in attitude and professional ideology as well as in organisational structures and procedures is required. We will examine this with a well known example of Oxfam (Box 9.1).

Conceptually, integrating gender issues into development work is not very complicated as knowledge about gender differences and their significance has been widely available for some time. However, it has proved to be a slow process, even within a reputedly progressive organisation like Oxfam. Oxfam is recognised as a leading agency in the introduction of gender issues into its own work, as well as in the wider development debate. Its Gender and Development Unit (now Team) was formed in the mid-1980s to derive a process of organisational change. A review of work in 1994 on gender issues in 30 countries where Oxfam operates, claimed many successes, including increased women's participation in Oxfam projects, strengthened women's organisations, and better awareness of gender issues among partner organisations. There were also many lessons learnt from a decade of experience: training staff and getting issues understood by Oxfam staff and partners takes time; the issues challenge people personally, and working through these challenges also takes time. There are powerful religious and cultural forces arrayed against change in unequal gender relationships. And as a result the profile of research and advocacy on issues like women's rights, legal status, and violence against women needs to be raised if there is to be any effect. Men and women need to be involved in, rather than excluded from, each other's projects if changes are to be achieved. Gender awareness project management procedures are needed. Women were also excluded from debate by the widespread use of English as the only language.

Problems identified by Oxfam staff included

- a failure to influence men, and the resistance of some male staff;
- lack of time to carry out the time-consuming work that gender issues require, because workload in other areas are heavy;
- difficulty of translating concepts developed in the headquarters to different contexts around the world; and
- the repeated failure of women's income generating projects (a key strategy) to improve women's status or access to decision-making and resources (Wallace, 1994).

9.6.3 Contexts of Change

Some strategies are to be applied to restructure the organisational set up of the government and NGOs. These are discussed as below.

- **Government and Public Sector**

Critical capacities for government in rural development include a capacity for self-restructuring, and transitional change; a capacity for public education and information, to foster self-regulation; a capacity to abandon the search for control over detail, but to orchestrate consensus behind purposes; a capacity to evaluate together with stakeholders; a capacity to value individuals who are central to networks rather than looking at them as a threat; and finally, and most problematically for government, a capacity to allow dissension political campaigning, and the emergence of countervailing interests.

But governments have critical incapacities; they are inflexible with respect to staffing and financial management; the pace of work is often too slow due to low productivity and low motivation; unmotivated staff are overly concerned with their own survival and perks; hierarchy and concentration of decision at the top make devolved management impossible; central ministries retain control at all costs. These fundamental incapacities mean that change in government has to be structural as well as cultural. There are some crucial decisions, which have to be taken at ministerial level. The devolution of development functions to local government is one approach, but the same incapacities can be created there. Delegation to specialist autonomous

bodies is another approach, much tried in the era of integrated development, but which may gain a new lease of life in the new paradigm, where fieldworkers are highly prized and experienced staff. They may be organised in small autonomous, collegiate bodies, reporting to a devolved government. Each autonomous body may have a small secretariat, but not the armies of office and fieldworkers typical of development project. If additional manpower is required they will have to be hired on contract, preferably with local backgrounds as well as relevant skills. Work may be done through partnership with local associations or NGOs.

The management of organisational change involves various capacities – the capacity to retrench, redeploy and destroy large parts of the public sector. Destruction and retrenchment may sound very negative, but public sector organisations have become so overburdened with the wrong kind of staff and the wrong sort of culture that in many cases retraining, redeployment and restructuring will only bring substantial benefits if accompanied by considerable retrenchment and destruction. This applies particularly to central ministries and centralised organisations based in capital cities. Only a very small percentage should remain in those locations: senior policy-makers, policy analysts, information system managers, and legislative experts. These types of change would affect ministries of agriculture, departments of primary and preventive health, departments of primary and secondary education, rural industry departments, and so on.

The capacity to retrench is complemented by a capacity to develop rolling relational (trust-based) contracts with other agencies or individuals, or even within the organisation. Performance of these contracts then needs to be monitored by both or all parties. However the contract culture needs to be tempered with commitment and a long-term perspective on the development of capacity at a local level. In the rural areas of the most developing countries, there is no private sector that waits to take contracts from the development agencies: contracts inevitably take on the characteristics of partnerships in this situation.

Radical restructuring would offer early retirement to civil servants, with benefits, especially those without appropriate skills; offer experienced workers responsible field postings with allowances to compensate for hardship, and scholarships for their children: create a framework in which they retire to their villages (early) and work for development organisations in their villages, perhaps competitively; privatise and regulate those services which can be, for example, veterinary, where demand is strong; move in a phased manner towards creating autonomous bodies for extension and research, and service provision (schools, hospitals, clinics, water supply systems), giving networking responsibilities to these decentralised bodies; and create links of accountability to local democratic bodies, as well as direct client groups.

- **NGOs**

The call for NGOs in recent years has been to ‘scale up’ – spread and grow in order to have a wider impact. This may be done through lobbying and advocacy, or by growing organisationally, unbundling, becoming properly rooted in society, working with partners in networks, avoiding the errors of past organisational empire-building strategies.

The empowerment of local organisations, CBOs, and associations does not require the long-term presence of a sustainable southern or northern NGO; success in developing the capacities of grassroots organisations and their associations would enable intermediary NGOs (or government departments charged with capacity-building) to disappear, or at the least to change the role, or move on. As a contribution to the development of civil society, NGOs are often a positive development, but they may be male and elite dominated, and highly opportunistic and career oriented in a situation where careers are hard to come by, and where northern NGOs provide much needed opportunities.

The intermediary NGO is an unsatisfactory and temporary form of organisation, a creature of the aid industry. They are much more significant, because they are rooted and sustainable, organisations which find their *raison d'eter* in the political economy, and not as semi-outsiders. The real capacity building of southern NGOs is their transformation into rooted organisations. There are few role models of NGOs e.g. Grameen Bank and Bancosol which have become commercial, poverty-oriented banks.

In NGOs, the process of organisational change has been characterised by fission, with new NGOs being set up by discontented staff from the established NGOs. Such staff could exercise greater imagination as they build their new organisation, exploring the scope for rooting the new organisations as sustainable institutions bound to a local membership or client group. There will always be a role for service agencies – agencies which provide services to membership organizations – but the priority today is to build the membership base organisations just as much as, if not more than, the service agencies.

Changing from an organisation which provides services to one which builds memberships into the process of provision involves continually identifying demand, adapting identified demand, involving members in decision-making on a regular basis and generating at least some resources internally (i.e. within the membership); the skills of building democratic broad-based organisations managing common properties and providing services. New attitudes are required to shape membership opinion, and also be disciplined by it. Skills of consensus-building and managing when consensus is absent will be at a premium.

SAQ 3

Discuss the underlying processes of capacity development.

9.7 ROLE OF LEADERSHIP AND INNOVATION IN ORGANISATIONAL CULTURE

To bring a change in the organisational culture, leadership and innovation are very important parameters as these create motivation (extrinsic leading to intrinsic) among people.

9.7.1 Leadership

Leadership is at the heart of planned organisational change. This field is dominated by the 'Excellence' tradition, which suggests that decentralised, project-based organisations, which give central place to the roles of individuals within the organisation, succeed. This tradition is strongest in the American private sector, but has influenced thinking about management across a wide spectrum of organisations, including those involved in rural development. Leadership is supposed to substitute for rules, quotas and targets. Leaders can be trained to be competent across a wide variety of competencies to play different roles. Here is one prescription for the 'master manager'. He or she should be able to play the following roles:

i) **The director role**

- Taking the initiative
- Setting the goal
- Effective delegation

ii) **The producer role**

- Personal productivity and motivation
- Time and stress management

iii) **The co-coordinator role**

- Planning
- Organising
- Controlling

iv) **The monitor role**

- Writing effectively
- Reducing information overload

v) **The mentor role**

- Understanding oneself and others
- Effective inter-personal communication
- Developing subordinates

vi) **The facilitator's role**

- Team building
- Participative decision-making
- Conflict managements

vii) **The innovator role**

- Creative thinking
- Living with and managing change

viii) **The broker role**

- Creating and maintaining a power base
- Effective negotiation and influencing skills
- Effective oral presentation

These roles tend to focus on the internal environment of change, whereas change may have much more to do with the interactions between leaders or innovators and the external environment. Since rural development organisations rarely have much autonomy they will need to pay considerable attention to changing the external environment if organisational change is to last.

Leadership is not only about possessing competencies but also an interactive process. Followers have to be led, willingly, but usually with incentives and sanctions and some support from both the narrow organisational and the wider culture as a result. Effective innovators are rare and should be cherished.

9.7.2 Innovators and Organisational Culture

The role of the innovator is one of the most compelling, and yet least understood, of the eight leadership roles as listed in the above subsection. Innovators need to be driven by wider objectives, and supported by conviction based on reality that what they are doing is right and feasible. In practice, innovators are often threatening to others, and come under a lot of pressure to work at a more widely accepted pace and in less demanding style. However, there are different cultural styles, which will be appropriate. Whereas the innovator in a western organisation will often be quite ruthless in pushing through new ideas, an innovator in a more paternalistic culture will need to combine innovation with a caring, family work orientation. This is an uneasy combination and much more difficult to balance. Without it, the innovator loses legitimacy. In either case, support from top management or headquarters organisations is vital.

Innovations may be encouraged or discouraged by factors in the internal and external environments of the organisation. These are:

- the degree to which interest groups identify with that vision, and
- the degree to which the vision is achievable within given financial and human resource frameworks.

Linked to the development of a shared vision is the evolution of a leadership cadre committed to change. Pressures from the environment – financial crisis, or pressures to proceed in a certain way – can speed up or slow down the change process. The process of change can also exert an influence: for example, simplicity and clarity of goals will help widespread understanding, and understanding is perhaps the first step to commitment.

Organisational culture is often an inherently conservative force in the face of necessary change. This is the reason for the emphasis on developing organisational cultures, which enable learning, adaptation and innovation as a matter of course. In rural development, change is now pervasive. Adapting to pervasive change should be easier for organisations that are newly established compared with agencies with stronger cultures of their own. Many rural development organisations are new, and have less formalised divisions of labour and procedures of operation, where cultures are better established. It is likely that structures, procedures and attitudes will need change. Resistance to change has several sources:

- The preference of staff (and other stakeholders) for stability and predictability. This is probably greatest in economics where uncertainties are also great.
- The cost of change: accountants' cost-conscious views often stand against proponents of change.
- Long-term external agreements and contracts may be seen to restrict, or complicate the process of change.
- Groups perceive change as a threat to their positions and power. Since rural development involves power sharing, this is a critical dimension.

The stronger is the culture of organisation that opposes change, it is more likely that it will be imposed on individuals. This is why changing the culture through training and other activities, which facilitate individual growth, may facilitate the change. Involving key players in creating the process of change – bringing out their latent creativity insofar as possible – helps spread the sense of ownership of the change. Getting the material incentives (pay, security, workload) right helps to break resistance. These would include factors, which enable employees to meet social expectations for example – assistance to family members, provided this can be done without compromising organisational objectives.

9.8 IMPLEMENTATION PROCESS: STAGES

Any change has to be gradual and drawn over time in sequential phases and cannot be hurried upon. Swift action poses problems of being pressed too far and too fast, and those who implement may complain of work overload, stress etc. However, this does not mean that change should be slow. There are certain phases and situations where swift action is perhaps necessary but it should be balanced against the cost of appearing to jump the process and causing stress or work overload.

There seem to be certain stages in the implementation process in terms of the attitudes and behaviours of the implementors. The first is *Honeymoon period*, where the necessity of change is felt and the change plan is considered desirable and there is zeal and enthusiasm among people for the change effort.

As the change plan gets implemented, the implementor gets to know the real demands made upon him and his work, reactions of others with whom he has to interact and

comments and criticism from those who do not tolerate deviation from their habitual work patterns. This is the *reconsideration stage*. Negative forces gather around and the implementor has to deal with them before they gain momentum and stall the change. Faith in the change effort is essential for the implementor to withstand these negative forces.

Persuasion is the third stage where the implementor has to win over the confidence of the others. This is possible in terms of persuasive communication, focusing on the attractive aspects of change, building up expectations about the likely problems to be encountered and how they can be overcome, and developing resistance to negative forces by inoculating against them.

The fourth stage is ensuring more **commitment** to change. Behaviour in the direction of intended change effort has to be positively reinforced. Those involved in the change activity have to be clear that gains or benefits are not immediate but delayed. While negative forces crop up early, employees should have the patience to wait for the desired results. It is also necessary to monitor the change effort at each of the stages by setting up a time table for evaluation and taking corrective action whenever required.

The change effort that is implemented has to be consolidated, otherwise the advantages of change may be vitiated. When a change is to be introduced, the unit or the organisation has to be tuned to it. Once the change is introduced it has to be frozen or consolidated, failing which the organisation may revert back to the pre-change equilibrium. However, before the beginning of freezing or consolidation process, it has to be checked whether change has realised its original purpose or has caused any negative consequences.

9.9 PARTICIPATION IN ORGANISATIONAL CHANGES: CHALLENGES AND MAINSTREAMING

In the above section, we have discussed the implementation process of a change; it is obvious that generally people are resistant to change because it is felt by the employees of organisation that they were not a part of this entire process or they were not taken into confidence. Therefore, participation of the people is very important for a successful expansion process. But the major constraint lies in the difficulty of designing and implementing the programmes encompassing a larger number of people in such a way as to permit their respective voices to be heard, listened to and acted upon.

9.9.1 Downstreaming Participation

The introduction of participation is not just a matter of holding a couple of PRA exercises to re-confirm pre-existing programme designs or to be able to say that people have 'participated'. To take from the private sector, it is about putting the client first rather than prioritising the interests of the delivery system. Priority should be given throughout the project cycle to the clients' needs and to establishing their views in order to provide a high quality development programme.

Downstreaming participation within an organisation requires that participation is not seen as something to be practised at the project or programme level but rather as a central principle informing the internal management practices of the organisation. It is important for development agencies to think carefully about matching working methods, procedures and the style of management to the overall objectives of a specific programme or, if appropriate, to the country programme objectives. It is often the mismatch of these factors which undermines institutional attempts to improve levels of participation.

Any agency committed to participation has to ensure a consistency in their way of working. The organisational culture is unlikely to be conducive to participation in the programme if the internal tradition is one of hierarchy and a lack of participation by staff in the office routine. It is often difficult to change large official institutions which traditionally have been wedded to strict hierarchy and where the senior staff have not been required to discuss policies and decisions with other staff. In all walks of life this form of organisational structure is being challenged; from the commercial sector to public service the advantages of a more consultative, participatory style of management seems to pay dividends in terms of greater commitment and ownership of all staff to decisions made, and through drawing upon a much wider body of experience.

Can we really expect an agency which is still run like an old-fashioned bureaucracy to really inspire an interest in participation? Most organisations have found that there is a serious organisational challenge they must confront when they have tried to change the programme work without looking at their own practices. Official agencies are realising the importance of greater transparency and a participatory form of management.

Box 9.2: Downstreaming participation

Participation in Management: Some Ideas of Good Practice.

1. Regular office meetings.
2. Improve transparency.
3. To feed in ideas and experiences.
4. Ensure that staff who will have to manage or implement a programme contribute to the design process.
5. Where necessary train staff in the skill and confidence building techniques process.

Internal Bureaucratic and Administrative Procedures should:

- Assist, not constrain, the participatory process;
- Be relatively flexible to allow for participation to be able to effect and design and implement programme;
- Try to avoid long lead times during which many factors may have changed considerably casting doubt on the value of the original design;
- Permit participation at different points in the programme process; and
- Highlight the contributions of the different stakeholders and make it clear where priorities have been placed in light of these.

9.9.2 Upstreaming Participation

One of the major comparative advantages of the UN system is its ability to develop policy dialogue based on micro-interventions. Participatory approaches provide further ability to listen and to learn from people and to translate this into macro policy dialogue with government and others, including multilateral agencies. UNDP refers to this as 'upstreaming':

'Participation should not be defined or confined to simply operating at the grassroots level (with or without the involvement of NGOs and CBOs). This aspect is significant within the context of UNDP's efforts to focus its interventions at the upstream or policy level'.

Indeed, it is often this upstreaming which provides the justification for UNDP to become involved directly in programmes involving Civil Society Organisations (CSOs). The additional benefit of being able to influence policy justifies the extra costs for large agencies engaged directly in grass roots development. This ability to provide a bridge between the micro-and macro has also been stressed by several parts

of UNDP including the UNV which specifically recognises the advantages of being able to place UNV specialists, DDS Field workers, National UNVs and others at the grass roots and to use their experience to inform policy decisions. Furthermore, some of the recent PRA exercises have sought to provide direct feedback to policy makers through using participating villagers as facilitators in sessions with government officials. In Central Asia, the results of PRA exercises supported by UNDP and UNV were fed back to the government officials and led to the local NGOs being incorporated into the national poverty forum because of the quality of the information gleaned through the programme from those rural communities undergoing rapid transition.

Box 9.3: Institutional development in central Asia

In collaboration with INTRAC, UNDP has supported a Poverty Alleviation Programme in Central Asia which seeks to directly support the introduction of participatory development at the grass roots with rural people who have undergone a rapid process of economic transition due to the move away from collective farms and towards a market economy. The programme has placed UNVs in rural areas to work with emerging CBOs and local NGOs using micro-credit, PRAs and other interventions. These programmes act as demonstration/pilot programmes which can be used to inform and influence new national level NGOs about options in poverty alleviation and participatory approaches. These programmes are also used to inform government officials about new ways of working and provide a direct feedback from community groups into the policy discussions of the new government.

Through upstreaming participation there is an increased democratisation of relationships between government and the civil society organisations.

In recent years, the UNDP has been able to facilitate the exchange of views between stakeholders from the State to CSOs through the means of the major international conferences. Each major conference Rio and the environment, Copenhagen and social development, Beijing and Women, Istanbul and habitat, Cairo and population, has provided in-country opportunities for dialogue between different social groups and institutional interests. The UNDP has a comparative advantage in being able to provide the forum, targeted resources and technical support to preparatory conferences, and follow up action and monitoring of their outcomes and action plans. These events provide not only an opportunity to discuss policy related to the specific set of interests but also to strengthen the democratic processes through national level dialogue between different stakeholders.

Box 9.4: Linking macro-policy to micro interventions

1. The UNDP is well placed to assist local communication and co-operation between different development actors: e.g. government officials, NGOs, CBOs and other CSOs.
2. Learning from micro-interventions can be used to provide high quality information for higher level policy discussions.
3. Community group representatives can act as facilitators with development workers, e.g. feed back results from PRA; hosting development workers in their communities.
4. Direct evidence of the impact of policy change can be fed through to planners, e.g. effect of price changes, structural adjustment programmes etc.
5. Bringing both primary and secondary stakeholders together for: needs, assessments, programme design, monitoring and evaluation.
6. Facilitating co-operative exchange of experiences within countries as well as across regions, South-South and more.

9.9.3 Issues of Mainstreaming

Let us now discuss some of the common issues that need to be addressed when establishing participation as a key principle in the procedures, policies and practices of an institution.

- i) **Quantity or quality:** There has been a rather sterile debate around participation which centres on the arguments as to whether participatory approaches are good for getting high quality information and feed back from clients yet not so good at obtaining a quantity of information in large scale programmes. Some agencies have tried to resolve this by arguing for a limited number of people within a programme to enjoy full participation or for organising a pilot programme with a high degree of participation.
- ii) **Sampling:** It is argued that if groups of foresters, for example, share common views, then it is only necessary to talk to a few groups to get an idea about their views rather than spend a lot of time and money talking to all of the foresters. The counter argument is that participation is not just about data collection, yet this is an important purpose but not the only one. Indeed if data collection is the only objective, then sampling may make sense. However, participation goes well beyond this and the processes involved have far more objectives including a whole ideology of improved communication between service delivery and clients. Therefore all clients should feel ownership of a programme. For example, if the aim of the programme is about improved use of forest products, a sample of PRAs in two villages may provide all the information required, but will not bring into the programme the other communities. Furthermore, it will not explain to them the aims of the programme, nor allow communities to explore their present uses of forest products and their own feelings about options for the future.
- iii) **Going to scale:** It has also been argued that participation is only a process which could be promoted at the level of small scale NGO programmes, but could not be managed or was not relevant for large national scale programmes. This has clearly been shown to be false. We now have many examples of larger scale programmes encompassing high degrees of participation. The Bangladesh UNDP office, for example, incorporated participatory exercises from a large number of communities into the Bangladesh Human Development Report. Large international NGOs such as ACTIONAID have repeated participatory methods in many of the villages.

Not all types of programmes will call for the same levels of participation. For example, the supply of capital equipment for a state railway will probably hardly justify participation; whereas road building might require some levels of consultation on the route to be taken but, once a decision is made to go ahead, it may not include communities if the building work is carried out by a contractor and maintenance is the responsibility of the Highways Department. On the other hand, a feeder road which assumes community maintenance will require far greater participation of local people, and their views to be heard and acted upon before they can be expected to assume any responsibility. Other types of programmes, such as community based forestry, also require high levels of participation by communities if a sustainable system is to be established which could survive and prosper after the end of project funding.

- iv) **Allowing time:** It is often argued that participation takes time. Indeed, time must be allowed if we are to be honest about participation and this may delay project implementation. However, if we compare participatory to non-participatory programmes, analysis reveals the very long lead times created by the bureaucratic machinery. Also, studies by the World Bank and others show that while there are extra costs in time and staff input demanded by programmes which are participatory and that disbursement is initially slow, it picks up speed later. This should argue for a programming which assumes low levels of disbursement in the early stages of a programme but higher levels later on. This may also avoid the common situation of high levels of initial disbursement in

many traditional programmes, as the easy inputs are purchased (capital items, accommodation) and low disbursement later because of the inappropriate design, low take up and interest by the target population and less commitment by those having to execute the programme.

- v) **Need to reinvigorate:** Participation like any other element of development, can easily become over institutionalised. It can become a part of the bureaucratic routine, something to be done to meet the criteria needed to get a programme through. Development organisations need to be aware of this problem and take action to avoid it by rejecting the over-formalisation of participation, keeping an open mind to new methods, changing our approach, allowing experimentation and permutations of methods. Sometimes it is necessary to re-invent organisations and approaches in order to introduce dynamism and excitement. There are ways that organisational change can be costly and damaging, but managed well, they can bring new life to our work and reinvigorate programmes.

The following table (Table 9.1) shows the kind of organisational change brought about by using a participatory approach in one NGO, National Development Foundation.

Table 9.1: Institutional changes – national development foundation

From	To
• Infrastructure output priority	• People and their participation + capacities as an output priority
• Emphasis on project implementation	• Emphasis on going 'beyond projects'
• Implementation guidelines top-down	• Implementation guidelines developed and agreed with farmer organisations
• Implementation managed by field officers	• Implementation managed by Farmer organisation facilitated by field officers
• Planning and monitoring controlled by field offices and head office	• Joint planning and monitoring – farmer organisations and NDF
• Participation induced	• Participation spontaneous
• Information collected through socio-economic surveys/questionnaires	• Information generated and analysed by farmer organisations facilitated by field officers/villagers
• NDF owner of information collected	• Information shared with Farmer organization – participatory analysis remains with them
• Funding channelled through field officers	• Funding directed to farmer organisations accounts
• NDF reporting to each donor separately	• Consolidated reporting common to all
• Progress review separately by donors	• Joint progress review and reflection combined with field visits
• Donor-recipient relations	• Partnerships characterised by open dialogue

SAQ4

What are the main issues and challenges in participatory approach of organisational change?

9.10 CASE STUDIES OF ORGANISATIONAL CHANGE

We will briefly examine three cases of rapid and significant organisational change. The Phillipines National Irrigation Administration (NIA) is perhaps the best-known and only well-documented case. The approaches employed there have been used in Bangladesh also with some success. Organisational change in the public sector in India has proved much more problematic. NGOs by contrast, if they are not heavily donor dependent, should present a much more conducive organisational environment for change. Some reflections on the recent experience of Plan-Nepal confirm this.

Case study 1

NIA changed from a classic infrastructure development government department to a semi-autonomous, self-financing servant of the farming community over a period of fifteen years. The key change introduced in the development of small and medium scale irrigation was a substantial and participatory planning phase in which the farmers who were likely to be benefitted from a NIA investment collectively sorted out their differences and agreed on a plan of action; this was facilitated by a cadre of NIA workers, the Community Organisers. Accommodating this cadre and painstaking preparatory work it performs, was the major change adopted by NIA. A key supportive change was that NIA raised more and more of its own revenue from the farmers it serves. Even more critical was the formation and persistence of a group of key leaders and supporters of organisational change, both inside and outside the NIA over a long period.

Case study 2

Our second case study, the Watershed Management Directorate (WMD), Uttar Pradesh in India presents a different image. Funded by the European Union and Government of India, and changed with reducing erosion and raising incomes in the Himalayan foothills, this organisation attempted to develop a participatory, gender – sensitive approach, making use of Participatory Rural Appraisal (PRA). It has been partially successful in a short period of time. Significant changes in the behaviour of front-line staff with villagers were recorded. The principle of village-level identification and negotiation of priorities was accepted. Village women were involved to a greater degree than in any previous governmental development effort. However, there were obstacles in the process of radical change. The government's strong culture of target orientation and achievement eroded the space, which was available early on for participatory planning: pressure to spend money escalated after the establishment phase. This pressure came largely from the State Finance Ministry and other state-level officials, and was not always resisted by senior project personnel, who are of course assessed by the degree to which targets are achieved. The target culture was reinforced by the common understanding that aid money would be lost if not spent. Retrospectively, the original project plan was also at fault. This gave indicative physical and financial targets, which were quite incompatible with the slow initial rhythms of a participatory approach. These were of course seized on by officers anxious to have targets to fulfill.

Case Study 3

Radical change was achieved in Plan-Nepal, through a combination of changes in personnel, the drawing-up of a country strategic plan, and the opening of the organisation to outside influences. Plan-Nepal was a very conservative NGO, like its international parent; providing services to the families and communities of sponsored children in a reactive and dependency-creating way. The appointment of two women to senior posts, and a regional director from outside the organisation, paved the way for a significant move towards a more thoughtful, participatory and gender-sensitive approach. The geographical and topical focus of the agency's work has changed significantly, with a new willingness to work in poor, remote areas and to confront

difficult social issues like child prostitution. Again the use of PRA has significantly changed the project-level operations. Nevertheless, with its incredibly successful child sponsorship financial treadmill, which has supported unprecedented organisational growth during the last decade, there are pressures to spend money in Plan-Nepal too: these will undoubtedly limit the freedom of Plan-Nepal staff to retain the quality of their new approaches.

9.11 SUMMARY

Let us summarise what you have studied so far:

- Organisation is a system consisting of four interacting subsystems i.e. structure, technology, people and task whereas institution is a part of the larger system i.e. community or society.
- Organisations have to modify and change to adapt to the changing internal and external environment.
- Change in an organisation is brought about by a professional consultant outside the organisation or by manager within; change agent should be competent enough to lead and motivate the organisation as leadership and motivation have strong role in organisational culture.
- Change has to be brought in content as Oxfam introduced gender mainstreaming in organisation as well as in the context of government, public sector and NGOs.
- Capacity development addresses development at different levels of society. It can be created in the context of organisation, institution and system.
- Participation of people in organisational change and institutional building is very important but it poses many challenges as upstreaming and downstreaming. The prime issue is mainstreaming the participation.
- To bring a change in the public sector is comparatively difficult as compared to an NGO; in a public sector, internal and external environments are not completely distinct.
- Organisational change is a vital aspect of the wider shift to the new paradigm, an aspect that urgently needs research, documentation and public debate.

9.12 TERMINAL QUESTIONS

1. Think of a change which may have been introduced in your organisation. How was it implemented? Did the implementation process follow some of the ideas mentioned in the Unit?
2. Examine the ways and means of building up supportive forces for change implementation.
3. Why is change more successful in organisational set up of NGO as compared to the private sector?
4. Search and find out some of the organisations which have incorporated gender issues in their set up.

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**Organisational Change for
Sustainable Development**



UNIT 10 WOMEN'S PARTICIPATION IN DEVELOPMENT

Structure

- 10.1 Introduction
 - Objectives
- 10.2 Status of Women in The South Asian Countries
- 10.3 Role of Women in Environment and Development
- 10.4 Women and Environment Approach to Development
 - Gender and Development (GAD)
 - Gender Approaches to Environment
 - Women's Movements for the Protection of the Environment
- 10.5 Gender Mainstreaming
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 - Changing Approaches in Gender Equity
- 10.6 Gender and Participation
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 - Bridging the Gap
- 10.7 Strategic Actions for Women Participation
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10.1 INTRODUCTION

You can tell the condition of a nation by looking at the status of its women.

Prime Minister, Jawaharlal Nehru

"Development, if not engendered, is endangered" was the slogan coined by Dr. Mahbub-ul-Haq, the progenitor of the series of Human Development Reports, in the Human Development Report of 1995.

Women are a vital link in protecting the environment and sustaining development. Women and the environment are truly partners in life. Their voices and their visions must be heard and heeded. The close link women have with the environment helps explain the huge interest of women's non-governmental organisations in ecological activities.

The Earth Charter and Agenda 21, the main documents of the Summit, include both men and women in their rights and obligations. Therefore, the ecological problems call on women throughout the world to stand united. If we want to resolve them, if we intend to exert greater influence in environmental management, we must not view the world as North/South or East/West. We must view the world as an array of ecosystems, each with different capacities. In the present Unit, we would deliberate on importance of women in environment and development. We have pondered upon as to why women participation is not appropriate in policy/decision making and which strategic actions should be taken for gender mainstreaming.

Objectives

After studying this Unit, you should be able to:

- appreciate the role of women in environment and development,
- analyse the present status of women in the South Asian countries,
- discuss the key gender issues,

- explain the gaps and barriers in women participation and how this gap can be over come effectively, and
- appreciate various women's movements and other organisations working towards gender mainstreaming.

10.2 STATUS OF WOMEN IN THE SOUTH ASIAN COUNTRIES

We will lionise him, but will we ever listen to what he's saying?

Amartya Sen - The Unheeded Conscience:

Sen points out that when he took up issues of women's welfare, he was accused in India of voicing "foreign concerns." "I was told Indian women don't think like that about equality. But I would like to argue that if they don't think like that they should be given a real opportunity to think like that."

Surviving through a normal life cycle is a resource-poor woman's greatest challenge. Looking through the lens of hunger and poverty, there are seven major areas of discrimination against women in South Asia (Box 10.1).

Box 10.1: Status of women in South Asia

Malnutrition: The exceptionally high rates of malnutrition in South Asia are rooted deeply in the soil of inequality between men and women.

"...the poor care that is afforded to girls and women by their husbands and by elders is the first major reason for levels of child malnutrition that are markedly higher in South Asia than anywhere else in the world."

India has exceptionally high rates of child malnutrition, because tradition in India requires that women eat last and least throughout their lives, even when pregnant and lactating. Malnourished women give birth to malnourished children, perpetuating the cycle.

Poor Health: Females receive less health care than males. Many women die in childbirth of easily prevented complications. Working conditions and environmental pollution further impair women's health.

Lack of education: Families are far less likely to educate girls than boys, and far more likely to pull them out of school, either to help out at home or from fear of violence.

Overwork: Women work longer hours and their work is more arduous than men's, yet their work is unrecognised. Men report that "women, like children, eat and do nothing." Technological progress in agriculture has had a negative impact on women.

Unskilled: Women have unequal access to resources. In women's primary employment sector-agriculture-extension services overlook women.

Mistreatment: In recent years, there has been an alarming rise in atrocities against women in India, in terms of rapes, assaults and dowry-related murders. Fear of violence suppresses the aspirations of all women. Female infanticide and sex-selective abortions are additional forms of violence that reflect the devaluing of females in the Indian society.

Powerlessness: While women are guaranteed equality under the Constitution, legal protection has little effect in the face of prevailing patriarchal traditions. Women lack power to decide who they will marry, and are often married off as children. Legal loopholes are used to deny women inheritance rights.

The Asian Enigma, published by Unique in the 1996 Progress of Nations made a point in the article: “Judgement and self-expression and independence is largely denied, millions of women in South Asia have neither the knowledge nor the means nor the freedom to act in their own and their children’s best interests.”

10.3 ROLE OF WOMEN IN ENVIRONMENT AND DEVELOPMENT

The women who participate in and lead ecology movements in countries like India are not speaking merely as victims. Their voices are the voices of liberation and transformation. . . The women’s and ecology movements are therefore one, and are primarily counter-trends to a patriarchal maldevelopment.

Chipko movement activist, Vandana Shiva

Chapter 24 of Agenda 21 of the Rio Declaration on Environment and Development states that: **Women have a vital role in environmental management and development and their full participation is essential to achieve sustainable development.** Fig 10.1 gives you a comprehensive picture of interrelationship of women, environment and development.

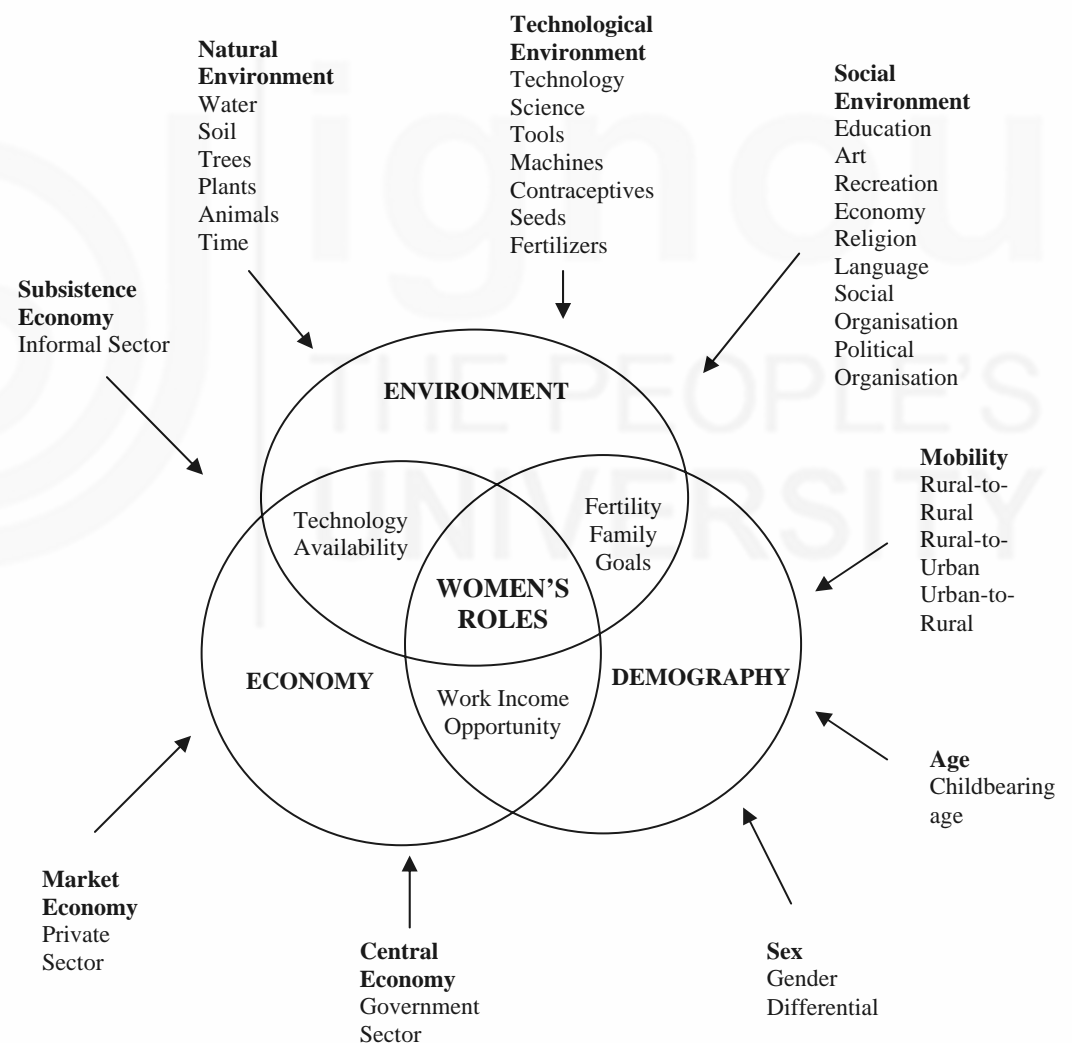


Fig. 10.1: Inter-relationship of woman, environment and development

One of the questions that will be asked from time to time is: why focus on women? In the following discussion, we will consider a few of the issues, which make that focus important.

i) **Women as the majority of the world’s poor**

Women suffer many inequities and as a result are the majority of the world's poor. Any suitable development project, which aims to alleviate poverty, must have, built into it, the involvement of women in the decision-making; planning, advising and extension work in the field.

Women's poverty has been linked to inequalities in their:

- Situation in the market
- Access to credit
- Treatment under social welfare systems
- Access to health and education services, and
- Status and power in the family.

In each of these areas, more opportunities are available to men as compared to women.

Access to credit is crucial for any woman who plays a dominant role in agriculture, for example managing small farms. Such women are left to deal with problems such as poor output and crop loss through diseases. However, they rarely receive the benefit of agricultural training or technical assistance from extension services. Even when faced with these inequalities, women constantly strive for a better quality of life.

The quality of life for women and children can be quantified and used as an index of the effectiveness of sustainable development programmes. This index tells us a great deal about the relative social positions of men and women. It manifests itself in the struggle of women for a better livelihood, comprising access to:

- Sanitation and proper housing
- Health care and education
- The right to live in a healthy and balanced environment and satisfy the demands of life.

It is mainly through their battle against the deterioration of their living conditions and those of their families, that women have been playing a major role in sustainable development issues.

ii) **Women as educators**

As children's first teachers, women have an important and far-reaching role to play to inculcate concern for the environment in their children. Women teach best through reasoning and by different examples.

iii) **Women as users, managers and conservers of environmental resources**

In carrying out domestic duties, women are in intimate, daily contact with their immediate environment as users and /or collectors of fuel, food, water etc. Women in many parts of the world collect fruits, nuts, leaves etc. from forests for food. In places like the Caribbean, women still largely make choice of food in the market place. In a real sense, women determine a crucial part of the nutrition of the country. They also grow much of the world's food: 70% in Africa, 50-60% in Asia, and 30% in Latin America.

Women manage water supply at home. They are responsible for safeguarding health by providing potable water and water for hygiene. They are also responsible for conserving supplies in many parts of the world; women are also carriers of water, which is a tiring and time-consuming task.

Women are conservers. Women have often been called traditional natural scientists. Their detailed knowledge of the local flora and fauna helped them as gatherers of food, fuel and fodder and herbal medicines thereby making them subsistence agriculturists. Women play a vital role in conserving fuel, food, and water. They also

play an important role in protecting other environmental resources. For example, they can contribute in reducing ozone depletion by choosing environment friendly products. In addition, they can contribute to reduce the depletion of natural resources such as corals and wild animals by choosing fashions, which do not require their destruction.

Women are controllers of population growth. Through family planning, women help in controlling population growth. Therefore, there is a need for an increase in efforts to educate women on family planning. To be effective, all such efforts must take into account traditional practices and views about contraception, and the relationship between population growth and resource consumption.

As the foregoing discussion shows, women are in a position to influence attitudes to, and use, of, the environment. Their choice in using natural resources affects not only the environment but also their own and their families' health. However, if their influence is to be positive, they need training, land, credit and simple conservation technologies.

When women's needs are not met, the results are detrimental not only to the environment but also to their families' health. For example, if appropriate technologies for cooking are not provided, women may have either of the two options:

- to rely on trees for firewood and charcoal, thus contributing to deforestation.
- to conserve fuel by not boiling water or cooking food long enough thus contributing to ill health in their families.

Neither of these options is desirable. When women's needs are met, the results are generally beneficial. For example, if alternative fuel sources are available and appropriate training is provided, many women around the world could get involved in replanting trees and managing forests. This is particularly true for women in Asia and Africa (Bynoe, P. 1998).

Through their management and use of natural resources, women provide sustenance to their families and communities. As consumers and producers, caretakers of their families and educators, women play an important role in promoting sustainable development through their concern for the quality and sustainability of life for the present and future generations. Governments have expressed their commitment to create a new development paradigm that integrates environmental sustainability with gender equality and justice within and between generations as contained in Chapter 24 of Agenda 21.

Women have often played **leadership roles** or taken the lead in **promoting an environmental ethic**, reducing resource use, and reusing and recycling resources to minimise waste and excessive consumption. Women can have a particularly powerful role in influencing sustainable consumption decisions. In addition, women's contributions to environmental management, including through grass-roots and youth campaigns to protect the environment, have often taken place at the local level, where decentralised action on environmental issues is most needed and decisive. Women, especially indigenous women, have particular knowledge of ecological linkages and fragile ecosystem management. Women in many communities provide the main labour force for subsistence production, including production of seafood; thus, their role is crucial to the provision of food and nutrition, the enhancement of the subsistence and informal sectors and the preservation of the environment. In certain regions, women are generally the most stable members of the community, as men often pursue work in distant locations, leaving women to safeguard the natural environment and ensure adequate and sustainable resource allocation within the household and the community.

SAQ 1

Discuss the interrelationship of women, development and environment.

10.4 WOMEN AND ENVIRONMENT APPROACH TO DEVELOPMENT

In the previous section, you have studied about the interrelationship of women, development and environment. In this section we will discuss about women and environment approach to development.

Trends in development research and practice reflect the changes of “women in development.” The terms “WID” (women in development), “WAD” (women and development), “GAD” (gender and development), and “WED” (women, environment, [sustainable] development) represent differing views of the relationship between women, gender and development in research, policymaking, and NGO practice since the mid-1960s. Each term is associated with a specific set of assumptions and values leading to the formulation of strategies for the participation of women in the development process.

The WED approach grew out of the mid-1970s oil crisis event and the literature about the earth's limited natural resources. The raised awareness of environmental concerns to a global scale catapulted development planners to look for more systematic solutions to global commons issues.

The WED movement emerged as a theme in the context of this debate with planners looking to strategies for people in the South who would be depending upon wood fuel as their major energy source. Lessons learned from development planner's failed forestry and energy projects attracted global attention as women's spontaneous grassroots social movements in India led to the widely-known Chipko Movement. You will study about this movement in detail later in this section. The increased environmental degradation of the late 1970s and the realisation of the feminisation of poverty in early 1980s led to deeper connections between the relationship of gender, development, and the environment. The inclusion of women's voices and their participation in decision-making became a UNEP policy goal to move nations from the unsustainable to sustainable path. From the late 1980s, WED 'professionals' and 'experts' from both the North and the South were charged with bringing women's role to promote sustainable development.

10.4.1 Gender and Development (GAD)

While the category 'gender' can be loosely defined as a set of beliefs about the psychological makeup of women and men, social roles are constructed based on these beliefs. Male roles are assigned higher importance than female roles, and therefore, are given greater status.

Stereotypes are used to justify traditional gender roles, division of labour, and men's higher social and economic status. The gender argument is circular – the relationship between gender roles and gender stereotypes is reciprocal and self-maintaining. GAD sets out to transform these unequal gender roles and relations and seeks to redistribute power inequities. Also known as the empowerment approach, GAD emphasises income-generating activities and grassroots initiatives to improve women's status and increase her self-reliance and strength. In practice, the GAD approach is seen as laden with Western feminist values which raises concerns for some funding agencies, and the approach is criticised as too academic in nature.

10.4.2 Gender Approaches to Environment

The Earth Charter Initiative, affirms “gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity” (Earth Charter; Section 3, Item 11). Agenda 21 recommends an increase of “the proportion of women involved as

decision-makers, planners, managers, scientists and technical advisers in programmes for sustainable development.” Governments acknowledged the crucial role women play in promoting environmental awareness in the **Rio +5** evaluation, and encouraged more opportunities to be created “**for women to participate effectively in economic, social and political development as equal partners in all sectors of the economy.**” A wide range of newly formed NGOs in the 1990s to implement the specific strategies of UN agenda continue to organise the necessary infrastructure to include women in the policy planning.

While efforts have been made at policy levels to acknowledge the critical role women play in environmental sustainability as local natural resource managers and as agriculturalists, the application of a universal gender analysis to environmental policy planning does not exist. Regulatory frameworks and entrenched social and cultural gender norms continue to exclude women and girls. UNIFEM acknowledges that although women throughout the world are the main care-takers and nurturers of our future generation, she still receives less education than men. Current development research finds that improvement in women’s economic status may not be a sufficient condition to change social, cultural and political status.

There still are no targets for improving women’s economic status or for reducing the “feminisation” of poverty. Women’s environmental NGOs report that it is still men who are in important environmental positions. At the national level, in many countries where laws give the same rights to women as to men, it is only the powerful men who are benefiting from land tenure rights. Globalisation has, on one hand, opened up new international experiences for women, but it has, on the other, created new inequalities that profoundly impact the lives of women and children.

Other problems contributing to the failure of a successful gender analysis framework are that policy planning for all women is problematic – women are not a homogeneous category, but a diverse range of class, ethnicity, religion and so forth. Cultural and environmental contexts are unique and not all gender relationships and gender divisions of labour come from Western patriarchal values. Some rural indigenous communities, for example, share tasks and adapt to environmental conditions.

Beyond academic theoretical debates of women’s greater connection to the earth (or as peacemakers) based on either her childbearing capacities or women’s knowledge vis-à-vis her experiences, the on-going entrenched cultural and social attitudes and behaviour towards gender roles continue to inhibit women’s participation in important decision-making processes, both on the ground and in policy planning. Only when women speak, and only when women’s voices are heard, can communities learn more about environmental stewardship from those whose livelihoods are most dependent upon their direct relationship with the land.

10.4.3 Women’s Movements for the Protection of the Environment

Today, women are no longer seen as passive powers. World-wide environmental crisis has created a kind of united thought in women that they must practically prove their existence and in this way turn into an effective material force. This process has been going on for years. Today, women’s movements have been formally recognised all over the world. Leslie Calmen in her analysis of women’s movements in India suggests that “A movement can target society, particularly with regard to social consciousness or ideology, it acts to influence the state, and it can act on participants within the movement itself”. The success of a movement can be gauged by analysing three potential arenas of action.

- i) Empowering women in the personal, familial and social realms
- ii) Moving the state to protect and enhance the rights and opportunities of women
- iii) Transforming social consciousness

The **Chipko movement of India** is one such example. Women are the main powers in this movement which continues to be led by them even today. In 1970's when logging merchants set out to axe the last remains of the forest trees of Himalaya, women who understood the importance of these forests for the survival of their lives and villages, and had recognised the link between the loss of Himalayan rivers, erosion and flooding with deforestation, rose to fight these plunderers. Women, confident of their knowledge and first hand experience of what had happened, united against the authorities who had denied the existence of a link between deforestation and desertification, and by hugging the trees prevented logging. This resistance saved the forests, and provided the basis for a movement which was called **Chipko** (meaning to hug). Today, this movement which has its origins in the Buddha teachings, is one of the most successful public movements for environmental protection, and one which has also gained world respect.

Box 10.2: Chipko Movement

Chipko movement was very successful because of the following reasons.

i) **Empowerment**

The main indication of empowerment as a result of Chipko has been the growing involvement and impact of village level women's organisations called Mahila Mangal Dals (MMDs). Across India, many forest management initiatives have emerged; while some are State-initiated, others focused around the panchayats. Chhaya Kunwar of the Himalayan Action Research Centre relates an example of the village of Bacchair, which has an all-women forest panchayat and has set an example of successful forest management. In Dongri Paintolli, the women protested the all-male panchayat agreement to let the state government fell a forest in exchange for a new road, secondary school, hospital, and electricity. In Fungari Paitoli women reacted spontaneously to a move by their own men to sell the panchayat forest in exchange for a potato cultivation project. Bachni Dei of Adwani led a resistance against her own husband who had obtained a local contract to fell the forest. There are many examples like these where women confronted the authority to save forests and their livelihood.

ii) **Moving the State**

Chipko was quite successful in affecting government policy at both the state and national level. After multiple bans had been issued on tree felling in various regional forests, a major success occurred in 1981, when late Prime Ministers Mrs. Indira Gandhi issued a 15-year ban on the felling of trees above 1000 meters in the entire state of Uttar Pradesh. This decree came as a direct result of the women's activism. Women's political participation received a push in 1992 when pressure from women's groups led to the seventy-third Constitutional Amendment in India, under which one-third of the seats in village and block level elected bodies are now reserved for women. This does not guarantee their agenda but it at least potentially provides them with a voice. Indian women's organisations have also helped negotiate with the State and community for more gender-just property laws and for women's greater access to economic resources. At the Conference on Women in Beijing, one of the five commitments made by the Indian government included the draft of a National Policy on Women.

iii) **Transforming Social Consciousness**

The Chipko movement is considered as an important success story in the fight to secure women's rights, in the process of strengthening local community through forestry, and in environmental protection. Yet the collective mobilisation of women for the cause of preserving forests has brought about a situation of conflict regarding their own status in society. Women have demanded a share in the decision-making process along with men resulting in opposition by men to women's involvement in the Chipko movement. Women are seeking to change their position in society while supporting a social movement that is resisting change.

The transformation of views about women as decision-makers has definitely begun as evidenced by the previous examples of legislation and the restructuring of some local panchayats. The examples of the villages of Adwani, Dongri Paintolli, and Fungari Paitolli illustrate how women have challenged the men and succeeded. But many men resent the intrusion of the women and are resisting the process. Some men such as C.P. Bhatt and the DGSM workers were able to recognise the potential strength of the women and found them very sensitive and responsive to ecological problems. They were able to move beyond the cultural constraints of what women were supposed to be and see them as knowledgeable, organised and eager co-workers in a common goal. But as the statistics for education, birthrate, etc. indicate, the improvement in political status has not yet made significant changes at home.

An other well-known Movement campaigning for the protection of the environment is the **Green Belt Organisation** in Kenya which is led by one of Kenya's leading ladies, Vangary Ma'atay. Today Vangary leads thousands of Kenyan women in their fight for the protection of the environment. In this campaign, 'tree' is the symbol of hope and a sign of the measures that need to be taken for the protection of the environment and ensure sustainable development.

The Green Belt Organisation was formed by Vangary in 1977 to combat desertification, deforestation and soil erosion. This organisation was formed under the supervision of the National Council for women in Kenya. Its mission is to halt desertification by adopting forestation measures to be executed by rural communities. This movement carries out a broad range of activities to increase the level of public awareness regarding the link between environmental destruction and issues such as poverty, unemployment, malnutrition and improper management of natural resources, and the effect that these issues have on socio-economic conditions throughout Africa.

Due to this movement, more than one million trees were planted with the least facilities at the outset of its formation. Today it is recognised as one of the effective movements and has won global respect.

The Green Belt Organisation's purpose is not just to give hope and confidence to rural people to believe in themselves when combating problems, but the protection of biological resources, genetic diversity and ecologically important regions are on amongst its agenda. The organisation plays effective role in biodiversity protection through propagation of the importance of endemic species adaptable to the environment, in place of using non-endemic species.

Mrs. Gandhi, the late Prime Minister of India was amongst the forerunners of environmental protection. In the 1970's when the Zero Growth theory was put forward by Forester and the Rome Club with Medoz in the lead, Mrs. Ghandi analysed and criticised this theory and fought against it. This theory suggested that to avoid world destruction, growth and development must be stopped and the current gap between the developing countries and the industrial world must remain.

It is clear that this suggestion could not have been to the advantage of the Third World countries. This theory disregarded the fact that industrial countries have been responsible for creating a critical environmental situation.

Environmental pollution in poor countries is not due to development but lack of it. In addition, environmental pollution is not a technical subject arising from science and technology but originates from the values of the contemporary world which disregard the rights of others and forgets the long term prospects. For this reason we can argue that in these countries, environmental issues are due to poverty and lack of development.

Environmental awakening of the world is also closely related to Rachel Carson's "**Silent Spring**". Environmental activists of the present generation and the future ones will always respect the memory of the initial endeavours of man in protecting

nature and living resources against the destructive world community which Rachel Carson described in her memorable work, "Silent Spring" about 30 years ago. This classical research on the destruction and poisoning of nature and loss of biodiversity through the over use of chemical poisons, was the first work that warned of the destruction of nature and living resources and insisted on the need to conserve the environment.

Women as ethical architects of the family, who are responsible for raising and educating generations, can, by raising the level of their knowledge and awareness, play a creative and constructive role in the propagation of culture and environmental ethics of the modern age. The acceptance of ethical values that are harmonious with respect for nature and its protection brings about a change in people's attitudes and behaviour towards nature. Such a change is only possible if the generations of today and tomorrow have belief in it and make it intrinsic, as they do with the general principles of ethics.

The basis for redressing the attitudes of the community towards nature and living resources lies in the family ethics and the inclusion of the necessary principles and emphasis on the importance of conserving the environment. In this respect women have irreplaceable values, which cannot be assessed against any other ordinary criteria. They are completely aware that the link between man and nature is a social one and follows the conditions of economic and social systems, i. e. the destruction of nature is directly linked with world economic policies, especially the industrially developed countries. In the Miami Congress of 1991 (Women's World Congress for the Health of the Earth) and its statement which was published under the title of, "A challenge for men and women to cooperate in the creation of a sound and sustainable future", there were factors which pointed to women's awareness, innovation and creativity in environmental issues.

Further, it is worth recalling the Rio Conference where women in global movements played a most effective role in supporting the Convention on Biodiversity protection, and the Green House phenomenon and its Outcomes. Today these two conventions have brought about new hopes in ensuring the existence of nature and living resources.

SAQ 2

- i) What do you understand by gender and development?
 - ii) Why do you think Chipko movement was successful?
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10.5 GENDER MAINSTREAMING

Lot of efforts are being made for gender mainstreaming. There is shift in approaches towards gender equity. But before discussing about the shift in approaches towards gender equity, let us first examine key gender issues.

10.5.1 Key Gender Issues

- i) An **adverse sex ratio** with far and fewer women than men, particularly in the 0-6 age group; low literacy and poor health; very low participation in the decision making arenas; unequal access to resources, whether food, land, jobs or assets; high risk during pregnancy and childbirth; increased vulnerability to HIV/AIDS. All this points out that poverty has an increasingly feminine face in the fast moving scenario of globalisation, with the erosion of traditional livelihoods and social sector investment by Governments.

The Beijing Platform for Action has emphasised that **“empowerment of women is a *critical* factor in the eradication of poverty.”**

- ii) **Women grow food for the household rather than for the cash economy**, and so their contribution to food production still tends to be left out of national and international statistics. In this context, is, of course, the problem of ensuring that women gain access to cultivable land, the most important resource for farmers everywhere.

Apart from land, women need water, seeds, credit, information and training, technologies and access to markets to become better farmers. For women to be equal partners in development, Prof. M S Swaminathan reminds us of the vital need for exclusivity to bridge not only the digital, but also the gender divide. He says, **“if women are empowered with technological information and skills, all members of a family benefit. The reverse may not happen”**.

Food production in the villages of India is also increasingly vulnerable to global macro-economic changes and priority shifts. Changes in the cropping patterns, with land increasingly being diverted from food crops to cash crops, has affected women the most. It is women rather than men who lose work when landowners decide to grow cotton instead of paddy, or sugarcane instead of wheat.

Furthermore, scientists all over the world are today increasingly concerned about the gradual decline in the use of many traditional varieties of food crops and farm animals. These varieties and breeds, which were highly nutritious, adapted to local conditions and resistant to local diseases, have in many cases been supplanted by introduced varieties. This disappearance of biodiversity has long-term consequences for the ecology of the planet. Similarly, the large-scale use of fertilisers and pesticides, once touted as miracle chemicals, has brought us to the brink of ecological disaster.

It is here that women’s age- old knowledge and practical experience is invaluable. After all, most of the ‘alternative’ and ‘appropriate’ agricultural technologies we are talking about are basically women’s technologies.

iii) **Valuing Women’s Work**

Women’s work is often underpaid and undervalued, and their contributions to the national economy are underestimated. Indeed, the contribution of women is often invisible.

The Human Development Report, 1995 estimated the value of unremunerated work at about \$16 billion, from which “\$11 billion represents the invisible contribution of women”. The report pointed out that “this has an impact on the status of women in society, their opportunities in public life and the gender-blindness of development policy.” For the majority of poor women, and their girl children, in developing countries (especially South Asia and Sub-Saharan Africa) the struggle to survive – to haul water, fuel and fodder, to keep the hearth going – takes up most of the day.

In most countries, unpaid work or household-value-added work is of a similar magnitude of the work in the cash-economy production sector. To promote a development process that is engendered, therefore, macro economic policies must address unpaid work in their scope of enquiry, formulation and appraisal.

Improvement in the paid and unpaid work, as well as formal and informal work, is crucial for empowering those whose ‘work’ is not measured by the conventional statistical and accounting systems.

This would mean moving away:

- from seeing the market as the “core of economic activity”;

- from recognising only “work for pay or profit”; and
- from inclusion of only formal labour processes in national income accounts.

We need to focus on the broader domain of work – that which includes subsistence production of goods for households; and non-economic activities such as domestic work, caring for family and elders, construction or repair of owner-occupied buildings, and voluntary work for which individuals receive no remuneration. The time-use survey is perhaps the best methodology to gather comprehensive information about activities and their outputs, yielding specificity and comprehensiveness that is not achieved in any other social survey. It is a key source of data for gender analysis, providing crucial inputs for policy planning as well as measuring the impact of policies at household levels.

Particular attention and recognition should be given to the role and special situation of women living in rural areas and those working in the agricultural sector, where access to training, land, natural and productive resources, credit, development programmes and cooperative structures can help them increase their participation in sustainable development. Environmental risks at home and workplace may have a disproportionate impact on women's health because of women's different susceptibilities to the toxic effects of various chemicals. These risks to women's health are particularly high in urban areas, as well as in low-income areas where there is a high concentration of polluting industrial facilities.

10.5.2 Effects of Globalisation

In most countries of the world – if not all – women form a disadvantaged section vis-à-vis men. India is no exception. India's economy has to fight an unequal battle with the developed countries in the international market; its society is doubly burdened by the inequities suffered by women, enhanced by the effects of this unfavourable competition. It is true that a section of Indian women – the elite and the upper middle class – has gained by the exposure to the global network. More women are engaged in business enterprises, in international platforms like the Inter-Parliamentary Union, and have greater career opportunities as a result of international network. Freer movement of goods and capital is helpful to this section. In India statistics show that unemployment rate for educated women (and for that matter for educated men as well) has declined considerably throughout the late 1970s to early 1990s, though it is still very high.

But what about the majority? Let us explain it with three examples – since globalisation is **introducing technological inputs**, women are being marginalised in economic activities, while men are being offered new scopes of learning and training. Consequently, female workers are joining the informal sector or casual labour force more than ever before. For instance, while new rice technology has given rise to higher use of female labour, the increased work-load for women is in operations that are unrecorded, and often unpaid, since these fall within the category of home production activities. Application of commercial chemical inputs (fertilisers and other plant treatment), essential for new (HYV) rice technology, are done exclusively by men.

Secondly, since SAP has led to the unemployment of a large number of men, and has increased frustration, tension and a fear of job insecurity, women are being made to pay the social cost. Family violence has increased, rape has become an everyday event, and dowry deaths (a fall-out of consumerism) are escalating.

Thirdly, the economy, strained to the utmost under the challenges of globalisation, is unable to bear the burden of necessary health-care and educational expenses. The weaker sections, especially the women, are denied the physical care they deserve. Maternal mortality is extremely high, anaemia is common and women die in large numbers from communicable diseases while increasing use of amniocentesis is killing yet-to-be born women in mothers' wombs. 40% women are illiterate, and drop-out rate among girls in schools is high. Sky rocketing food prices and export-

oriented cropping pattern in agriculture contributes to women's declining access to food and nutrition. The less than satisfactory public distribution system deteriorates under the SAP, and brings extra sufferings to women, especially to women heading households (and women-headed households are on the increase in India).

This is not to suggest that all this is the result of globalisation, but to assert that globalisation/SAP has not ensured a good quality of life for the majority of Indian women; on the other hand it has reinforced the existing gender inequalities.

10.5.3 Changing Approaches in Gender Equity

Approaches to the issues of gender equity and engendering development policy have seen a fundamental shift over the years. The major credit for this must go to the global women's movement and to women's activism, supported by the findings of substantive social science research, which have provided incontrovertible evidence of the social, economic and cultural exclusion of women from mainstream development efforts.

Initially, most mainstream approaches to women's development were not based on analyses of the overall reality of women's lives. **During the fifties and the sixties**, women's concerns took second place to the single-minded obsession with economic growth which, it was argued, would bring equality as well. This assumption came to be questioned in the seventies. In **seventies** the development planners focused either on women's roles as mothers and housewives, or as economic agents. Development for women was seen as an issue of "letting them participate" in initiatives which they were not involved in developing, and on terms decided by others.

"Top-down welfare approach", had very little lasting impact. In the nineties it was realised that gender inequality is not a result of the lack of women's integration in development, or their lack of skills, credit and resources. The root cause of the problem, as the women's movement had been saying for many years and in many ways, lies in the social structures, institutions, values and beliefs which create and perpetuate women's subordination.

Creating Space for Women

In the development process, the issue is not merely one of "adding on" women to various processes, but of *reshaping* these processes to create space for women's involvement not only in implementing the development agenda, but also in *setting* that agenda.

It is a shift away from the image of women as victims to women and as agents of change. The Fourth World Conference on Women at Beijing in 1995 put women's issues in the forefront of the global arena. Along with women, who were identified as the primary agents of change, there was also recognition for the central role of men in first recognising the need for, and then participating in, transforming gender relations and improving the status of women. The World Summit for Social Development at Copenhagen, also in 1995, the Beijing Plus 5 conference at the United Nations in 2000, Cairo, and the World Summit on Social Development at Johannesburg in 2002, took the agenda forward, though the actual change that has taken place is under debate.

The United Nations Development Fund for Women's (UNIFEM) report on the world's women released in 2000, was a comprehensive survey of progress. The report focused on the economic dimensions of women's progress in the context of globalisation, and found that progress had been uneven, with gender inequalities even in the richest countries. As the UNIFEM director has aptly put it: "the countries of the world have agreed to a path, but have neglected to create sufficient road signs that let us know how far we have come in our journey and how far we have to go."

It is for all these reasons that gender mainstreaming is recognised an essential component of UNDP's policies, programmes and activities. Gender mainstreaming attempts to ensure gender equality through creating space for everyone – women and

men – to contribute their energies to translate the shared vision of people-centred sustainable human development into reality.

SAQ 3

How has globalisation affected gender inequalities?

10.6 GENDER AND PARTICIPATION

Institutions need to mainstream gender-awareness and participatory approaches into their own work to ensure that development is truly equitable.

Critical voices about participatory initiatives have focused largely on mis-matches between over ambitious aims and poor practice. One such breach is the one between claimed social inclusiveness and the reality of gender bias. Despite the aims of participatory development to involve people in development that affects them directly, little attention is paid to understanding who wants to 'participate', what makes their participation possible, and what is in it for them. Often, participatory processes have left women on the sidelines, along with the gender issues that shape their lives. **Combining gender awareness and participatory approaches can be used to unlock men and women's voices for gender redistributive change and gender -sensitive programme and policy development.**

10.6.1 Gaps and Barriers

Let us now discuss the lacunae in our system which hinder the participation of women in the development process.

- a) **Women remain largely absent at all levels of policy formulation and decision-making** in natural resource and environmental management, conservation, protection and rehabilitation; their experience and skills in advocacy for and monitoring of proper natural resource management too often remains marginalised in policy-making and decision-making bodies, as well as in educational institutions and environment-related agencies at the managerial level.
- b) **Women are rarely trained as professional natural resource managers** with policy-making capacities, such as land-use planners, agriculturalists, foresters, marine scientists and environmental lawyers. Even in cases where women are trained as professional natural resource managers, they are often underrepresented in formal institutions with policy-making capacities at the national, regional and international levels.
- c) **Women are not equal participants in the management of financial and corporate institutions** whose decision-making greatly affects environmental quality.
- d) Furthermore, there are **institutional weaknesses** in coordination between women's non-governmental organisations and national institutions dealing with environmental issues, despite the recent rapid growth and visibility of women's non-governmental organisations working on these issues at all levels.

10.6.2 Bridging the Gap

The recent years have seen a cautious convergence of gender and participation. Its success appears to hinge on three factors that often require organisational change. **Firstly, conceptual clarity** lays the basis for practical application; hence the urgent need to use clear and commonly agreed terminology. Several concepts that need attention include the following:

- The use of simplistic and stereotypical concepts of '**gender**' have alienated rather than encouraged men and have done a disservice to the complexity of gender relations.

- Smoothly used but rarely explained, the term '**empowerment**' is seldom accompanied by analysis of the causes of gender-related suffering or of the processes through which it is commonly but erroneously assumed to occur.
- Comparing official definitions of '**participation**' with organisational mandates and available resources can reveal conceptual inconsistencies.
- The term '**community**' is also problematic with its simple but incorrect image of an undifferentiated and co-operative social group.

Secondly, the inherent limitation of visual methods associated with **participatory methodologies** and, above all, their **application** have glossed over gender-differentiated experiences, thus creating the impression of a uniform and static local knowledge. For example, much participatory work relies on mixed group-based discussions or assumes the dominance of a male/female division over other forms of social difference.

'Empowerment'- oriented work requires methods that can make social transformation a principal goal, yet they do not expose or generate conflicts that increase the vulnerability of marginalised groups.

The third essential change lies **within the organisations** that seek equitable participatory development, as concepts and methods work only if supported by organisations and institutions in which they are nested. Experiences from Uganda, Zambia and India show time horizons of 3 to 8 years to integrate an intra-communal difference perspective into practice.

Training programmes are one small step, only if gender and participation are presented as integral components and if participants' personal experiences and views on gender are explored.

Stimulating empowerment in ways that women and/or men might not support not only threatens to expose vulnerable people to conflict but will also determine the extent to which they wish to engage in a process that may draw attention to deeply rooted conflicts. Participation is only inclusive of gendered views if those who drive the process want it to be, or if those involved demand it to be. Gender-sensitive and participatory techniques can help translate their intentions into practice.

Recent decades have witnessed an international trend towards **democratic decentralisation** (the shifting of power, functions, responsibility and accountability from national level to grassroots communities) in order to strengthen local governance. A significant contribution of this decentralisation is to provide constitutional status to women in local governments and enhance their political participation. A clear example is the 73rd Constitutional Amendment Act of India (1993), which transferred power to people in decentralised Panchayati Raj Institutions (PRI – local government institutions), with one third reservation of seats for women. This paved the way for women to exercise their political rights in local governance, thereby gradually giving a new thrust to more woman-friendly grassroots governance. However, it has not necessarily enabled them to influentially define priorities or address gender issues. The Society for Participatory Research in Asia (PRIA-a non-profit development organisation based in New Delhi) has developed innovative approaches to enhance the participation of women.

Women's entry into provincial politics has, to a certain extent, challenged the social stigmas related to their ability to exercise power, and altered the texture of daily politics by injecting different values, and perspectives, as well as a different atmosphere within Panchayats. Although it is important not to assume that women display more integrity than men, it has been suggested that political administration has improved because women are more accessible to the community than men, more transparent, and more effective in fighting grassroots corruption. They have also drawn attention to issues such as education, water, sanitation, fuel and alcohol abuse, issues which are generally not focused on by men.

Ensuring women's political participation through reservations is a first important step, but much needs to be done to bring about a fundamental change in society. NGOs, CSOs and women's organisations need to increasingly network and share experiences on working with the government to increase dialogue on gender and quality of women's participation within the PRI system. Systematic and sustained efforts to motivate women to actively participate in local governance need to be accompanied by strong information and knowledge support through training and innovative communication, as well as participatory bottom-up processes. More attention needs to be focused on sensitising men as an integral part of such programmes. Without these, the promise of women's political participation offered by reservation of seats will not be effectively realised.

It makes sense for poverty alleviation interventions to reflect complex and diverse local experiences of poverty if they are to be credible, relevant and effective. But this does not always happen. With the introduction of government-led Poverty Reduction Strategies Papers (PRSPs) the World Bank has acknowledged the importance of civil society in formulating national policy to tackle poverty. PRSPs are supposed to be based on participatory consultation and planning processes. Yet specifically designing these processes to address gender biases that limit the participation of different women (and men) in national policy processes, and to integrate gender analysis into poverty diagnosis poses a major challenge.

Box 10.3: Poverty Reduction Strategy Papers (PRSPs)

While many countries have already developed their own poverty reduction strategies, the World Bank and the IMF have recently linked access to concessional lending and debt relief to the development of a poverty reduction strategy. This strategy, to be developed by governments in consultation with civil society and other stakeholders, is then to be summarised in a Poverty Reduction Strategy Paper (PRSP) and presented to the boards of the World Bank and the IMF. Countries that need to access funds can develop an Interim PRSP (IPRSP), which is designed to offer guidance for developing the main PRSP and outline the areas that need attention.

In order to access debt relief, several countries have already advanced in the PRSP process. According to Tony Burdon, Policy Adviser with Oxfam "in the 14 PRSPs completed, gender as a cross-cutting issue has been addressed in variable ways, and generally in a weak manner" (Links, 2000). Major decisions continue to be taken by the IMF, World Bank and governments, whereas the voices of civil society actors have generally been marginalised. However, according to the European Network on Debt and Development (EURODAD), in some countries the PRSP process has resulted in higher levels of civil society-government interaction than in the past.

If PRSPs are to fulfil their potential to integrate gender aware participatory approaches, the following is recommended for bilateral and multilateral donors, international NGOs, national governments and CSOs:

- Establish standards by which to measure the quality of gender-aware participation and participatory gender analysis, and develop projects to monitor them.
- Build government capacity and commitment to using participatory approaches for the PRSP process and to effectively respond to gender concerns.
- Support the development of advocacy skills of local groups committed to gender equality to engage effectively with the PRSP process.
- Ensure that approaches to participatory research and policy dialogue address the gender biases that currently limit the participation of marginalised groups.
- Integrate and use feminist participatory research and analysis on the local poverty situation to inform priorities for action.

SAQ 4

- i) In your opinion, where do the major lacunae lie in the present organisational set up which prohibit appropriate women participation?
 - ii) How far do you think participation can overcome these barriers?
-

10.7 STRATEGIC ACTIONS FOR WOMEN PARTICIPATION

The strategic actions needed for sound environmental management require a holistic, multidisciplinary and intersectoral approach. Women's participation and leadership are essential to every aspect of that approach. The recent United Nations global conferences on development, as well as regional preparatory conferences for the Fourth World Conference on Women, have all acknowledged that sustainable development policies that do not involve women and men alike will not succeed in the long run. They have called for effective participation of women in the generating an information and environmental education in decision-making and management at all levels. Women's experiences and contributions to an ecologically sound environment must therefore be central to the agenda for the twenty-first century. Sustainable development will be an elusive goal unless women's contribution to environmental management is recognised and supported.

10.7.1 Strategic Objectives

In addressing the lack of adequate recognition and support for women's contribution to conservation and management of natural resources and safeguarding the environment, governments and other actors should promote an active and visible policy of mainstreaming a gender perspective in all policies and programmes, including, as appropriate, an analysis of the effects on women and men, respectively, before decisions are taken.

I INVOLVE WOMEN ACTIVELY IN ENVIRONMENTAL DECISION-MAKING AT ALL LEVELS

Actions to be taken by Governments, at all levels, including municipal authorities, as appropriate:

- a) Ensure opportunities for women, including indigenous women, to participate in the environmental decision-making at all levels, including as managers, designers and planners, and as implementers and evaluators of environmental projects;
- b) Facilitate and increase women's access to information and education, including in the areas of science, technology and economics, thus enhancing their knowledge, skills and opportunities for participation in environmental decisions;
- c) Encourage, subject to national legislation and consistent with the Convention on Biological Diversity, the effective protection and use of the knowledge, innovations and practices of women of indigenous and local communities, including practices relating to traditional medicines, biodiversity and indigenous technologies, and endeavour to ensure that these are respected, maintained, promoted and preserved in an ecologically sustainable manner, and promote their wider application with the approval and involvement of the holders of such knowledge; in addition, safeguard the existing intellectual property rights of these women as protected under national and international law; work actively, where necessary, to find additional ways and means for the effective protection and use of such knowledge, innovations and practices, subject to national legislation and consistent with the Convention on Biological Diversity and relevant international law, and encourage fair and equitable sharing of benefits arising from the utilisation of such knowledge, innovation and practices;
- d) Take appropriate measures to reduce risks to women from identified environmental hazards at home, at work and in other environments, including appropriate application of clean technologies, taking into account the

precautionary approach as agreed in the Rio Declaration on Environment and Development;

- e) Take measures to integrate a gender perspective in the design and implementation of, among other things, environmentally sound and sustainable resource management mechanisms, production techniques and infrastructure development in rural and urban areas;
- f) Take measures to empower women as producers and consumers so that they can take effective environmental actions, along with men, in their homes, communities and workplaces;
- g) Promote the participation of local communities, particularly women, in the identification of public service needs, spatial planning and the provision and design of urban infrastructure.

By Governments and international organisations and private sector institutions, as appropriate:

- a) Take gender impact into consideration in the work of the Commission on Sustainable Development and other appropriate United Nations bodies and in the activities of international financial institutions;
- b) Promote the involvement of women and the incorporation of a gender perspective in the design, approval and execution of projects funded under the Global Environment Facility and other appropriate United Nations organisations;
- c) Encourage the design of projects in the areas of concern to the Global Environment Facility that would benefit women and projects managed by women;
- d) Establish strategies and mechanisms to increase the proportion of women, particularly at grass-roots levels, involved as decision makers, planners, managers, scientists and technical advisers and as beneficiaries in the design, development and implementation of policies and programmes for natural resource management and environmental protection and conservation;
- e) Encourage social, economic, political and scientific institutions to address environmental degradation and the resulting impact on women.

By non-governmental organisations and the private sector:

- a) Assume advocacy of environmental and natural resource management issues of concern to women and provide information to contribute to resource mobilisation for environmental protection and conservation;
- b) Facilitate the access of women agriculturists, and pastoralists to knowledge, skills, marketing services and environmentally sound technologies to support and strengthen their crucial roles and expertise in resource management and the conservation of biological diversity.

II INTEGRATE GENDER CONCERNS AND PERSPECTIVES IN POLICIES AND PROGRAMMES FOR SUSTAINABLE DEVELOPMENT

Actions to be taken

By Governments:

- a) Integrate women, including indigenous women, their perspectives and knowledge, on an equal basis with men, in decision-making regarding sustainable resource management and the development of policies and programmes for sustainable development, including in particular those designed to address and prevent environmental degradation of the land;
- b) Evaluate policies and programmes in terms of environmental impact and women's equal access to and use of natural resources;
- c) Ensure adequate research to assess how and to what extent women are particularly susceptible or exposed to environmental degradation and hazards, including, as necessary, research and data collection on specific groups of women, particularly women with low income, indigenous women and women belonging to minorities;

- d) Integrate rural women's traditional knowledge and practices of sustainable resource use and management in the development of environmental management and extension programmes;
- e) Integrate the results of gender-sensitive research into mainstream policies with a view to developing sustainable human settlements;
- f) Promote knowledge of and sponsor research on the role of women, particularly rural and indigenous women, in food gathering and production, soil conservation, irrigation, watershed management, sanitation, coastal zone and marine resource management, integrated pest management, land-use planning, forest conservation and community forestry, fisheries, natural disaster prevention, and new and renewable sources of energy, focusing particularly on indigenous women's knowledge and experience;
- g) Develop a strategy for change to eliminate all obstacles to women's full and equal participation in sustainable development and equal access to and control over resources;
- h) Promote the education of girls and women of all ages in science, technology, economics and other disciplines relating to the natural environment so that they can make informed choices and offer informed input in determining local economic, scientific and environmental priorities for the management and appropriate use of natural and local resources and ecosystems;
- i) Develop programmes to involve female professionals and scientists, as well as technical, administrative and clerical workers, in environmental management, develop training programmes for girls and women in these fields, expand opportunities for the promotion of women in these fields and implement special measures to advance women's expertise and participation in these activities;
- j) Identify and promote environmentally sound technologies that have been designed, developed and improved in consultation with women and that are appropriate to both women and men;
- k) Support the development of women's equal access to housing infrastructure, safe water, and sustainable and affordable energy technologies, such as wind, solar, biomass and other renewable sources, through participatory needs assessments, energy planning and policy formulation at the local and national levels;
- l) Ensure that clean water is available and accessible to all and that environmental protection and conservation plans are designed and implemented to restore polluted water systems and rebuild damaged watersheds.

By international organisations, non-governmental organisations and private sector institutions:

- a) Involve women in the communication industries in raising awareness regarding environmental issues, especially on the environmental and health impacts of products, technologies and industry processes;
- b) Encourage consumers to use their purchasing power to promote the production of environmentally safe products and encourage investment in environmentally sound and productive agricultural, fisheries, commercial and industrial activities and technologies;
- c) Support women's consumer initiatives by promoting the marketing of organic food and recycling facilities, product information and product labelling, including labelling of toxic chemical and pesticide containers with language and symbols that are understood by consumers, regardless of age and level of literacy.

III STRENGTHEN OR ESTABLISH MECHANISMS AT THE NATIONAL, REGIONAL AND INTERNATIONAL LEVELS TO ASSESS THE IMPACT OF DEVELOPMENT AND ENVIRONMENTAL POLICIES ON WOMEN

Actions to be taken

By Governments, regional and international organisations and non-governmental organisations, as appropriate:

- a) Provide technical assistance to women, particularly in developing countries, in the sectors of agriculture, fisheries, small enterprises, trade and industry to ensure the continuing promotion of human resource development and the development of environmentally sound technologies and of women's entrepreneurship;
- b) Develop gender-sensitive databases, information and monitoring systems and participatory action-oriented research, methodologies and policy analyses with the collaboration of academic institutions and local women researchers, on the following:
 - i) Knowledge and experience on the part of women concerning the management and conservation of natural resources for incorporation in the databases and information systems for sustainable development;
 - ii) The impact on women of environmental and natural resource degradation, deriving from, inter alia, unsustainable production and consumption patterns, drought, poor quality water, global warming, desertification, sea level rise, hazardous waste, natural disasters, toxic chemicals and pesticide residues, radioactive waste, armed conflicts and its consequences;
 - iii) Analysis of the structural links between gender relations, environment and development, with special emphasis on particular sectors, such as agriculture, industry, fisheries, forestry, environmental health, biological diversity, climate, water resources and sanitation;
 - iv) Measures to develop and include environmental, economic, cultural, social and gender-sensitive analyses as an essential step in the development and monitoring of programmes and policies;
 - v) Programmes to create rural and urban training, research and resource centres that will disseminate environmentally sound technologies to women;
- c) Ensure the full compliance with relevant international obligations, including where relevant, the Basel Convention and other conventions relating to the transboundary movements of hazardous wastes (which include toxic wastes) and the Code of Practice of the International Atomic Energy Agency relating to the movement of radioactive waste; enact and enforce regulations for environmentally sound management related to safe storage and movements; consider taking action towards the prohibition of those movements that are unsafe and insecure; ensure the strict control and management of hazardous wastes and radioactive waste, in accordance with relevant international and regional obligations and eliminate the exportation of such wastes to countries that, individually or through international agreements, prohibit their importation;
- d) Promote coordination within and among institutions to implement the Platform for Action and Chapter 24 of Agenda 21 by, inter alia, requesting the Commission on Sustainable Development, through the Economic and Social Council, to seek input from the Commission on the Status of Women when reviewing the implementation of Agenda 21 with regard to women and the environment.

10.7.2 Strengthening the Role of Women in Environment and Development

Women's participation in sustainable development and information to support this goal was a critical element of Chapter 24 of Agenda 21 with governments being called upon to take steps in a range of areas including (but not limited to)

- a) increasing the number and proportion of women involved in decision making for sustainable development,
- b) strengthening of government institutions such as women's bureaus and other mechanisms that systematically bring a gender perspective to government policy making,
- c) strengthening NGO capacity, and
- d) strengthening gender sensitive approaches to research, data collection and dissemination.

Clearly, women's participation in sustainable development cannot be divorced from advances in women's participation in government as a whole. Several countries report outstanding progress in this area.

While some progress has been made, there is currently inadequate research and analysis on women's participation in the decision-making roles related to environment and sustainable development. This would include more substantive understanding of existing barriers to participation and strategies to overcome them. Preliminary review of national reports submitted for both Beijing +5 and National Plans on Agenda 21 indicates that "measurable" data on governmental efforts to increase the proportion of women in decision making on sustainable development is quite limited.

Structural changes to facilitate a gender approach have been instituted in some countries. For example, in some countries the agencies responsible for women's affairs have implemented efforts to increase participation in environmental concerns. More long-lasting strategies will incorporate gender mainstreaming in national environmental agencies.

It is also critical that more national environmental institutions develop mechanisms for structured input and consultation with women's NGO's active on sustainable development. Local Agenda 21 processes represent a special opportunity to increase women's participation in sustainable development; however few localities have made efforts in this area. To a large extent to date, there has not been an explicit approach to gender in most countries as part of LA 21; however, surveys conducted both by the Women's Environment and Development Organisation (WEDO) and the International Council for Local Environmental Initiatives (ICLEI) showed that there is an ample room for the development of such an approach.

Other barriers in LA 21 communities include a general lack of awareness by both women and men about the connections between environment and women's roles, lack of interest and political will among local authorities and a lack of desire to change the balance in current power relations.

i) **Strengthening Capacity of Women's NGOs**

Broad based, grassroots approach to involving women and obtaining their input on sustainable development issues need to be implemented. High priority should be given to working with women's NGOs active on sustainable development to facilitate investments in innovative information and communications technologies, which represent an important opportunity for women's empowerment. The ability to communicate their perspectives and concerns is a central empowerment issue, both for the publication of their concerns and perspectives, and for access to information and education that will promote women's consciousness-raising. Further, the decentralised, interactive and non-hierarchical nature of these technologies present a unique space for women to develop their views, opinions, benefit from the synergy of interactive communications with women. In addition, once the initial costs of access and technology are covered, it presents a low-cost and relatively simple mode of publishing newsletters, articles, statements, etc. Special attention should be given to involving women's NGOs in training and support, in partnership with technology providers.

ii) **Information and Research Availability**

Review of the United Nations "Indicators for Social Aspects of Sustainable Development", reveals that few of these are gender specific, for example, only the overall unemployment rate rather than gender disaggregated labour force participation rates. As countries continue work programmes on the development of the broader range of environmental indicators, they must ensure a gender analysis as part of this review. The Women's Caucus has previously suggested that a comprehensive effort should be conducted to measure progress. They have pointed to the utility of the Human Development Report's (HDR) two gender-related indices, the Gender Development Index (GDI) and the Gender Empowerment Measure

(GEM), provide useful and up-to-date data. The GDI is based on the Human Development Index (HDI) that measures the average achievements in a country on the basis of three dimensions, namely longevity, knowledge and the real GDP per capita. The GDI takes account of the inequality in HDI achievement between the sexes. The GEM aims to evaluate whether women are able to actively participate in key areas – economic, social, and political. GDI focuses on capabilities and conditions, while GEM is concerned with their use for full participation. *It is critical that these indices be integrated with the sustainable development indicators to take gender into account.*

The self reported ratings by governments in the National Reports on Sustainable Development of the availability of sustainable development information for women at the national level is as follows. For the Asia/Pacific region of 21 countries, almost half (10) countries provided no rating, 1 saying information was poor, 2 countries show some good data and another 5 indicating that information was either good or very good.

Adequate funding to support gender sensitive research and information in decision - making on sustainable development remains a barrier. Clearly, efforts need to be made to provide funding for creative partnerships between government, women's NGOs and universities active on gender and sustainable development for comprehensive strategies for research development and dissemination. Additional gender sensitive research at the international level also needs to be enhanced. For example, a comprehensive international analysis of policies for women's access to land and efforts to reform land legislation would be useful. At the local and national level, lack of land education remains a critical issue, and must be approached in conjunction with innovative methods of improving women's ability to understand legal texts.

In Rio+10 2002, commitment to strategies for strengthening women's access to information for participation and decision making including involvement of women in high level consultations was stressed upon.

SAQ 5

How can the role of women in environment and development be strengthened?

10.8 INTERNATIONAL AND NATIONAL ORGANISATIONS

*As a woman I have no country;
As a woman my country is the whole world*

– Virginia Woolf

Some important international and Indian organisations working in the direction of women and sustainability leadership with brief description are given in Table 10.1 and Table 10.2 respectively.

Table 10.1: International women organisations

Organisation	Thrust Areas
Common Well Institute International, Inc (USA)	Is a non-profit organisation dedicated to inspiring sustainable leadership for the new century that promotes peace, and that is dedicated in spirit and action to the wellbeing of all citizens of the global village, including women and children
Division for the Advancement of Women (UN)	Grounded in the vision of equality of the United Nations Charter, (DAW) advocates the

	improvement of the status of women of the world and the achievement of their equality with men.
The European Women’s Lobby (Belgium)	(EWL) is the largest co-ordinating body of national and European non-governmental women’s organisations in the European Union. The EWL’s goal is to achieve equality of women and men in Europe and to serve as a link between political decision-makers and women’s organisations at EU level.
Institute for Women’s Policy Research (USA)	IWPR is a public policy research organisation dedicated to informing and stimulating the debate on public policy issues of critical importance to women and their families.
International Women’s Media Foundation (USA)	The IWMF’s mission is to strengthen the role of women in the news media around the world.
National Organisation for Women (USA)	NOW’s goal has been to take action to bring about equality for all women. NOW works to eliminate discrimination and harassment in the workplace.
PeaceWomen (USA)	Works to facilitate communication among and mobilisation of advocates and supporters in civil society, the UN system and governments working on women.
Socialist International Women (UK)	Is the international organisation of the women’s organisations of the socialist, social democratic and labour parties affiliated to the Socialist International.
WELDO (Pakistan)	Women Empowerment Literacy and Development Organisation is a world renowned, not for profit, progressive, non-governmental organisation working on Environmental Rehabilitation and Conservation and Promotion of International Trade and Public Private Partnership in Pakistan.
Women’s Action for New Directions	WAND empowers women to act politically to reduce violence and militarism.
Women’s Environment & Development Organisation (USA)	WEDO is an international advocacy organisation that seeks to increase the power of women worldwide as policymakers at all levels in governments, institutions.
Women for Sustainable Development (India)	The aim of WSD, which is based on the principle of conscious and responsible participation of women, is to implement relevant development programmes.
Women in Europe for a Common Future	Is a network of organisations and individuals working for sustainable development, protection of human health and environment and poverty reduction.
Women’s Learning Partnership for Rights, Development, and Peace (WLP) (USA)	Is an international, non-governmental organisation (NGO) that empowers women and girls in the Global South to re-imagine and re-structure their roles in their families.
Women’s Transport Network (UK)	To promote transport systems and pedestrian environments that are safe and accessible for all and to encourage women to enter and progress in the transport industry.
Women’s WORLD (USA)	To research, explore, and educate the public about the scope and prevalence of gender - based censorship

Table 10.2: Women's organisations of India

Organisation	Thrust Areas
Aaina Bhubaneswar	Aaina was founded in 1998 by a group of like minded women who wanted to focus, on the development of women and children's issues, especially as they relate to disability
Aanchal Mumbai	Aanchal is a help line and support group that reaches out to lesbian and bisexual women in Mumbai, India. This population was chosen because sexual minorities, especially lesbians are seen as invisible in India.
Anveshi Dalit Women's Trust Tiruvalla	Anveshi Dalit Women's Trust is an organisation that was founded in 1993 by a group of Dalit women. Anveshi's main goal is to empower Dalit women and the Dalit community as a whole for social change.
ARPAN	Advancement of Rural People And Nature (ARPAN) was established in 1992. The group was founded to help women of North Gujarat in India who suffer due to the prevailing social values.
Centre for Women's Development and Research Chennai	The Centre for Women's Development and Research (CWDR) is an organisation that was founded in 1993 by a group of female activists who wanted to address problems faced by women in the southeast end of Chennai, India in a region called Thiruvannamiyur. CWDR's mission includes creating awareness about gender issues, increasing the income of women, and eliminating violence against women.
Guidance Society for Labour Orphans and Women (GLOW) Tamil Nadu	GLOW (Guidance Society for Labour Orphans and Women) is a non-profit, social service organisation that has been assisting the poor, marginalised and vulnerable Dalit women of Taminadu, India since 1996.
Indira Social Welfare Organisation (ISWO)	Indira Social Welfare Organisation (ISWO) was started in 1985 by a group of enthusiastic female teenagers mainly from Thenkanal district in the state of Orissa. The organisation aims to empower the slum dwelling women, who are mostly Dalit and tribal women, to enable them to rise above the poverty line.
Integrated Women Development Institute (IWDI)	The Integrated Women Development Institute was founded in 1989 by Celinal Paul Daniel, a woman inspired by the ideology of Gandhian thoughts and Christianity, who wanted to implement programmes and rural development works that would benefit the people living in Gummidipoondi and Ponneri taluks of the Thiruvallur District. The IWDI targets homeless women, low income bonded labourers, the destitute, the deserted, aged, and girl children.
Mahila Mandal Barmer Agor (MMBA)	MMBA, founded by Ms. Mumtaz Ben as a result of her struggle to improve the quality of life at Indira Colony, has been working in the Barmer and Jaisalmer districts of India since 1985. It is a grass roots organisation that concentrates on education, health, gender

	discrimination, and serves primarily widowed women known as dalits.
Nari-O-Sishu Kalyan Kendra (NSKK)	Nari-O-Sishu Kalyan Kendra (NSKK) was registered in 1979. It was originally founded by Md. Mainuddin, who believed in empowering women. His initial goal was to empower women living in seven Muslim dominated villages who, due to their faith, were unable to receive an education. NSKK focuses its services on three age groups of women: up to 12; 12-18; and 18-45. Some of the current activities and programmes include: counselling services; mobilisation of local resources; and credit access for skill development and self employment opportunities.
Rural Educational Awareness Development Society (READS)	Founded in Tamil Nadu in 1998, Rural Educational Awareness Development Society (READS) organises women in order to raise their social and economic status. In Tamil Nadu, dowry torture is still prevalent, most women have little or no education due to pressure from their parents to stay home and help with household work.
Rural Health and Environment Development Trust (RHEDT)	Rural Health and Environment Development Trust was established in Tamil Nadu in 1990 by a group of male and female social workers. The mission of RHEDT is to organise the Tribal women into self-help groups and equip them with knowledge, awareness, analytical skills etc.
Women Development Resource Centre (WDRC)	The Women Development Resource Centre (WDRC), was started in 1991 to create a space for women to come together to sit and discuss the development of women, the injustice on them, and to bring conditional and positional changes to the lives of women. The organisation also addresses the livelihood needs of women, works on actions against violence on women and encourages the political participation of women in local governmental systems.
Women’s Emancipation and Development Trust (WED)	Women’s Emancipation and Development Trust (WED) was founded in 1992 with the aim of “building a gender-just society with self-sustained, economically independent, politically empowered women.” Their activities include programmes aimed at awareness education to prevent violence against women (especially female infanticide and foeticide), self-help groups and micro -finance for women’s income generation, as well as family counselling and legal aid.
Women’s Organisation for Rural Development (WORD)	Women’s Organisation for Rural Development (WORD) was founded in 1991 by Ms. Sivakamavalli who envisioned “promoting rights of the oppressed, discriminated and marginalised women” in India. Their goals include eradicating gender disparity through the attainment of social, economic, health, cultural, and environmental development.

10.8 SUMMARY

Let us summarise what you have studied so far:

- Women are the main victims of environmental degradation. They are sound managers of natural resources, are close to nature and are in constant contact with environment.
- Women are involved in all social and cultural activities. Due to women's vital role in production and reproduction, many programmes and policies targeted at the community have their greatest impact on women. Yet this gender-specific impact is too often ignored by planners, overlooked by field workers, and bypassed in project implementation.
- It is well documented that development programmes that ignore women either fail or have negative social impact, as they are based on an inadequate and only partial understanding of the society.
- Women, as agents of change, have developed their own strategies to cope up with environmental degradation. Their first reaction is to channelise more time, energy and effort into the supply of natural resources.
- Women have often played leadership roles or taken the lead in promoting an environmental ethic, judicious resource use and reusing and recycling resources to minimise waste and excessive consumption.
- There is a shift to wards the issues of gender equity over the years. Due to changes in the organisational and institutional mechanisms, there is a reshaping of woman's role.
- The image of a woman is changed from a victim to the agent of change.
- There is a cautious convergence of gender and participation at all the levels i.e. from grass root level to the formulation of policy.
- Strategic actions are being taken to involve women actively in environment, in decision making, in integrating gender concerns in policies and assessing the impact of development and environment policies on women at national, regional and international levels.
- Many international and national organisations are focusing on women and environment and development. But the capacity of NGOs has to be enhanced to strengthen the role of environment.

10.9 TERMINAL QUESTIONS

1. Why it is necessary that women should participate in the decision making process?
2. Do you think there is a paradigm shift in approach towards gender equity in your country? Substantiate your answer.
3. What role is being played by the NGOs to overcome the barrier in women participation?
4. What are the key gender issues that need to be addressed while formulating a policy for women?
5. Why women are considered as traditional natural scientists?
6. How has globalisation reinforced the existing gender inequalities?

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UNIT 11 YOUTH PARTICIPATION IN DEVELOPMENT

Structure

- 11.1 Introduction
 - Objectives
- 11.2 Need for Youth Participation in Sustainable Development
- 11.3 What Concerns Young People?
- 11.4 Youth in Development Work – History and Traditions
- 11.5 Role of Youth in Development Work
 - Participation and Young People
 - Functions of Youth in Development Work
- 11.6 Youth in Development Work as a Profession
- 11.7 Models of Youth in Development Work
- 11.8 Applying Freire's Ideas to Youth in Development Work
- 11.9 Youth – Our Goals in Working with Them
 - Indicators of Youth Well Being
 - Goals
 - Youth Participation
 - Participation
 - Promoting Participation
- 11.10 Youth as Initiators and Activists
- 11.11 Organisations Providing Opportunities for Young People
- 11.12 Summary
- 11.13 Terminal Questions

11.1 INTRODUCTION

There are only two lasting bequests we can hope to give our young people. One of these is roots; the other is wings (Hodding Carter).

There is a widespread destruction and degradation of the environment and there has been a global call for the integration of environmental protection and development. The people who are concerned about environmental protection find a ray of hope in sustainable development. By now, you must have understood the concept of sustainable development and importance of participation of different sectors and different people in environmental management. In the previous unit, you have studied about the role of women in environment and development. In the present unit, you will get acquainted to the participation of youth in development. The youth has a major role to play because it possesses energy, creativity and insights, which should be tapped in an effort to promote sustainable development. Moreover, involving youth in sustainable development activities will raise their level of awareness of important environmental issues and ensure their active participation in the conservation and the protection of environment. It will lay the foundation for more widespread interest in sustainable development over time.

In the present unit you will study about the role of youth in development work, different models and approaches of development work, some important organisations that enable young people to participate in sustainable development projects and various participatory approaches.

Objectives

After studying this unit, you should be able to:

- appreciate the need for participation of youth in sustainable development,
- discuss the role of youth in development work,

- explain the skills needed by the youth when adopting the models in development work,
- discuss the role of youth in community development, and
- appreciate the activities of various organisations towards youth development.

11.2 NEED FOR YOUTH PARTICIPATION IN SUSTAINABLE DEVELOPMENT

“The day will come when the progress of nations will be judged not by their military or economic strength, nor by the splendor of their capital cities and public buildings, but by the well being of their peoples; by their levels of health, nutrition and education; by their opportunities to earn a fair reward for their labours; by their ability to participate in the decisions that affect their lives; by the respect that is shown for their civil and political liberties; by the provision that is made for those who are vulnerable and disadvantaged; and by the protection that is afforded to the growing minds and bodies of their children.” (Jim Grant, Former Director, UNICEF)

Young people have been a fundamental force for change throughout history: they speak the truth, they act with passion on the things they believe in and they take risks. It was in this spirit that many youth activists from around the world became involved in the United Nations Conference on Environment and Development (UNCED). They were at the UNCED in unprecedented numbers to demand action on the part of the world community in answering the world’s social, economic and environmental crisis. The process leading up to the Earth Summit was marked with a sense of urgency among youth activists who came together to discuss the environment and development issues throughout the world. Youth felt that, not only did they have something to contribute, but also that their failure to contribute would result in the failure of what the Earth Summit has set out to achieve. They came to Rio demanding and exercising their right to participate in determining their future and that of the planet, and they came with a sense of responsibility to act in search for solutions.

All of the youth NGO statements since the Earth Summit have called for social and economic justice, sustainable development that includes the fair distribution of resources, equal participation in decision-making, peace and respect for human rights, access to education, among many other issues. A common theme for all the global conferences has been a call for the inclusion of youth and their perspectives in decision-making. This is reflected in Chapter 25 of Agenda 21 titled ‘Strengthening the Role of Children and Youth in Sustainable Development’, which states that:

It is imperative that youth from all parts of the world participate actively in all relevant levels of decision-making process because it affects their lives today and has implications for their futures. In addition to their intellectual contribution and their ability to mobilise support, they bring unique perspectives that need to be taken into account (Woods, Z. 1997).

Chapter 25 of agenda 21 recognises that youth comprises 30% of the world’s population. It also indicates that their involvement in decision-making about the environment and development, and the implementation of programmes for sustainable development, is critical to the long-term success of agenda 21.

SAQ 1

Explain why it is important for youth to participate in the process of sustainable development.

11.3 WHAT CONCERNS YOUNG PEOPLE?

At World Youth Environmental Meeting, *Juventud (Youth) 92*, held in Costa Rica, young people from all over the world discussed the following issues related to environment.

- Poverty and the environment
- External debt
- Population growth
- Natural resource degradation.

As you explore some of these complex and inter-related issues, try to ponder on an important questions i.e. how can young people bring about a change? We hope, you will get a satisfactory answer to this question after going through the following.

i) **Poverty and the environment**

Poverty is an environmental pollutant, and lessens people's capacity to use natural resources rationally. Therefore, poverty intensifies the pressure on the environment. Poor people, who are unable to meet their needs, are forced to exploit natural resources for income, or for their own use. In countries with large populations of poor people, to which category most of the South Asian countries belong this can be devastating to the environment.

Now, what can young people do in this direction?

Young people can do lobbying with international and government institutions to encourage economic growth in the spirit of the current GATT agreement on the terms of trade. If industrialised countries reduce trade barriers against goods from developing countries, specially on agricultural produce, then it would be especially beneficial. Further, National Youth Division, with support from national government, can create special financial initiatives that will provide seed money and training for youth to become self-employed so that they can generate their own income.

The bottom line is that the poor have become both the agents and victims of environmental degradation, although not the cause. The cause seems to lie with international trade agreements, the free market approach to development and external debt.

ii) **External debt**

External debt is the part of a country's debt owed to creditors outside the country. This includes debt owed to private commercial banks, government or international financial institutions such as the IMF and the World Bank.

At *Juventud '92*, young people expressed their fears and concerns about:

1. The cause and impact of external debt
2. Their dissatisfaction with the approach of developed countries towards the issue of development. Young people are concerned that financial institutions such as the World Bank and International Monetary Fund (IMF) give priority to transnational companies which have contributed, in part, to the depletion of the resources of developing countries.

At the *Juventud* meeting, it was observed that the heaviest burden in international economic adjustments has been carried by the world's poorest people in Latin America, the Caribbean, Africa and Asia.

Now we would dwell on the causes of external debt and direction in which young people can contribute.

Causes of external debt

The young people at *Juventud '92* felt that a combination of factors has contributed to the rapidly growing debt that confronts many developing countries:

- gaining political independence without corresponding economic independence
- local autocrats
- corruption
- flawed development strategies
- the fact that poor countries are encouraged to imitate the free market development model of industrialised nations.

What can young people do?

1. Lobby for debt forgiveness.
2. Begin to search and discuss with peer group about the possibility of creating alternative models of development, which take into consideration the cultural, social, economic and political values of the people. Basically youth have to search for a model that respects and nurtures the environment while delivering economic benefits to the people.

iii) Population growth

One of the factors that adds to the problem of poverty, external debt and their effect on the environment, is that poor countries tend to have large, rapidly growing populations of people who are competing for limited resources. Approximately 80% of the world's population lives in poorer and developing countries. The growth rate in these countries is much faster than in developed countries. It is estimated that it will double in the next few years. This will put an immense strain on countries that are already finding it difficult to support their people. Youth can create awareness in the context of cause and effect of over population among general masses by blanching campaigns.

iv) Natural resource degradation

One of the most devastating forms of natural resource degradation is deforestation. Combined with air and water pollution caused by industrial waste, deforestation compounds the problem of ozone depletion and global warming. It results in soil erosion i.e. the loss of topsoil that is vital for agriculture. Further, it has many environmentally harmful effects.

What can young people do to protect forests?

1. Support local organisations concerned with protecting forests and planting trees.
2. Plant a tree whenever an opportunity arises.
3. Lobby with the government and local authority to protect the forests in the country.
4. Involve in various awareness campaigns about the need to protect the forests.

SAQ 2

Why are young people concerned about external debt and what steps can they take to reduce this?

11.4 YOUTH IN DEVELOPMENT WORK-HISTORY AND TRADITIONS

A lot of emphasis is being laid on the participation of youth in development. Due to this continual change, impact on the global economy as well as social and economic

life of every part of the work, small or large is being observed. However, the practices of youth in development work are deeply influenced by a long history.

There are five main international traditions of youth in development work. They are:

- i) Youth in development in families and communities
- ii) Youth work as social and leisure provision
- iii) Pastoral work and out-of-school education
- iv) Youth work for development
- v) Youth welfare work.

i) Youth in development in families and communities

The earliest traditions of youth in development work are related to changes in the role of adult family members and community elders who traditionally cared for, supported, educated and controlled young people.

With the recent increase in family breakdown and the erosion of traditions, community structures have changed. Traditional methods have become less and less effective in helping young people make the transition to adult life; they have been supplemented by professional advice and help, and in many wealthy countries, replaced by these.

Rapid social change often poses difficulties for the youth in development work who have to be ultra-sensitive to the feelings and expectations of the family and community while working in a close relationship with them.

ii) Youth work as social and leisure provision

The work that includes social and leisure provision for young people is one of the oldest traditions of youth work in developed countries such as Australia, Britain and Canada. It developed there strongly because rapid industrialisation and urbanisation created a lot of free time for those not yet in work, and who were, if poor, without the means and knowledge to use that free time productively. Rising crime rates, mental illness, and use of drugs tend to be associated with this condition.

For those from a reasonably prosperous rural area, this will probably seem strange but global economics is beginning to create these conditions in many formerly settled and harmonious communities.

Youth work as social and leisure provision developed due to the following reasons:

1. help young people meet and enjoy themselves
2. allow young people to have a space of their own
3. protect young people from the dangers of society, and
4. protect society from troublesome young people.

The types of programmes offered through this tradition may include:

- informal social gatherings
- clubs offering structured activities such as photography, fishing and sports, and
- powerful social organisations such as Malawi's Young Pioneers which ran businesses, organised festivals, educated illiterate people and so on.

The emphasis in this area usually focuses on instilling a sense of proper character in young people, rather than on competitiveness. Values such as loyalty, fair play, social and national responsibility are promoted through various activities of groups such as the Scouts and the Boys' Brigade, although more covert political values might also be consciously or unconsciously transmitted.

iii) Pastoral work and out-of-school education

Pastoral work and out-of-school education are superficially similar to and overlap the leisure tradition. However, they may be deeply committed to ideologies and agenda of a social and spiritual nature.

Religious, sporting and international organisations have established extensive structures and activities for youth in development work in many developing and developed countries throughout the world. These organisations include scouts, girl guides, missionaries, benevolent groups and churches. In many cases, these organisations had clear educational and /or religious goals, and distinct ways of working with young people.

iv) Youth work for development

Youth work for development has played an important role in official national development efforts. It has been used to promote national fitness, military training, political mobilisation, democracy struggles, community development and citizenship education.

The major concerns usually include the development of young people's:

- political knowledge
- political skills
- abilities to create an identity with a particular social movement.

Some examples of youth work for development are organisations such as the Co-operative Youth Movement, Young Socialists, Bangladeshi Youth Leagues, and Malawi's Young Pioneers.

Some part of youth work for development is centred on working alongside government in a supportive role, while other part of youth work for development has focused on directly tackling the broader structural problems in society, such as working to help women in rural areas, gain access to credit and to technical expertise.

The main focus of youth work for development has been helping young people to understand the entrenched nature of oppression as a force built into the structure of society and of the economy, as well as being personal and political. As a consequence, it has generally aimed to help young people take an active role in the political arena through community activity, political parties and organisations, unions and national and international movements.

v) Youth welfare work

Welfare means to support the people who have been put into a situation where they find it very hard to get what we now consider to be the basic requirements to live in an acceptable way. This might be because of structural poverty such as inequities in the distribution of resources (handling the resources of education, health, land and so on), or personal problems due to community or family breakup, or illness.

The tradition of youth welfare work varies significantly across the Commonwealth. In most countries, youth welfare work relies on the sponsorship of philanthropic non-governmental organisations, as in developed countries such as New Zealand, Australia, Britain, Canada, USA. In some European countries such as Norway and Germany the youth welfare work is sponsored by the government.

The welfare tradition has its roots in the Victorian era of 19th century in England, with the notion of rescuing. This approach saw young people as required to be saved from the dangers of society, and in need of moral and religious instruction. In many cases, this approach was adopted by volunteers guided by their own personal values,

evangelistic Christian or other moral codes. These values have an influence on how effective the work will be if the values are not acceptable to the recipients. Many organisations play down their own value systems so that they do not interfere with the work itself.

As the welfare approach became professionalised, certain young people were identified as being 'at risk', 'in trouble' or 'deprived'. Professionals were employed to provide counselling, material relief, accommodation and/or training. Welfare workers within a pluralist tradition assist young people to identify their problems and then to act on them within the framework of law.

For example, the 'Hare Krishna Hindu' religious sect has organised welfare accommodation and education for homeless street children in Nairobi. 'Save the Children Fund' organises welfare work for and with children throughout the world.

A further development of the welfare tradition has been the emergence of organisations that provide information to young people and also act as advocates, with legal know-how, on their behalf. It is important to try and understand the economic environment in which welfare work takes place.

SAQ 3

There will be a variety of welfare activities in your country that are concerned with young people. Find out.

11.5 ROLE OF YOUTH IN DEVELOPMENT WORK

For your country,

If you plan for a year-sow paddy

If you plan for a decade-plant trees

If you plan for a future-nurture youth

(Proverb quoted in National Youth Policy of India)

The central purpose of youth in development work is to empower young people to play an assertive and constructive role in the regeneration of their communities.

A youth in development work has three distinct roles:

1. working face to face with young people in a variety of settings including clubs and projects
2. managing and supporting paid and volunteer workers
3. formulating and developing policies on governmental and non-governmental organisations (NGOs).

Youth workers undertake their roles across a wide range of settings. The type of work they engage in will differ depending on the:

- organisation they work for
- country they work and live in
- type of young people they work for
- philosophical approach; and
- resources they have to work with young people

Role of youth in development work is increasing the participation of young people in national development and decision-making or promoting youth empowerment. Like human rights and democracy, there are ways of interacting with young people.

Fundamentally, participation and empowerment are both about letting young people have more control over their personal development and the directions of their lives.

11.5.1 Participation and Young People

Participation in democracy, employment, education, cultural development – are enshrined as individual rights in the Universal Declaration of Human Rights. They are also included in the Harare Declaration as priorities of the Commonwealth.

Traditionally, young people have been excluded from active participation in many of the decisions that affect their lives. When we are very young, our parents, family members and other adults regularly make decisions on our behalf. Ideally, they are genuinely concerned with our interests. But as we grow into adolescence i.e. the period of transition from childhood to adulthood, we usually begin to develop our own sense of what our 'best interests are', and we may not have the same perspective as the adults do. But adults do not always want to relinquish their role as decision-makers as well as they do not always recognise when young people are able to begin to make their own decisions, and take responsibility for the consequences of those decisions. This struggle for greater influence and autonomy takes place not just within our families, but also at school and in community contexts, where adults may be reluctant to give up some of their traditional power.

As a youth and development worker, your role is to create an *enabling and empowering environment for young people*. At the same time as you are trying to do this, there are likely to be other forces working in the other direction, such as troubled home environment, negative mass media images (particularly affecting young women), or shrinking employment markets. It is also more difficult for you to create an enabling environment for others if you do not feel empowered in your own personal or professional life.

11.5.2 Functions of Youth in Development Work

The Common Wealth Youth Programme (CYP) has defined three main functions that are central to the practice of all youth in development work. They are the *enabling*, *ensuring* and *empowering* functions.

i) **Enabling**

Enabling is about creating the conditions in which youth can act on their own behalf, and on their own terms, rather than relying on other people and professionals to do things for them.

The enabling approach assists youth in development works to ensure that young people:

- understand and appreciate the cultural values and traditions of their group, society and country.
- are themselves valued as a key part of their country's national, social, economic and political life.

A youth worker using the enabling approach would encourage young people to:

- develop new skills
- develop self-confidence
- raise their aspirations
- speak for themselves
- take the initiative in making a creative contribution to their communities.

They might work in a team with other youth workers to:

- address young people's needs
- analyse and evaluate different ways in which this could be done
- design and develop new ways of implementing policy.

If they are experienced and have given a lot of thinking about this, they might work with other organisations in the following directions:

- involve young people in policy formulation and implementation
- always keep young people in the forefront of thought process to ensure delivery of programmes that are relevant to young people.

ii) **Ensuring**

Ensuring is about working in harmony with the core Commonwealth values and principles (democracy, liberty, justice and equity) because these are the systems, which give a sense of meaning, and moral and social purpose to the ways in which young people can use their skills and knowledge.

The ensuring approach is meant to assist youth in development works to:

- maintain the principle of equity as the essential underpinning of all youth programmes, activities and outcomes.
- develop an awareness and moral commitment to the ideals of the Commonwealth and in the tradition of the groups that founded it.

An ensuring approach could include helping young people, no matter from what social background, to:

- secure the opportunity of redeveloping their learning abilities
- acquire ways of making themselves into valuable and contributing members of the community
- express their needs and ideas to those with power.

It might involve the learning of youth worker to network with other development workers to:

- develop collective understanding and skills in this work
- learn together how best to mainstream youth policy and particular issues of equity
- work collaboratively and share technology to optimise the efficiency of the work.

If she/he is very experienced, the youth worker might be involved in collaborative work with other organisations, to encourage:

- awareness and sensitivity to young people's issues
- allocation of resources to young people
- to run programmes for young people.

iii) **Empowering**

Empowering is about putting the democratic principles (*i.e. pluralism/diversity, citizenship and respect for human rights*) into action with young people so that they can play an assertive and constructive part in the decision-making that affects them at all levels of society.

The empowering approach assists youth in development works to ensure that young people:

- understand deeply and internalise democratic principles and practices
- have the insight and skills to influence the decisions that affect them and their communities.

A youth working towards development process tries to empower young people and aims that young people should:

- develop much more of their open-ended potential as thinkers, interactors and doers
- become involved creatively in social change
- gain access to resources
- play a full and active part in social and economic development
- organise self sustaining initiatives
- assert their and others human rights
- practice Commonwealth values and principles
- participate fully and actively in democratic processes

They might work with other youth workers to practise advocacy with and for young people. With more experience they might also work with other organisations to improve youth related social policy and its implementation.

SAQ4

In your own words, write what you consider to be the key elements of the three approaches we have discussed:

enabling approach
ensuring approach
empowering approach

11.6 YOUTH IN DEVELOPMENT WORK AS A PROFESSION

In the above section we have discussed about role of youth in welfare and development. It is to be highlighted that partly because of their integration into activities funded by government, aid agencies or NGOs, **youth welfare** work and **youth work for development** tend to be largely professionalised. This is not to say that there are no professionals in the other traditions, but the origin of these traditions are in voluntary movements within families, communities, churches, missionary groups and other philanthropic groups, which are low budget, and largely low paid organisations.

Youth in development work and youth welfare work have a longer professional history with the work usually practised by occupational groups such as youth workers, welfare workers and social workers. In more recent times, the other traditions such as pastoral and out-of-school education, leisure and community work have increasingly employed professionals to undertake work with young people.

Developing Professionalism in Youth in Development Work

If field training, education and vocational training are imparted to youth engaged in development, they can make the difference between:

- a worker who analyses the problems and has the skills to improve things significantly, and
- a worker whose approach is memorised from a book or simply applied common sense, and whose influence on problems is very poor.

There are of course situations where common-sense is appropriate, but these situations do not require a professional to deal with them. There are some things that are common to have a professional approach in youth towards development work. These include:

- seeing ourselves as knowledgeable **partners** rather than mere experts in our work with young people
- distinguishing between the necessary **professional detachment** of objectivity and sheer indifference
- **avoiding** the **control** of access to information and control of people by specialist language (jargon)
- **working cooperatively** with other professionals and other agents rather than competing with them.

To ensure credibility, we must treat our jobs, our own on-going learning and our staff's development professionally. One way of achieving this is through a commitment to life long learning. Another important way is to take on the role of an active and reflective practitioner.

An active, reflective practitioner is a professional who:

- is in control of her or his thinking and learning
- analyses circumstances and situations
- applies problem solving skills
- recognises the social context in which individuals operate and respond to these
- has a thorough grasp of a range of youth work models and skills, and deploys them flexibly and appropriately

SAQ 5

Briefly describe the key features of a youth worker who has a professional approach.

11.7 MODELS OF YOUTH IN DEVELOPMENT WORK

In this section you will be acquainted with models of youth in development work and specific skills required by youth workers in these models. There are four models of youth in development work are:

1. The treatment model
2. The reform model
3. The advocacy model
4. The conscientisation model

Now, let us discuss these models in the following paras:

i) **The treatment model**

The treatment model defines the problems of social groups as normal, human and reasonably healthy social reactions to the necessary constraints that living in society imposes. Those who work within the treatment model framework say that we must recognise these problems as useful indicators of the need to make social adjustments, not as evidence of something deeply wrong with society. In the treatment model young people who do not conform are seen as a threat to the stability of society.

What skills do youth workers need in a treatment model?

Youth workers need the following skills in the treatment model of youth in development work:

- controlling young people
- demonstrating high standards of personal conduct
- planning and designing programmes
- establishing and setting rules and limits
- presentation skills
- counselling

- group or team building skills.

ii) **The reform model**

The reform model of youth in development work looks at young people as disadvantaged by their social environment or family upbringing. If young people have had a poor or unhappy upbringing, this causes them to act in negative way. The reform model argues that if young people are disadvantaged by their family upbringing or their social environment, then it is difficult for them to make the changes necessary to fit into society.

What skills do youth workers need in a reform model?

The role of youth workers employing a reform model tends to be that of person - centred experts who have become professional youth workers because they feel they can help young people to:

- make the best out of opportunities available to them
- build positive relationships with older generations and the social system
- identify their life goals, and
- change themselves to achieve those goals

iii) **The advocacy model**

The advocacy model of youth in development work sees that many of young people's problems are a result of their social rights not being respected, because either young people are not aware of their rights and/or do not have the skills to use them or society has failed to protect their rights.

What skills do youth workers need in an advocacy model?

The skills a youth worker needs to implement in an advocacy model of youth in development work include:

- ability to use the legal and bureaucratic system
- networking with bureaucratic system
- case work skills
- campaigning skills
- media skills
- motivational skills
- negotiation skills
- lobbying skills.

iv) **The conscientisation model**

The majority of young people in the world are structurally disadvantaged by rich and powerful people through the organisation of social institutions such as banking, ownership of business and property, and the structure of education. This is fundamentally unjust and contrary to the notion of human rights.

What skills do youth workers need in a conscientisation model?

The skills a youth worker needs when adopting a conscientisation model include:

- community education skills
- community development skills
- negotiating skills
- social research skills
- the ability to help young people overcome apathy, low self-esteem and fear of authority
- a practical understanding of the implications of social analysis
- campaigning skills.

11.8 APPLYING FREIRE'S IDEAS TO YOUTH IN DEVELOPMENT WORK

Paulo Freire was born in Brazil in 1921. He was a Christian who was committed to fight poverty in his country. He worked with poor people and taught them to read and write. Freire offers one way for youth in development workers to achieve change with young people and help us to identify the ways in which we can avoid acting as oppressors of young people.

Some of the dominant class ... *talks about the people but they do not trust them; and trusting people is the indispensable precondition for revolutionary change. A real humanist can be identified more by his trust in people, which engages him in their struggle, than by a thousand actions in their favour, without that trust (Freire, P. 1993).*

There are two ways in which his ideas can apply. The first is for us to be aware of our own unconscious capacity to oppress young people by the ways we relate to them. We have to trust young people and have confidence in their ability to think creatively and evaluatively, and to make their own decisions and act on them. The second is to apply work with young people in the following steps as directed by Freire:

1. The first step is to **listen**. Spend time getting to know young people and learn about their culture and values. Learn to see things from their perspective and identify those themes that are important to their lives. Learn to decode what they say to grasp the real underlying quality of their ideas, as they are often at first unable to articulate them.
2. The second step is to enter into **dialogue** with young people. Ask young people to share experiences through telling stories, drawings and using photographs. Encourage young people to share their problems and identify a need for change.
3. The final step is to engage young people in **action**. Work with young people, transform their situation by deciding on particular courses of action, help them act on their decisions and then reflect on their actions.

Some strategies such as community development and social planning are most likely to bring about change for groups at a local level for youth in development work.

11.9 YOUTH-OUR GOALS IN WORKING WITH THEM

The Faculty of Human and Social Development at the University of Victoria and The Social Planning and Research Council of British Columbia conduct Social Development Research Programme (SDRP). The project was concerned with developing a conceptual framework for the well-being of youth and also included developing indicators of youth well-being.

11.9.1 Indicators of Youth Well Being

SDRP researcher grouped nine recurring themes related to youth well being into two main categories i.e. "The interpersonal aspects of youth well-being" and "The institutional aspects or changes needed for youth well-being."

The themes related to the first category i.e. the interpersonal aspects of youth well - being were:

- Theme 1: More independence and autonomy.
- Theme 2: Better relationships/More interaction between youth and several groups including their parents, teachers, law enforcement officers and other young people.
- Theme 3: Better communication.
- Theme 4: More community involvement.

Theme 5: Ending discrimination and barriers to equality.

The themes related to the second category i.e. the institutional aspects of changes needed for youth well-being were:

Theme 1: More places for youth.

Theme 2: More youth services and activities.

Theme 3: More job creation/skill training for youth.

Theme 4: Improve the educational system.

Organising the ideas in this way is useful for community development workers. It reduces the tendency in many youth development programmes to focus on the delivery of services to young people (doing for rather than doing with). The approach highlighted the empowerment issues in the forefront. Services for youth are important but every effort should be made to include young people in designing and operating them.

11.9.2 Goals

The perspective on youth well-being developed by the SDRP team also brings to light two important community work concepts – the idea that there are *process goals* and *product goals*. Knowing that there are two different types of goals will help you set out the goals to be accomplished.

Process goals

According to Twelvetrees 1991, Process goals are to do with changes in people's confidence, knowledge, technical skills and attitudes. Therefore they have to do with enabling people to take control over events, and to make sound decisions. The theme of more independence and autonomy for youth or better relationships is linked to some of the process goals of working with young women and men.

Product goals

*Product goals are to do with the changed material situation*¹ like the establishment of youth-run drop in centres or a revised curriculum in schools, which are services designed to meet some of the practical needs youth have.

Both types of goals are important for youth in community work, although some workers tend to emphasise one or the other depending on their particular interest and context. Let us explain it through an example, a youth worker in a remote rural community may be of the view that services and activities for youth, as well as job creation and skill training (product goals) are most important in order to tackle the problem of rural-urban migration. However, another worker in exactly the same situation could well argue that the promotion of youth organisations (a process goal) through which young people can advocate for these services themselves is the most appropriate goal. Obviously these goals are not mutually exclusive and there is usually a process element in most of the product goals.

11.9.3 Youth Participation

The best community work highlights the importance of working with and through community organisation. It emphasises the importance of involving the intended 'beneficiaries' in the following steps:

The best community work highlights the importance of working with and through community organisation. It emphasises the importance of involving the intended 'beneficiaries' in the following steps:

- the definition of the problem

¹ Twelvetrees, Ibid., p.11.

- the identification of possible solutions
- the choice of the final approach to be taken
- its implementation
- the monitoring and evaluation of its progress and success or failure.

Henderson and Thomas describe several of the roles played by youth workers and suggest that the following factors may influence the choice of role:

- the type of work to be done.
- the phase or stage of development of the work.
- the goals the worker has
- the worker's own personal preferences and competence
- the host agency's views about appropriate worker roles.

The role of the community youth worker as enabler, facilitator, broker, advocate and teacher is given in Table 11.1.

Table 11.1: Role of community youth worker

Worker Role	Description
Enabler	Asking questions to clarify a situation, and/or deepen participants' understanding of issues; actively listening; giving encouragement; providing a model for others.
Facilitator	Similar to enabling: can involve putting people in touch with agencies and resource people; creating environments for learning and action.
Broker	Sometimes called mediator. A moderately active role where the worker secures resources or concessions for the group. Engages in resolving disagreement within and between the community (group) and the agency and other external bodies.
Advocate	Can be an activist role involving making representation usually to secure policy or institutional change for the benefit of the client system. Involves research analysis, negotiation, bargaining and sometimes more coercive measures such as demonstrations and strikes.
Teacher	Involves the structured development of skills (interpersonal and organisational).

11.9.4 Participation

As a youth and community development worker, you know that you need to be responsive to your clients' needs and perspectives. It is also important to try to engage the active participation of your clients. You need to understand that participations and consultation are about sharing power, often giving it up completely.

You will appreciate that those who have been accustomed to taking decisions (having a monopoly on power) may be reluctant to relinquish it. This in fact is often the source of the rationalisations we make or hear for a lack of participation as people not really know what they want; they do not have the knowledge or skills required to participate effectively: participation and consultation are too time consuming and costly.

Forms of participation

Let us now look at the many forms that participation can take. You will find these examples relevant to your work.

- Beneficiaries are seen to participate because they receive some material benefit from the programme.
- Beneficiaries are informed about the programme after it has been designed, and they are mobilised to contribute voluntary labour, and possibly materials.

Programmes and Services

Participatory methodologies and participatory techniques are used interchangeably to explain the methods used to engage people in an interactive process of involvement and dialogue.

- A selected group of beneficiaries is invited to participate in monitoring programme implementation, but have no delegated authority, i.e. can only recommend but not authorise change.
- The policy frame is established, intended beneficiaries are invited to make comments about the proposed programme-but there is no guarantee that their comments will be taken into account.
- The policy framework is established, comments are invited, but this time a guarantee is given (and honoured) that beneficiary comments will be taken into account.
- Intended beneficiaries are invited to give advice on policy frame-work, while the actual programme design is done by experts.
- Intended beneficiaries also have delegated authority in monitoring evaluation.

There are many different ways people can participate, sometimes we are tempted to think that only programmes showing the last three or four characteristics (faces) are truly participatory. But it is important to bear in mind that beneficiaries are not the only stakeholders in any policy and programming context. So it is not always possible to delegate full authority to them.

Normally, the degree of participation should follow the principle that decisions be taken at the lowest level that is feasible, i.e. at the level closest to the people and most directly affected by them. But this is more easily said than done.

Moreover, to stress the importance of participation and inclusion does not mean you may not take a directive approach in particular situations. Some community groups, particularly of very young or inexperienced may lack any idea of how to proceed and be in danger of losing a valuable opportunity if the worker fails to intervene. He or she may offer expert advice or suggest a possible solution.

11.9.5 Promoting Participation

You have already studied about Freire's ideas in Sec.11.6. Now let us discuss about techniques practised by Freire in the participatory process.

Participation Principle 1: Understand human behaviour

Good participatory methods rely on an understanding of individual human behavior and group dynamics.

Basic human needs

We have basic human needs for food, clothing and shelter; in addition, each of us wants to:

- Feel safe
- Have a sense of belonging
- Be treated with respect
- Have a sense of dignity
- Experience growth.

These are essential elements of the **Ladder of Human Needs** developed by Abraham Maslow (1957) in his theory of *Human Motivation*. It is now acknowledged, however, that these needs do not fall as neatly into place as Maslow had originally thought.

Admittedly, our physical needs are important, and their satisfaction cannot be postponed. But even as we pursue the satisfaction of our physical needs, the remaining higher order needs also demand attention. An essential principle of participatory methodology, therefore, is that it should respect the needs which people have. In fact, you could use Maslow's hierarchy of higher order needs (the ones beyond food, shelter and clothing) as a checklist against which to measure your participatory techniques.

Participation Principle 2: Take into account the stage of the group

Participatory methods should also take into consideration the stage of development of the particular group. A group may not always be able to or want to participate at the planned level; this lack of interest could have several causes. It should be ensured that a seeming lack of interest may not actually be cynicism based on prior experience, or simply a lack of familiarity with participatory processes.

The five stages to group development

Grouping goes through different stages of development (Table 11.2). Here is a well-known and very simple method for describing the different stages in the development of a group. Groups do not necessarily go through all stages in a perfect sequence. They may progress through the first two stages and then start all over again. There are also wide variations in the amount of time a group will take to negotiate a particular stage of its development.

Table 11.2: Stages in the development of a group

<p>1. Storming The potential members of group are just coming together. You may find here that people drop in and drop out. This is not the time to begin making long range plans.</p>
<p>2. Forming Some cohesion and identity begin to emerge. Membership and participation become more stable. People are getting to know each other.</p>
<p>3. Norming A group now exists. It has arrived at some consensus about what its purpose is and is establishing a culture – its own way of doing things. This is a good time to elect leaders and make plans.</p>
<p>4. Performing This is the stage where the action begins. Whether it is a sports club or an environmental action group, the group gets on with it.</p>
<p>5. Adjourning Something interesting occurs at this final stage. Some people think that groups should last forever and are very unhappy when members start to drift away. If the group's purpose has been served (or is no longer being satisfactorily met), then the group needs to come to closure. A challenge for a worker is to help the group to adjourn in a positive and productive way.</p>

Participatory Principle 3: Use small group work – if appropriate

In addition to understanding the different stages in the development of groups, the worker also needs to understand the ways in which small groups can be used at various stages of thinking, learning, planning and acting.

The small group is a popular instrument in the participatory process. Among other purposes, it can create a place of safety where those who have been silenced or silent up to this time are able to express themselves. However the thinking and inappropriate use of the small group can in fact prove to be counter-productive.

SAQ 6

- i) Find out about youth organisations that are involved in environmental and/or sustainable development activities in your country.
 - ii) Describe two approaches that the youth groups have adopted in an effort to promote sustainable development.
 - iii) Discuss two ways in which you (and/or your group of young people) can become involved in the activities of any of the organisations.
-

11.10 YOUTH AS INITIATORS AND ACTIVISTS

What can young people do to participate in the process of sustainable development? They can become initiators as well as activists. It is important to explore the role of youth as initiators on the larger national stage. For youth to function in this role the government must have a sympathetic approach and realise that using the idealism, energy and new thinking of the youth is one of the few ways in which developing countries can make that qualitative jump essential for sustainable development. Here are a few ideas gathered from international reporting on this matter.

- Make your voices heard by ensuring that you are consulted and integrally involved in your country's decision-making processes, which relate to environmental protection, natural resource management, and development.
- Encourage policy makers at both regional and national levels to adopt the strategies, which are recommended by international, regional and local youth conferences that offer perspectives on sustainable development.
- Get involved in educational and training efforts, which are designed to increase environmental awareness. (The knowledge and skills, which you gain, will empower you to contribute positively to sustainable development.)
- In addition, lobby your government to make sustainable development a compulsory aspect of school curricula and vocational training programmes.
- Get directly involved in project identification, design, implementation and follow-up.
- Organise fund-raising activities such as eco-fairs, that would produce seed funding for some of your own environmental/sustainable development projects.
- Agitate and collaborate to prevent more environmental degradation in your community and country.
- Enhance your ability to activate, organise and mobilise by seizing opportunities for education and employment. As Agenda 21 states, *Education is critical for promoting sustainable development*. It is a prerequisite for participation in decision-making and for improving the capacity of people to address environment and development issues.
- Lobby your leaders for a continuous flow of information on the environment so that you can keep abreast with environmental issues and problems.
- Network with youth in your community and country to exchange information and to strengthen your environmental activities at the local level. Networking will lessen the degree of duplication and save the much-needed resources.
- Form yourselves into groups and discuss each of the 27 principles of sustainable development. Pay special attention to their implications for the youth in your country.
- Share, with other youth, your knowledge of and skills in environmental protection at summer camps, school, public fora and youth organisations.

SAQ 7

Can you suggest any other ideas, not mentioned above, that may be more relevant to your country or community?

As an initial foray into the area of social action:

- i) Discuss with your group of young people, which of these strategies are most relevant to your situation.
- ii) Together, start to plan a project that you can put into operation over the next few weeks.

In your plan, you will need to include:

- a brief description of the problem you want to address

- your objective (what you want to achieve)
- a timeframe (planned start and duration)
- the strategies you want to use (how you want to achieve your objectives)
- an action plan (the tasks or steps you need to do or take).

It is probably best to take a small project to begin with; it might grow into something bigger later as you and your group become more experienced.

11.11 ORGANISATIONS PROVIDING OPPORTUNITIES FOR YOUNG PEOPLE

The foundation for the inclusion of youth in decision-making has been established and endorsed by nations around the world through different conventions, including the Convention on the Rights of the Child. In addition, the International Conference on Population and Development, the World Summit for Social Development, the fourth World Conference on Women and the Habitat Conference, highlighted the importance of youth participation in the implementation of their plans of action:

Each country should, in consultation with its youth communities, establish a process to promote dialogue between the youth community and government at all levels and to establish mechanisms that permit youth access to information and provide them with the opportunity to present their perspectives on government decisions, including the implementation of Agenda 21.

There are numerous organisations that provide opportunities for young people to become involved in environmental activities, either directly or indirectly. Some of them are discussed as below:

i) International Youth Federation (IYF)

The International Youth Federation for nature studies and conservation was founded in Salzbrug, Austria in 1956. It is the advocate for the interests of youth environmental groups.

According to its statutes, IYF shall: ... seek to organise and encourage all that might increase the knowledge, understanding and appreciation of nature and the awareness of environmental problems among young people throughout the world. This is in order to promote the commitment of youth to the principles of environmental conservation and to stimulate young people to voluntary action for the protection and enhancement of the environment and for the natural use of the Earth's resources.

IYF operates in Asia and the Pacific; Africa; Latin America and the Caribbean; and Europe. It involves over 15 million young environmentalists in some 150 to 200 environmental organisations. The work programmes vary from environmental education to strategy and action. The focus over the years has been on appropriate technology, technology transfer, energy, tropical forests and the use of pesticides, in industrial countries and developing countries. The organisation has held a number of youth exchange programmes and meetings around the world and has a number of publications.

ii) The Caribbean Youth Environment Network (CYEN)

The Caribbean Youth Environment Network (CYEN) is a non-profit making youth organisation dedicated to the promotion of appropriate development through education, regional integration and community development. These are aimed at changing the attitudes and behaviour of young people in order to popularise the conservation and protection of human and natural resources within the wider Caribbean. The goal of the organisation is to promote meaningful youth involvement

in the conservation and protection of resources through education for awareness, integration and community action. Some of the concerns of the Caribbean Youth Environment Network are solid waste management, sewage disposal, coastal zone degradation, the depletion of biological resources, and the agro-chemical pollution of ground and surface water resources.

At the community and national levels, CYEN members work with young people to address some of these issues. An established focal point in each country is responsible for coordinating activities at the national level and reporting to the executive boards. CYEN members have also been engaged in, among other things, public awareness campaigns on the protection of the leather back turtles, tourism development and its impact, and solid waste management using the 3 Rs (Reduce, Reuse, Recycle). The organisation strives to meet bi-annually to share ideas, knowledge and experiences on a particular theme (Bynoe, P. 1998).

iii) **The Commonwealth Youth Programme (CYP)**

One of the overarching principles that the Commonwealth Youth Programme has adopted to guide its work is to '*promote the Commonwealth values of social justice, democracy and human rights amongst the young people of the Commonwealth*'. Since its foundation in 1974, CYP has worked to promote youth empowerment through education and training, expanding employment opportunities and increased participation in decision-making. As some of the early discussions leading to the formation of CYP took place at the Singapore in 1971, it was quite natural for the Commonwealth Principles to be proposed as a key focus for the youth programme.

CYP's Mission

The Commonwealth Youth Programme's vision and mission statement is as follows:

CYP works towards a society where young women and men are empowered to:

- *develop their potential, creativity and skills as productive and dynamic members of their societies and*
- *participate fully at every level of decision-making and development, both individually and collectively, successfully promoting Commonwealth values.*

In addition, the Commonwealth Youth Programme:

1. Supports the efforts of member governments in the formulation of policies and development of programmes, which effectively address the issues, and concerns of young women and men.
2. Assists member governments in establishing and strengthening youth ministries and independent youth networks to support policy and programme development based on the active participation of both young women and men.
3. Enhances the involvement of young women and men in all CYP's planning and decision-making processes.
4. Supports the efforts of youth non-governmental organisations (NGOs) and collaborates with international organisations in the promotion of youth development activities.
5. Enables young women and men to participate effectively in the planning and decision-making processes of their own countries, and in regional and international fora.
6. Supports and recognises initiatives by young women and men for their own social and economic development and for the development of their communities.
7. Promotes greater awareness amongst young people about the role of the Commonwealth in international relations.

(Source: CYP brochure titled *Youth Representatives*, Commonwealth Secretariat, May 1996.)

CYP Focus

While the kinds of programmes administered by CYP have changed since it began in 1974, its overall goal to promote youth involvement in and benefit from social and economic development has remained constant. Currently, CYP programmes emphasise:

- education and training
- providing support to youth enterprise and self-employment initiatives
- promoting national youth policies
- addressing youth health concerns including HIV/AIDS
- increasing the participation of young women in all aspects of development
- promoting literacy at a local level
- increasing youth awareness about sustainable development (Humble, M. 1998).

CYP Regions

The four regions covered by the Commonwealth Youth Programme (CYP) are *Asia*, *The Caribbean states*, *The South Pacific* and *Africa*. This enables CYP to reach more young people, and to offer a wider variety of training programmes and projects tailored specifically for the needs of young women and men in each region. Here we will discuss the details of CYP of the Asian region:

ASIAN REGION:

Background

The Asian region of the CYP comprises Bangladesh, Brunei Darussalam, India, Malaysia, Maldives, Pakistan, Singapore and Sri Lanka. Many issues for young people in the Asian commonwealth countries are historically the result of colonial rule and the breakdown of traditional life.

Regional problems

While the breakdown of traditional life is a long-term issue for young people in the Asian Commonwealth countries, participation in the global market economy and greater emphasis on materialistic values have caused problems more recently. Coupled with this is the growing population, which has outpaced economic development. The combination of these factors has resulted in the region facing growing poverty, unemployment and other social problems.

The break down of traditional life and the influence of materialistic values has caused a shift in culture from emphasis on the family to that on self-interest. When young people are not able to achieve materially because of poverty and unemployment, their sense of powerlessness and alienation can lead to crime, violence and drug abuse. Many Asian commonwealth countries have had a history of youth exchange to promote inter-community harmony and national integration.

Youth services in Asia are also confronted with major youth needs and issues such as:

- rising religious fundamentalism
- rising communalism
- the spread of AIDS
- deep poverty
- unemployment
- high illiteracy rates in some regions
- inequitable class, caste and gender access to education
- the marginalisation of young people, social class, caste and gender inequality
- youth health problems
- easy availability of drugs
- increase in crime.

Youth policy

The Asian Commonwealth countries respond to these problems in a myriad of ways. For example, in countries such as Brunei Darussalam and Singapore, many Youth services have an emphasis on citizenship. In India youth programmes also focus on values such as unity, national integration, spirituality and culture. In Bangladesh, Sri Lanka and Pakistan the emphasis of youth programmes is on education, employment and training. In the Maldives the focus is on sports, recreation and culture.

The role of NGOs and government in youth services varies from country to country in the region. For example the governments in India, Pakistan and Sri Lanka rarely consult the NGOs. However, at the same time they use NGOs to undertake limited programmes in specific areas such as employment. In places such as Malaysia, there is a strong relationship between NGOs and the government. In Singapore, the government has no central agency for coordinating youth affairs.

In most countries, the youth sector has not been given priority despite political statements conveying the opposite. As a result youth organisations often do not receive the resources they need to encourage young people to participate in national development. Some youth organisations in Asia have substantially contributed to the social and economic development of countries.

Youth services and programmes

Many NGOs in the Asian region work together to address social and economic problems and mobilise young people to become active in the process of change. A range of models and programmes for youth in development work exists in the Commonwealth countries of Asia. The challenges for youth in development work include:

- working towards democracy
- environmental sustainability
- using communication technology to help young people
- the widening gap between the rich and poor
- population issues
- dealing with the process of urbanisation
- youth participation.

Most Asian Commonwealth countries have encouraged young people to participate in sports, recreational and cultural activities and rural and community development activities.

INFOYOUTH:

After discussing some of the organisations that are actively involved in youth welfare, let us discuss about infoyouth network.

The Infoyouth network, often described as ‘a network of networks’, was set up to provide an overview of youth policies and programmes throughout the world. The main objectives of the organisation include increasing the availability of knowledge and experience about issues concerning the youth, easing decision making processes, aiding in the monitoring of official policies, encouraging regional and inter-regional exchanges of data between its members, raising awareness and facilitating the training of young people in new information and communication technologies, and providing access to information and support to those struggling against the HIV/AIDS.

The Infoyouth programme is an effective tool in the process of finding, selecting and disseminating relevant information at international, national and local levels.

It is an innovative and effective framework based on the complementarities between the governmental and non-governmental sectors, linking an international organisation, **UNESCO**, a Ministry, the **French Ministry for Youth and Sports**, and the **National Institute for Youth and Community Education**.

Right from the period of preparations for the International Youth Year in Barcelona, Spain in 1984, The International Foundation for Human Development, Hyderabad has been an active member in the Working Group of International Youth Non-Governmental Organisations set up by the former UNESCO Youth Division. Since 1995, it has been a member of UNESCO INFOYOUTH programme and, in addition to its being a national focal point, it has been striving to coordinate youth activities and establish networking among the youth NGOs in the SAARC region. There is a satisfactory level of cooperation with the French National Institute of Youth and Community Education (INJEP), which is entrusted by UNESCO to manage the international network of the INFOYOUTH programme, as well as, with the Youth Centre of the Korean National Commission for UNESCO, which is the regional focal point for Asia and the Pacific region.

At the sub-regional and regional level, IFHD has been constantly making efforts to bring together youth-related NGOs and networks and has been trying to provide a platform for their mutual consultations, whether it is physical or electronic or virtual. From 1995 to 1998, a trimestrial bulletin 'Asia-Pacific Link' was published and distributed among the NGOs, UNESCO field offices and the National Commissions for UNESCO. As the response and cooperation from the recipients was found to be inadequate in proportion to the efforts mobilised to continue such an initiative, it was discontinued, after releasing a few more issues electronically. However, the official Website provides information and serves as a reference point for the youth and youth networks in the region.

There have been two sub-regional meetings with the youth organisations in South Asia: in 1998, there was a 'Seminar on Promotion of Voluntary Service and Social Responsibility' from 22nd to 23rd August, and, again, in 2001, the '2nd South Asian Conference: Current Challenges for Voluntary Action' was held from 27th to 29th July. Bringing representatives of the youth organisations from Bangladesh, Maldives, Nepal, Pakistan, Sri Lanka and India proved to be laborious and expensive. One or two countries make things particularly difficult to get them involved. Administrative and visa problems have been insurmountable and the productivity of such a gathering has not always been evident. The enthusiasm evoked and the commitment obtained on the spot did not, usually, sustain themselves for long in the follow-up activities.

However, the spirit of sub-regional identity is upheld and ingrained in the mind of the youth leaders and a wide spectrum of current and future issues of relevance to youth have been broached and provided an agenda for their ensuing national and local action. There has been a constant stress in all those discussions on the positive role that could be played by the information and communication technologies for development and poverty alleviation in the region.

In fact, with redeemed determination, we in IFHD intend to pursue this tradition of consulting each other in the sub-region. If not in lieu of, at least, in addition to the physical meeting now and then, we are also envisaging 'a meeting of minds' by virtual conference, more frequently, through website facilities. All along, youth related sections in UNESCO have been very cooperative in our endeavours. Similarly, parallel to above such events, there has been an effort by some active youth organisations to form an autonomous networking mechanism, called "Voluntary Youth Associations of South Asia" (VYASA). This informal group was set up with its secretariat at the IFHD office by the South Asian NGOs, when they met in 1998 in Macao during a meeting arranged by UNESCO. These consultations have invariably brought out the commonalities in their problems, limitations and their aspirations. But, no concrete activities have been, so far, undertaken under its banner.

At the national and local levels in India, IFHD has an equally daunting and formidable task. These national and local activities provided, in fact, the background necessary for several sub-regional, regional and international activities and exchange programmes.

11.12 SUMMARY

Let us summarise what you have studied so far:

- It is important to understand that the programmes aimed at youth or youth-serving organisations can in no way substitute for youth-run projects and organisations, which lead to greater youth empowerment, allowing them to run their own programmes driven by their own priorities, needs and perspectives. The concept of ‘for youth, by youth’ has resulted in projects and programmes being more successful, such as peer education in areas of health, environmental issues and youth rights.
- The policies need to be examined in consultation with young people, ensuring a youth analysis and participation in setting up the direction and the vision for projects and programmes, youth are participants in the process leading to sustainable development.
- The member countries of the United Nations, agreed through Agenda 21, to the promotion and creation of mechanisms to involve youth representation in all United Nations processes.
- An effective youth policy will have to recognise and adequately analyse the current social, cultural and economic environment that determines the livelihoods of young people. And those impacts cannot be ameliorated only by adding a few youth projects.
- Young people’s basic rights need to be respected – the basic rights to a home, clean water, a safe environment, protection from violence, equality of opportunity, education, livelihood and health care.
- The prevailing attitude that their time will come needs to be shed. Youth need to be part of the solution here and now.
- The absence of youth from policy-making is hindering the much-needed revitalisation of countries, the creativity needed in search of alternatives and the renewal of leadership to take us into the next century.
- In many cases, it has not been difficult to make an argument for the benefits of involving youth. What has been difficult is implementing the stated intentions – how and where does intergovernmental equity begin?
- The most important point is the commitment that youth should involve themselves in the activities that are appropriate to them and, most importantly, they should be given the space to implement their own initiatives .

11.13 TERMINAL QUESTIONS

1. Which characteristics of youth and which major issues that concern the youth should be borne in mind by government of a country while formulating a youth policy?
2. Considering the attitudes of modern youth, which model of youth in development will suit the best in your opinion?
3. Outline the plan to form a youth organisation to deal with sustainable development issues in your country. Your plan should identify:
 - the proposed philosophy of the organisation
 - objectives of the organisation
 - target group.

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UNIT 12 SOUTH ASIA CO-OPERATIVE ENVIRONMENT PROGRAMME (SACEP)

Structure

- 12.1 Introduction
 - Objectives
- 12.2 Salient Features of South Asia
- 12.3 Establishment of SACEP
- 12.4 Aims and Mission of SACEP
- 12.5 Organisational Arrangement of SACEP
- 12.6 Functions of SACEP
- 12.7 Financial Arrangement
- 12.8 Important Milestones of SACEP
- 12.9 Programmes and Activities of SACEP
 - Projects and Programme Activities Completed
 - Ongoing Projects
 - Future Projects
- 12.10 Partnerships and Co-operative Management
- 12.11 Summary
- 12.12 Terminal Questions

12.1 INTRODUCTION

South Asia is the second largest growing region in the world. Most of the South Asian countries share similar problems stemming from poverty and over population resulting in unmanaged natural resource use and environmental pollution. The UNEP took the initiative to establish South Asia Co-operative Environment Programme (SACEP) for the protection and preservation of the South Asian environment.

SACEP is an association of eight member states namely: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. It came into being with the adoption of the Colombo Declaration and the Articles of Association at the Ministerial Meeting held in Colombo in February 1982. SACEP fulfills the need of sharing information, knowledge and efforts for tackling common environmental problems. This unit briefly examines the aims, objectives, functions, organisational structure of the SACEP and its programmes and activities.

Objectives

After studying this unit, you should be able to:

- explain the role of regional cooperation in human development and environmental management,
- appreciate the need for the establishment of SACEP,
- discuss the vision and mission of SACEP,
- explain the organisational structure of SACEP,
- appreciate the various programmes and activities run by SACEP, and
- describe the partnerships and cooperative management by SACEP.

12.2 SALIENT FEATURES OF SOUTH ASIA

Before giving a detailed information regarding SACEP, let us first get acquainted with the salient features of environment and development of South Asia and the establishment of SACEP.

South Asia is one of the most diverse regions in the world. Bordered to the north by the Himalayas and to the south the Indian Ocean, covers a diversity of ecosystems from lush tropical forest to harsh dry desert. It is also one of most populous regions,

with over 1 billion people living in India alone. The movements of people over thousands of years has resulted in strong commonalities between cultures. Yet there remains a huge diversity of languages, religions and outlook across the sub-continent. Most of the South Asian nations share similar problems related to natural resources. Significant natural resource concerns of the region include depletion of water quality and quantity, dwindling forests and coastal resources, and soil degradation resulting from nutrient depletion and salinisation.

Some of the salient attributes of South Asia are given below:

- The region covers almost one twentieth of the earth's surface and provides a home for about one fifth of the world population.
- The degree of urbanisation in 1999 ranged from 7 percent in Bhutan to 33 percent in Pakistan. Mumbai, Calcutta, Delhi, Karachi and Dhaka are fast growing cities with population more than 10 million.
- Over 30 percent of the population earns less than one dollar per day and the per capita GNP for 1998 ranged for US\$ 210 to 130. It is US\$ 210 in Nepal to 1,130 in Maldives.
- Although the economies of the countries are primarily agricultural, industrialisation has increased during the past decade.
- South Asia is home to 14 percent of the world's mangrove forests and the Sundarbans found between Bangladesh and India is one of the largest continuous mangrove stretch in the world.
- 6 percent of the world's coral reefs are in the South Asian seas. The atolls of Maldives and Lakshadweep islands of the region, are biodiversity-rich marine habitats.
- The Hindu Kush Himalayan belt is home to over 25,000 major plant species, comprising 10 percent of the world's flora.
- The region is prone to natural disasters such as cyclones, floods and landslides. From 1990-1999, the region accounted for over 60 percent of disaster-related deaths worldwide.

It was strongly felt that while national programmes are important, it is the regional co-operation among the countries of South-Asia in the sphere of environmental management that is of significance. SACEP is an important step in this direction. In the following section you will study about initiatives taken to establish SACEP.

12.3 ESTABLISHMENT OF SACEP

The 1972 Stockholm Conference had drawn the attention of the world to the environmental issues that would change the life styles of the people and in many ways would threaten the future well-being of the world if the continuing pattern of resource consumption was not changed to a more sustainable pattern. The warning echoed by the Stockholm Conference and the establishment of the United Nations Environment Programme (UNEP) was taken seriously by the developing world and in particular by the leaders of South Asia.

The initiative to establish an organisation for the protection, preservation and management of the South Asian Environment was taken by the United Nations Environment Programme Regional Office for Asia and the Pacific in the late seventies and the result was the establishment of the South Asia Co-operative Environment Programme (SACEP). SACEP is the brainchild of the high level meeting of Ministers of the South Asian Countries held in February 1981. SACEP became a legal entity on January 1982 when the required number of countries ratified the Articles of Association. SACEP is an inter-governmental organisation of eight countries namely Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, who ratified the Articles of Association of SACEP. The mission of the SACEP is to promote and support conservation and management of the environment, both natural and human, in the member states of the South Asian region in a cooperative manner to achieve sustainable development.

All member countries of SACEP belong to the developing world, and five have been classified as least developed covering one twentieth of the earth surface and a home for about one fifth of the world's population. According to the World Bank, during the past decade, South Asia has been the second fastest economically growing region in the world, and their efforts at increased production have put enormous pressure on the natural resources and the environment. Significant natural resource concerns in South Asia include depletion of water quality and quantity, dwindling forests and coastal resources, and soil degradation resulting from nutrient depletion and salinisation.

In most of these countries, much work has been undertaken for the protection and management of the environment in the face of the need for accelerated development. They are also party to several international agreements, covering many aspects of economic development and environmental conservation. However, the progress and achievements in the field of environment in these nations were not much known to each other and therefore, SACEP fulfilled a long felt need for a regional arrangement for the sharing of information and knowledge on tackling environmental problems.

The SACEP was established to fulfill a vision based on the following five assumptions:

- The types and scales of environmental degradation taking place in the South Asian Region are positively dangerous not only to the economic development but also to the survival of the humans inhabiting it.
- The greed of the rich and the needs of the poor continue to cause irrevocable damage to the fragile ecosystems and their ability to regenerate themselves.
- There is an urgent need to reduce environmental degradation and pollution, while giving equal emphasis to the elimination of the root causes of environmental degradation such as poverty, over population, over consumption and waste production.
- Environment and development are two sides of the same coin and therefore integration of environmental concerns into development activities should be recognised as an essential prerequisite to sustainable development.
- The ecological and development problems of the South Asian Region transcend national and administrative boundaries; therefore, co-operative action is needed to effectively deal them.

SAQ 1

On which five assumptions the vision of SACEP is based?

12.4 AIMS AND MISSION OF SACEP

As set forth in the Colombo Declaration in 1982, the aims of SACEP are:

- a) To promote and support the protection, management and enhancement of the environment, both natural and human, of the countries of South Asia, individually, collectively, and co-operatively;
- b) To make judicious use of the resources of the environment towards removal of poverty, reduce socio-economic disparity, improve the quality of life, and prosperity on a continuing basis;
- c) Make the full use of the organisational arrangements and facilities for cooperation under SACEP.

The Mission of SACEP is to promote regional co-operation in South Asia in the field of environment, in the context of sustainable development and on issues of economic and social development which also have tremendous impact on the environment and vice-versa, to support conservation and management of natural resources of the region and work closely with all national, regional, and international

institutions, governmental and non-governmental, as well as experts and groups engaged in such co-operation and conservation efforts.

12.5 ORGANISATIONAL ARRANGEMENT OF SACEP

In accordance with the Articles of Association, the organisational arrangement of SACEP is made up of five sub units:

- The Governing Council (GC)
- Consultative Committee (CC)
- National Focal Points (NFP)
- Subject Area Focal Points (SAFP) and
- The Secretariat

The organisational arrangement of SACEP is depicted in Fig 12.1.

i) **The Governing Council (GC)**

The Governing Council is the main review and deliberative body, responsible for determining the policy and programmes of SACEP and it oversees these activities by meeting regularly to review the ongoing programmes and to endorse new recommendations put forward by the Secretariat. It consists of one representative from each member state who will be of Ministerial rank. As a legal entity since 1982, SACEP held eight GC Meetings.

The governing council of SACEP has recently approved biennium (2004-2005) and quennium (2004-2008) programmes. Their implementation will give new impetus to the efforts of SACEP in the region.

ii) **The Consultative Committee (CC)**

The Consultative Committee comprising of the representatives of the diplomatic missions in Colombo and the Secretary of Ministry of Forestry and Environment of Sri Lanka is responsible for facilitating the implementation of policies, strategies and programmes approved by the SACEP's Governing Council. CC is also expected to provide guidance to the secretariat in the planning, implementation and monitoring of programmes and projects. The Consultative Committee meets regularly to provide guidance to the Secretariat in its activities and up to May 2001, 79 Consultative Committee Meetings have been held.

iii) **National Focal Points (NFP)**

Each Member State has designated a National Focal Point to facilitate the work of the Secretariat and to function as the main communication link between the Secretariat and the respective country. National Focal Points are expected to implement and monitor national programmes in co-operation with the Secretariat.

The national focal points are deemed to be liaison points in their countries for all matters related to SACEP including their own.

At an official level, secretaries of the ministries of environment are the designated national focal points of SACEP in member countries. For operational needs, an official(s) of appropriate level are designated as the liaison officer(s) as the secretaries in the work related to SACEP.

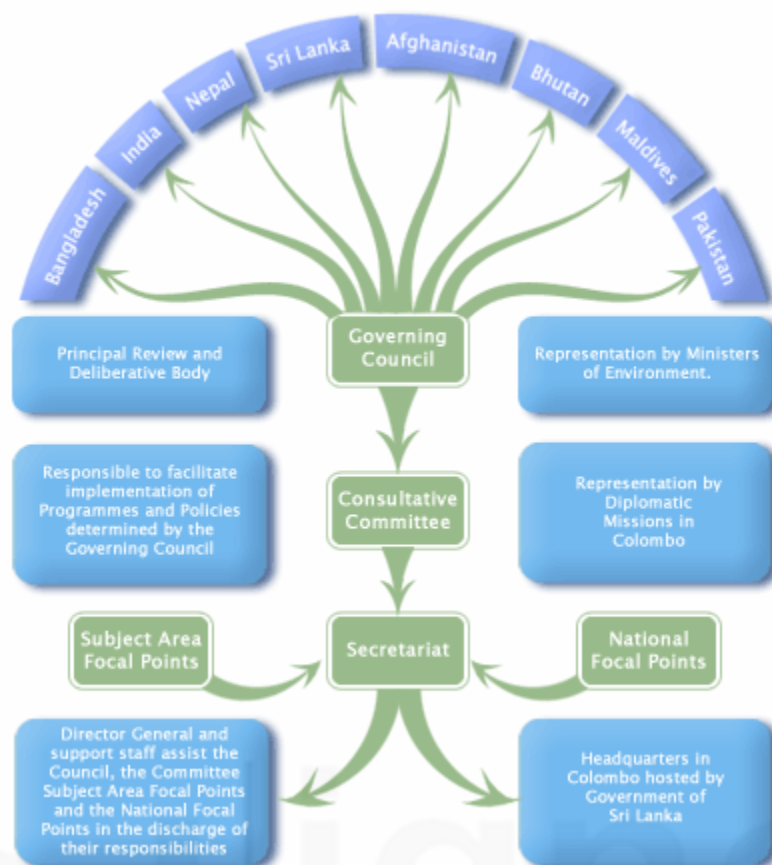


Fig. 12.1: Organisational Structure of SACEP

iv) **Subject Area Focal Points (SAFP)**

The Subject Area Focal Points are expected to co-operate with the Secretariat in project identification, formulation, implementation and monitoring. The country which is responsible for a particular subject area, designates a centre of excellence in that subject and appoints a liaison officer. The member countries were assigned as the focal points for the following subject areas at the 7th GC Meeting of SACEP in 1998;

Bangladesh: Management of Freshwater Resources

India: Conservation of Biodiversity, Energy and Environment, Environment Legislation, Education & Training, Waste Management

Maldives: Management of Coral Island Ecosystems, Sustainable Tourism Development

Nepal: Participatory Forestry Management

Pakistan: Air Pollution, Desertification, Science and Technology for Sustainable Development

Sri Lanka: Sustainable Agriculture and Land use, Sustainable Human Settlement and Development

v) **The Secretariat**

The Secretariat consists of the Director General, professional, administrative and supporting staff. The Director General is appointed in rotation from the member states in alphabetical order and the appointment is for a period of three years. Presently

Mr. Mahboob Elahi from Pakistan occupies the position. The main function of the Secretariat is to assist the Governing Council, the Consultative Committee, National

Focal Points, and Subject Area Focal Points in the discharge of their duties and responsibilities. It is based in Colombo, Sri Lanka and the Sri Lankan Government provides financial support for its existence.

SAQ 3

What are the functions of NFP and SAFP?

12.6 FUNCTIONS OF SACEP

The functions performed by SACEP towards environmental management are:

- To promote cooperative activities in priority areas of environment of mutual interest;
- To ensure that these activities result in benefit individually or collectively to the member states;
- To extend support as needed through exchange of knowledge and expertise available among the member countries;
- To provide local resources towards implementation of projects and activities; and
- To encourage maximum constructive and complementary support from interested donor countries and other sources.

It should be noted that this was the first regional organisation to be established in the sub-region even before the coming into being of the SAARC a couple of years later. Due credit should be given to the leaders of South Asia for their far sightedness in establishing this specialised agency.

The SACEP Governing Council in its meeting held in November 2003 formally re-endorsed the role of SACEP as an intergovernmental organisation of the region and to this end work closely with all national, regional, and international institutions, governmental and non-governmental organisations as well as experts and other groups involved with environmental protection and sustainable development.

While there are many environmental and development challenges common to the countries of the region, actions at the regional level can create synergy and optimise the benefits. SACEP seeks to work in areas where regional cooperation and collective action can add value to the member countries and produce better outcomes for the region. The 3rd special session of the 8th Governing Council has approved a new work programme. Deliberations in this session directed the SACEP to concentrate on the following broad areas:

- Assessment and Strategy Development
- Experience Sharing and Networking
- Capacity Building Training

SACEP is also an appropriate forum for action on transboundary environmental issues. These are issues where the geographical scope or impact extend beyond national boundaries. One such area of engagement is the control and prevention of air pollution and its likely transboundary effects.

SAQ 2

What are the initiatives taken by SACEP in the context of capacity building and transboundary environmental issues?

12.7 FINANCIAL ARRANGEMENT

SACEP currently receives three types of financial assistance for its activities:

- Annual country contributions from the member countries on an agreed scale of assessment.
- The support facilities provided from the Government of Sri Lanka as the host country of the Secretariat.
- Financial assistance by donor/funding agencies to implement projects and programmes
 - i) Multilateral – UNEP, UNDP, IMO, ADB, ESCAP (Economic and Social Commission for Asia and The Pacific)
 - ii) Bilateral – Norwegian Agency for Development Cooperation (NORAD), Swedish International Developmental Agency (SIDA) and the Netherlands Government.

The decision of the leaders of the SACEP member countries to commit funds from their national budgets to the organisation to protect and preserve the environment just nine years after the Stockholm Conference shows their commitment to preserve the natural resources for the benefit of present and future generations.

12.8 IMPORTANT MILESTONES OF SACEP

Some crucial meetings that led to establishment of SACEP and the important milestones of SACEP till 2004, after it was established in 1982, are listed in Table 12.1

Table 12.1: Some important milestones of SACEP (1980–2004)

Year	Event
1980	An intergovernmental experts' group meeting of the South Asian countries was held in Bangalore, India, to identify and discuss the common ecological problems of the region. The meeting unanimously adopted that it would be mutually beneficial to establish a sub-regional organisation, devoted for protection and management of the environment.
1981	A Ministerial level meeting held in Colombo, Sri Lanka, approved the Colombo Declaration and the Articles of Association for the initiation of SACEP.
1982	SACEP became a legal entity in 1982, when Afghanistan, Bangladesh, Bhutan, India, Maldives, Pakistan and Sri Lanka ratified the Articles of Association.
1983	The first Governing Council meeting of SACEP approved the 15-priority subject areas identified by SACEP with necessary support from UNEP and UNDP.
1984	At a national focal point meeting held in Bangkok, the five maritime nations of SACEP committed themselves to the development of an action plan to protect and manage the marine environment of the South Asian Seas region.
1989	SACEP initiated a programme for the establishment of a regional information network in the countries of region with the technical and financial assistance of Asian Development Bank (ADB).
1992	First strategic plan for SACEP for the period of 1992–1996 was prepared and approved by GC, SACEP. Its implementation was facilitated by NORAD's financial support.
1994	Nepal ratified the Articles of Association of SACEP and thereby became its eighth member state. Preparation of national and regional state of environment reports was initiated.
1995	The South Asian Seas Action Plan was adopted by the maritime nations of SACEP at the meeting of plenipotentiaries held in New Delhi.
1998	Male Declaration on Control and Prevention of Air Pollution and its likely tranboundary effects for South Asia was adopted.
1999	First South Asian Seas inter-governmental meeting of ministers was held in Islamabad, Pakistan.
2002	An external review of SACEP was commissioned.

	SACEP took part in preparing the South Asian regional position paper on sustainable development to present at the World Summit on Sustainable Development, Johannesburg, South Africa.
2003	MoU on UNEP-SACEP co-operation in the field of environment was signed. Dr. Klaus Töpfer, Executive Director and Mr. Mahboob Elahi, Director General signed the MoU on behalf of the UNEP and SACEP respectively. The GC, SACEP approved the strategy and biennium (2004–2005) and quennium (2004-2008) work programmes of the SACEP.
2004	SACEP and South Asia Association for Regional Cooperation (SAARC) have signed a MoU on cooperation for the protection of environment of the region. Mr. Mahboob Elahi, Director General and Mr. Q.A.M.A. Rahim, Secretary General signed the MoU on behalf of the SACEP and SAARC respectively.

Source: <http://www/sacep.org.com>

12.9 PROGRAMMES AND ACTIVITIES OF SACEP

Let us now discuss as to how far the SACEP has been successful in achieving its aims and objectives. In this section, you will study about some of the projects and activities undertaken and successfully completed by SACEP.

Since its inception, SACEP has promoted sustainable development in the region by implementing a number of projects and programmes in the fields of environment education, environment legislation, biodiversity, air pollution, and the protection and management of the coastal environment with the assistance of various bilateral and multilateral funding agencies. UNEP's Environment Assessment Programme for Asia Pacific (UNEP-EAP.AP) made use of SACEP as a sub-regional partner in the field of environment assessment, reporting, data management and capacity building by establishing South Asia Environment and Natural Resources Information Centre (SENRIC) with the assistance from Asian Development Bank (ADB).

In consultation with member governments, the following areas have been selected for priority attention.

- Capacity Building and Awareness Raising
- Systematic Information Exchange and Intra-regional Technology Transfers
- Environmental Management for Training and Institutional Development for Training
- Regional Co-operation in Management Plans for Mountain Ecosystems, Watersheds and Coastal Resources
- Wildlife and Wildlife Habitat Conservation in the Region

12.9.1 Projects and Programme Activities Completed

SACEP's programme activities primarily focus on the following aspects:

Institutional Strengthening and Capacity Building; Conservation and Sustainable Management of Ecosystems; Pollution Assessment and Control; Environmental Information, Reporting and Networks; Environmental Education and Awareness.

The project and programme activities implemented by SACEP cover the periods as provided in Table 12.2.

Table 12.2: Project and programme activities implemented in period: 1983–1991

Project/ Programme	Collaborating agencies	Major achievements
Environmental Legislation Programme	UNDP	<ul style="list-style-type: none"> • Country reports • A regional overview • A regional workshop on environmental legislation

		(1987) New Delhi, India.
Environmental Impact Assessment and cost/Benefit Analysis	UNEP/ Netherlands	<ul style="list-style-type: none"> • Experts level meetings, New Delhi, India • Regional workshop on EIA proceedings and methodologies
Conservation of Mangrove, Coral and Island Ecosystems	UNEP / ESCAP (Economic and Social Commission for Asia and The Pacific)	<ul style="list-style-type: none"> • Formulation of action plans • Dissemination of reports among stakeholders.
Desertification	UNEP	<ul style="list-style-type: none"> • Regional workshop on dryland degradation and rehabilitation • Expert meetings to delineate the areas and causes
South Asian Seas Action Plan	UNEP	<ul style="list-style-type: none"> • Two meetings for National Focal Points of SACEP and a legal expert meeting to develop the South Asian Seas Action Plan.

**SACEP's Strategy and Programme 1 (SSP1)
Period: 1992–1996**

Project/ Programme	Collaborating agencies	Major achievements/ outcomes
Assessment of Faunal Biodiversity	NORAD	<ul style="list-style-type: none"> • Workshop for national co-ordinators on the methodologies for the preparation of the report, Calcutta, India (1995) • Formulation of Regional Action Plan for the Management of Faunal Biodiversity • Final workshop on the Management of Faunal Biodiversity in Maldives (1996) • Wide dissemination of the action plan among the member countries
Assessment of environmental training needs and opportunities in the SA region	NORAD	<ul style="list-style-type: none"> • Regional workshop (1995) • Manual on training needs
Environmental Management Seminar for South Asia	NORAD/ UNEP-ROAP	<ul style="list-style-type: none"> • Regional seminar in Colombo, Sri Lanka (1996) • Three national workshops in Bangladesh, Maldives and Nepal (1996) • Publication of a book on Harmonising Environment and Development in South Asia by SACEP (1996)
Environmental Awareness: South Asian Region	UNEP-ROAP (Regional Office for Asia and The Pacific)	<p>Following publications were produced and widely disseminated</p> <ul style="list-style-type: none"> • ABC Naturally

		<ul style="list-style-type: none"> • Puzzling Out Pollution • Where's Away and • Forest Tales
Air Pollution Management	UNEP/WHO	<ul style="list-style-type: none"> • Two training courses for environmental officers of the member countries in Nagpur, India (1995)
Training & provision of GIS facility	UNEP/-EAP-AP (Environment Assessment Programme-Air Pollution)	<ul style="list-style-type: none"> • Organised 6 inhouse training courses for the environmental and forestry officers of the member countries • Provided hardware and software to the participating institutions of the member countries • Training Programmes
Training for reporting data for the preparation of national and sub-regional State of the Environment Reports	UNEP/-EAP-AP	<ul style="list-style-type: none"> • A workshop for senior level government officials in Kathmandu Nepal (1994) • Meeting for national consultants in Colombo, Sri Lanka (1994)
Finalisation and adoption of South Asian Seas Action Plan	UNEP	<ul style="list-style-type: none"> • Formal adoption of the plan at a meeting of plenipotentiaries of the member states in New Delhi, India (1995).
Capacity Building for Planning & Management of the Coastal Areas in the South Asian Region	UNEP/ESCAP	<ul style="list-style-type: none"> • Regional workshop in Colombo, Sri Lanka (1993).

SACEP's Strategy and Programme 2 (SSP2)

Period: 1996–2000

Project/ Programme	Collaborating agencies	Major achievements/ outcomes
Management of protected areas and coral island ecosystems: South Asia	NORAD	<ul style="list-style-type: none"> • Training workshop on integrated coastal and marine protected areas management in Maldives (1998)
Framework legislation for environmental management	NORAD/ UNEP	<ul style="list-style-type: none"> • Published a report on Co-operation Capacity Building for Environment Training in South Asia (1996) • Development of national action plans • Published 4 books on different aspects of environmental law and policy
Environmental Training- follow up	NORAD	<ul style="list-style-type: none"> • Published a report on Co-operation Capacity Building for Environment Training in South Asia (1996)
Environment Management Seminar for South Asia	UNEP-ROAP	<ul style="list-style-type: none"> • Seminar on exchange of ideas based on country experiences in meeting the challenges of sustainable

		development (1998) in Pakistan
	UNEP	<ul style="list-style-type: none"> • First Intergovernmental Meeting of Ministers (1999)
South Asian Seas Programme		<ul style="list-style-type: none"> • Revision of the progress of the implementation of the Action Plan • Identification of 10 priority projects for the Programme Cycle 1999-2002
Preparation of National Action Plans for the implementation of the GPA in member countries of SACEP	UNEP-GPA (Global Programme of Action)	<ul style="list-style-type: none"> • Workshop on Implementation of the Global Programme of Action for the protection of the marine environment from land-based activities in Colombo, Sri Lanka (1997).
Preparation of Strategic Action Plan on Sewage-Case studies for South Asia	UNEP-GPA	<p>Two reports on</p> <ul style="list-style-type: none"> • An overview of socio-economic opportunities related to the protection of coastal and marine environment from land based sources of pollution particularly urban and domestic sewage in the South Asian Region • An overview with a compilation, description and analysis of case studies for the South Asian Region on socio-economic benefits
Development of draft regional oil spill	UNEP	<ul style="list-style-type: none"> • Updating and finalisation of the regional oil spill contingency plan in collaboration with the member countries of SACEP and IMO, Colombo, Sri Lanka (1999)
Contingency plan	IMO	<ul style="list-style-type: none"> • High level meeting to approve the draft Contingency Plan and the Memorandum of Understanding for co-operation on the response to Marine Oil Spills in the SA region (2000) • Second Intergovernmental Meeting of Ministers of the South Asian Seas Programme to formally adopt the plan
Malé Declaration on the Control and Prevention of Air Pollution and the likely Transboundary Effects for South Asia	SIDA/UNEP-EAP.AP	<ul style="list-style-type: none"> • Network establishment • Baseline studies • Action plans • Workshop to review baseline studies and action plans Male, Maldives (2000)
Strengthening of	UNEP-EAP.AP	<ul style="list-style-type: none"> • Publication and launch of

Environmental Assessment & Monitoring Capabilities (SEAMCAP)		South Asia regional SoE, Children of the Monsoon and national SoE reports of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka
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Period 2000–2003

Project/ Programme	Collaborating agencies	Major achievements/ outcomes
Facilitating the implementation of UNFCC	UNEP	<ul style="list-style-type: none"> National workshop on the UNFCC and the Institutional Design of the Cooperative Implementation Mechanisms of the Kyoto Protocol, Colombo, Sri Lanka
Assessment of floral biodiversity	NORAD	<ul style="list-style-type: none"> Regional workshop on “Assessment of Plant Diversity and Preparation of Action Plans for South Asia”
Integrating environment concerns into economic development	UN-ESCAP	<ul style="list-style-type: none"> Workshop on “Integrating Environmental Considerations into the Economic Policy Making Process in Sri Lanka”
Private sector participation in environment management	UNEP/NORAD	<ul style="list-style-type: none"> Organised a South Asian Forum on Environmental Co-operation, India
Multilateral environmental agreements	UNEP	<ul style="list-style-type: none"> Asia Pacific regional Workshop on the “Implementation of Multi-lateral Environmental Agreements and the Review of the Training Manual, Colombo, Sri Lanka”
Facilitating the ratification/implementation of MARPOL 73/78	UNEP/IMO	<ul style="list-style-type: none"> Organised a workshop on Port Reception Facilities, Colombo Sri Lanka
Facilitating to protect coral reefs	GCRMN (Global Coral Reef Monitoring Net Work)/CORDIO (Coral Reef Degradation in The Indian Ocean Programme)	<ul style="list-style-type: none"> Organised Sri Lanka Coral Reef Forum 1 and 2 OPRC level 2 training course for supervisors and on-scene commanders for the South Asian region, Colombo, Sri Lanka
Capacity building on oil spill contingency planning	IMO	<ul style="list-style-type: none"> OPRC level 3 training course for supervisors and on-scene commanders for the South Asian region, Colombo, Sri Lanka National training course on OPRC level 3 for Pakistan, Karachi, Pakistan
Integrated Coastal Area and River Basin Management	UNEP	<ul style="list-style-type: none"> Organised a regional workshop, Chennai, India
GIWA-Bay of Bengal	UNEP/GEF (Global	Final Workshop in Colombo, Sri

Assessment Programme	Environment Facility)/KALMAR UNIVERSITY OF SWEDEN	Lanka
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12.9.2 Ongoing Projects

The projects that are being successfully handled by SACEP are listed as under:

- **Project for the preparation of Handbooks of National Environmental Legislation and Institutions in South Asia.**
- **Project on Environmental Education and Training**
- **South Asian Seas Programme (SASP)**
- **Integrated Coastal Area and River Basin Management**
- **South Asia Environment Natural Resources Information Centre (SENRIC)**
- **Male Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia**
- **South Asia Biodiversity Clearing House Mechanism**

SASP: SASP is a co-operative partnership, formally adopted in 1995 for the protection and management of shared marine waters and associated coastal ecosystems of five maritime SACEP countries-Bangladesh, India, Maldives, Pakistan and Sri Lanka.

SENRIC: Since the inception of SACEP, exchange and access to information was seen as a priority for the development of the region. To facilitate this, the Regional Environmental and Natural Resources Information Centre (RENRIC) was established in July 1990 with the support from the Asian Development Bank. The broad objectives of RENRIC were:

- a) Establishment of an environmental and natural resources clearing-house within the SACEP Secretariat;
- b) Establishment of an environmental and natural resources information network within the SACEP membership;
- c) Provision of an information network system including appropriate hardware and software;
- d) Provision of advisory support and training for representatives of member nations.

The partnership further led to the nations establishment of the South Asia Environment and Natural Resources Information Centre (SENRIC). This was sponsored by the ADB and UNEP Global Resources Information Database (UNEP - GRID).

SENRIC’s early activities included assisting the UNEP – RRC.AP programme on “Environment and Natural Resources Information Networking” (ENRIN) in Asia and the Pacific Region. Between the years 1994–1997, SENRIC pursued Training and Data Management activities.

Activities carried out by SENRIC include:

- Preparation of GIS Training Manuals (Professional and Policy Level)
- Training programmes (GIS and Image Processing/Remote Sensing)
- Setup of GIS Training Units (University of Peradeniya, Sri Lanka)
- Setup of National Coordinating Units at the Ministries of Environment (Sri Lanka, Maldives)
- Provision of Hardware and Software in the region

At present the activities focus on the assessment and reporting of the following:

12.9.3 Future Projects

The projects that will be taken by SACEP in future are listed in Table 12.3.

Table 12.3: Future projects of SACEP

Subject Area	Project
Biodiversity	South Asia Biodiversity Clearing House Mechanism.
Biodiversity	Conservation and Integrated Management of Marine Turtles and Their Habitats in the South Asia Seas Region.
Coral Reefs	Reef-Based Corals Management.
Energy	Accelerated Penetration of Cost Effective Renewable Energy Technologies.
Hazardous Waste	Establishment of a Basel Convention Sub Regional Centre for South Asia
Protected Areas	Management of World Heritage Areas.
Wetlands	Implementation of Ramsar Strategic Plan at Sub-regional Level.

12.10 PARTNERSHIPS AND CO-OPERATIVE MANAGEMENT

Partnerships are very relevant to South Asia given the complexity and scale of the environmental challenges in the region and is now one of the specific areas of interest of SACEP.

Partnerships and co-operation between governments, communities, NGOs and regional and multilateral institutions are increasingly seen as critical drivers for the achievement of sustainable development. The focus on partnerships was one of the salient features of the World Summit on Sustainable Development (WSSD) and is thus receiving attention by SACEP.

SACEP itself is indeed the result a partnership of its member countries, working through the National Focal Point and Subject Area Focal Point networks.

Partnerships have also been established with international organisations to address several priority environmental concerns in the region. These include:

- Preparation of South Asia State of Environment report (SoE) 2001: UNEP, UNEP-ROAP and UNEP-RRC.AP
- Water quality assessment in the Bay of Bengal: Global International Waters Assessment (GIWA)
- Preparation of regional oil spill contingency plan and implementation of MARPOL: International Maritime Organisation (IMO)
- Environmental law programme for South Asia and assessment of faunal biodiversity: NORAD
- Preparation of nation/regional GPAs for Bangladesh, India, Maldives, Pakistan and Sri Lanka: UNEP-GPA

SACEP is keen to work with other organisations that have relevant programmatic focus such as biodiversity, energy and environment, management of freshwater resources, and coastal and marine area management. SACEP would welcome such contributions from interested organisations. Some cooperative arrangements of SACEP from 1990–2003 are given in Table 12.4

Table 12.4: Cooperative arrangements at the project level

Years	Organisations	Objectives
2003	UNEP-Nairobi	MoU on co-operation in the field of environment Draft Memorandum of Understanding (MOU) for co-operation on the response to Marine oil and chemical spills in the South Asia Region.
2003	UNEP-Nairobi	Facilitate implementation of the South Asian Seas Action Plan for the Protection and Management of the Coastal and Marine

		Environment of the region
1999	CORDIO Programme	Promote environmental management, conservation and sustainable use of coral reef resources in India, Sri Lanka, and Maldives
1999, 2001	UNEP-ROAP	Preparation of “South Asian Action Plan for Environmental Education and Training”
1999	UNEP-Regional Seas	Support to South Asian Seas Programme: <ul style="list-style-type: none"> • Updating and finalising the “SAS Regional Oil Spill Contingency Plan” • Development of 7 detailed project proposals for the programme cycle 1999–2000
1997, 2000	UNESCAP	Project on integrating environmental considerations into economic policy making process-South Asia sub-continent
1997, 1999, 2002, 2003	IMO	Support in preparation of national and regional oil spill contingency plans and conducting workshops on IMO conventions (OPRC, MARPOL)
1996-2002	NORAD	Implementation of SSP.
1994-2003 Annual basis	UNEP-RRCAP	Implementing the environment assessment programme in the South Asian region (SENRIC programme activities)
1991	UNEP-ROAP	Preparation of SACEP’s Strategy and Programme for 1992-1996
1990	ADB	Establishment of Regional Environmental and Natural Resources Information Centre

12.11 SUMMARY

Let us summarise, what you have studied so far:

- The South Asia Co-operative Environment Programme (SACEP) is an association of eight member states namely: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- It came into being with the adoption of the Colombo Declaration and the Articles of Association at the Ministerial Meeting held in Colombo in February 1981.
- SACEP aims to promote and support the protection and enhancement of the environment of South Asia individually, collectively and cooperatively to encourage the judicious use of the resources of the environment with a view to alleviating poverty, reducing socio economic disparities, and improving the quality of life of the people.
- The key functions of SACEP are to promote co-operative activities in environment protection and management which are beneficial to the member states; facilitating sharing of knowledge and expertise and providing resources for project implementation through donor assistance and support.
- Organisational arrangement of SACEP is divided into five subunits: The Governing Council (GC), The Consultative Council, National Focal Points, Subject Area Focal Points and the Secretariat. Currently SACEP receives financial assistance from governments of member countries, government of Sri Lanka and from donor/funding multilateral and bilateral agencies.
- SACEP is working in the domain of capacity building and awareness raising, systematic information exchange and intra-regional technology transfers, environmental management for training and institutional development for training, regional co-operation in management plans for mountain ecosystems, watersheds and coastal resources, wildlife and wildlife habitat conservation in the region.
- South Asian Seas Programme (SASP) and South Asia Environment Natural Resources Information Centre (SENRIC) are some of the important projects undertaken by SACEP at present.

- Partnerships and cooperative arrangements are very relevant to South Asia for the management of common environmental issues.

12.12 TERMINAL QUESTIONS

1. In your opinion, how far has SACEP been able to fulfill its aims?
2. Do you think partnerships and cooperative arrangements will strengthen SACEP's framework of activities? Explain.
3. Discuss the important activities of two important projects of SACEP.

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UNIT 13 PARTICIPATORY FOREST RESOURCE MANAGEMENT

Structure

- 13.1 Introduction
 - Objectives
- 13.2 What is Forestry?
- 13.3 What is Participation?
- 13.4 Types of Partnership
- 13.5 Origin of Participatory Forestry
 - The Eco-crisis and the Basic Needs Debate
 - What is Participatory Forestry?
 - Property Rights and Participatory Forestry
 - Benefits of Participatory Forestry
- 13.6 The Decentralization Debate in the Forestry Sector
 - Decentralization versus Devolution
- 13.7 Participatory Forest Management in India
 - People Resistance against the State
 - Genesis of Joint Forest Management
 - Facilitative Role of NGOs
 - Policy Trends in Joint Forest Management
- 13.8 Development of Sustainable Forestry Context: South Asia
 - Advent of Social Forestry
 - Drawbacks of Social Forestry
 - Challenges of Social Forestry
- 13.9 Summary
- 13.10 Terminal Question

13.1 INTRODUCTION

Forests with large global biodiversity constitute home for forest-dependent communities and peoples. Forests cover about one-fifth of the earth's land area. Humans in some or the other way manipulate more or less all these forests. Most people are dependent on forest for several purposes like fuel wood, food, fodder, and medicine etc. This makes forest protection more important than even before. Forests constitute an important component of natural resources that need to be managed prudently so as to meet the increasing population's demands, without depriving the future generations, as well as preserve the ecological balance and biodiversity. The task is so great that the Government alone cannot do it. Local community's voluntary agencies have to play an important role in the management of forests.

Therefore, participatory forestry emerged as a new worldwide practice for forestry development and was promoted by international organizations. Participatory management involves working together with the beneficiaries, various government and non-governmental organizations and is broadly accepted as the most appropriate strategy for implementing programmes for sustainable development of natural resources. Although the types of interventions are diversified, the profession continued to embrace those traditional practices of forestry that were dominated by the twin dogmas of timber primacy and sustained yield. Participatory forestry is claimed to be the unique vehicle by which the needs of local people could be met and the quality of rural lives enhanced.

In India forest communities have faced increasing marginalization for several centuries. Though forest departments have grown in size and numbers, their financial and human resources remain woefully inadequate to ensure proper management of nearly one-quarter of the Indian subcontinent classified as public forest land. Forest departments are firmly entrenched in institutional procedures and regulations and

attitudes on both sides are often hostile towards each other. But in participatory management forest departments have to help local communities in building institutional management capacity and must approach the task in a supportive, rather than directive, top-down manner.

Unfortunately, current governance systems and political-economic arrangements at national and international levels ignore the rights and abilities of communities in managing forests thus continuing to support the destruction of forests. Even to conserve biodiversity we need to consider both the future of the forests, and the security of the communities that live in them.

This unit provides a critical analysis of the strengths and weaknesses of these new approaches and considers whether participatory forestry provides a new paradigm for forest management or whether it is another fashionable, soon to be marginalized, development trend. We have also described participatory forest management in India that is based on co-operative management and a give and take relationship with Forest Department, mediated in most cases by a non-governmental organization.

Objectives

After studying this unit, you will be able to:

- define the term forestry and describe its types,
- explain the concept of participatory forestry, and trace the origin of this new approach,
- appreciate the paradigm shift in forest management from centralization to decentralization, and
- describe the recent trends in participatory forest resource management in India as well as in South Asia.

13.2 WHAT IS FORESTRY?

Forestry is the science, art and practice of managing and using trees, forests and their associated resources for human benefit. It is the scientific answer for the question we have asked but a more elaborate explanation will be that all the operations in the forest such as plantation of trees, their protection, monitoring, proper and sustainable utilization and any other aspect of management constitute forestry. It also includes scientific, socio-economic and legal aspects.

There are three functional divisions of the forest sector, which come under state governments in India.

- i) Territorial sector – which involves raising forest, its protection and utilization of forest land held by State Government (as forest land is owned by State Government)
- ii) Social forestry – in which trees are grown on road side, canals, barren land, waste land, village land with the help of farmers.
- iii) Wild life – Conservation of wild life that is flora and fauna in forest through bio-reserves, parks and sanctuaries. Tourism also constitutes important part of wild life. Sustainable tourism also brings conservation of wild life as discussed in Unit 11, Block 2 of MED-006.

Forestry Research: Forestry Research has become important part of forest. There is necessity to strengthen the research base as well as new priorities for action. Research disciplines required for the support of forestry which include; economics, microbiology, history, increasingly political science, anthropology, sociology, law ecology, chemistry, soil science, zoology, botany among many others. Forestry, alone among the professional disciplines, derives its power base from ownership of large areas of land. It is highly centralized with a diversity of roles and products, where

internal conflicts and contradictions often dominate. Its practice requires the development of multi-disciplinary skills and their accommodation within a framework that allows their full expression.

Some broad areas of research and development that need special attention are:

- i) Increasing the productivity of wood and other forest produce per unit area per unit time by the application of modern scientific and technological methods;
- ii) Revegetation of barren/marginal/waste/mined lands and watershed areas;
- iii) Effective conservation and management of existing forest resources (mainly natural forest eco-systems);
- iv) Research related to social forestry for rural/tribal development;
- v) Development of substitutes to replace wood and wood products; and
- vi) Research related to wildlife and management of national parks and sanctuaries.

Forestry Education: Forestry should be recognized both as a profession and a scientific discipline. In Agriculture University there should be courses for imparting forestry education and research. Specialized orientation courses for developing better management skills, and in service training need to be encouraged because of the latest developments in forestry and related disciplines .

Forests and the Forestry Scenario in India

Resources: India's forest cover is estimated to be about 64 million hectares, or 19.5 percent of the country's area. The per capita availability of forest land in India is one of the lowest in the world, 0.08 ha, against an average of 0.5 ha for developing countries and 0.64 ha for the world. Dense forests in almost all the major states have been reduced and forest degradation is a matter of serious concern.

Fires destroy about 35 million hectares of forests, some 55 percent of the forest area, annually. Other factors leading to forest degradation are transfer of forest lands for other uses – encroachment on forest lands for agriculture and other purposes, grazing, and pests and diseases.

Products: Forests formally contribute 1.7 percent to India's GDP. India produces a range of processed forest (wood and non-wood) products ranging from saw wood, panel products and wood pulp to bamboo, rattan ware and pine resin. The paper industry produces over 3 million tonnes of paper annually from more than 400 mills (however, the raw material to produce that volume comes substantially from non-wood fibre) (Fig. 13.1).

Total industrial wood consumption by wood-based processing industries is about 30 million cubic metres. This, however, accounts only for about 10 percent of total wood consumption; 90 percent is consumed in the form of small timber and fuel wood. An important cause for sub optimal wood use is its relatively low price because of subsidies on wood raw materials and free fuel wood supply.

India is world's largest consumer of fuel wood. The country's consumption of fuel wood is about five times higher than what can be sustainably removed from forests. However a large percentage of this fuel wood is grown and managed outside forests. Fuel wood meets about 40 percent of the energy need of the country. About 70 percent of the fuel wood is used by household and the rest by the commercial and industrial units. Around 80 percent of rural people and 48 percent of urban people use fuel wood.

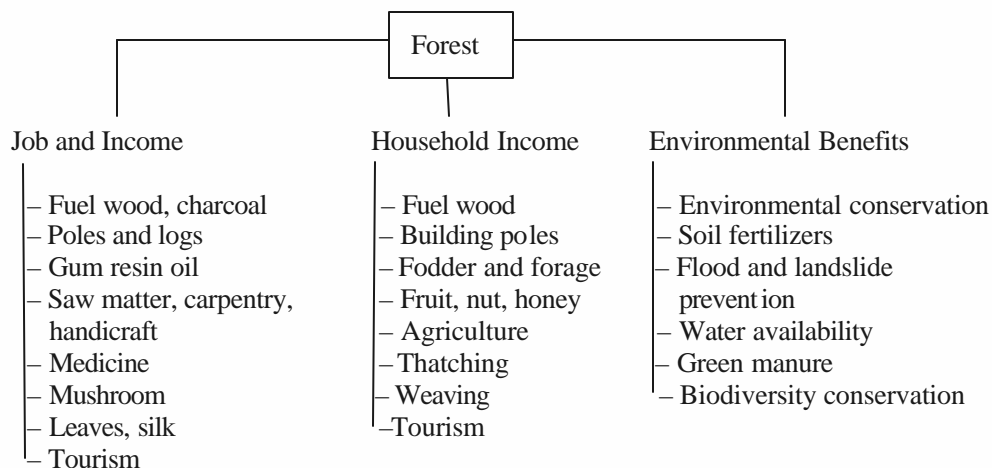


Fig. 13.1: Benefits of Forest.

Forestry Options in India

Revegetation of degraded lands could be aimed at one or more of the following goals:

- to meet the biomass needs of local communities and industries; demand factors;
- to conserve soil, moisture and biodiversity: local and national ecological factors;
- to sequester carbon: global ecological factors; and
- to generate employment, income and reducing the burden of balance of payments: macro-economic factors.

The natural resource management and conservation efforts are at cross-roads today. The sustainability of ecological processes and life support systems is threatened in the forests and also the security and dignified livelihood of the people living in or on the outskirts of forest and protected areas.

Forestry encompasses (Table 13.1) many objectives, such as commercial and rural development (poverty alleviation, employment creation, empowerment of marginalized groups (in particular, women), tourism and amenity, and conservation. Often conflicts arise between these objectives and the priority assigned to each in a given area. The power base derived from its landholdings has made it vulnerable to attack by a number of environmental and human rights groups who contend that this power has been wrongfully wrested from those local groups whose livelihoods are deeply associated with the forests (Fig.13.2).

There are a host of forestry organizations contributing to various aspects of forest management issues including the Forest Survey of India, the Indian Institute of Forest Management and the Wildlife Institute of India.



Fig. 13.2: Forests are life line of people living on its edges.

Timber, logging concession, government officials, local forest users, democratic institutions, corruption – all these words link up in different forms of open and hidden relationships (fig13.3). As early as 1975, Jack Westoby, reflecting on 20 years of development assistance to the forest sector questioned its contribution to the economic and social life of underdeveloped nations. Still, in many countries of South-East Asia, the nexus between timber merchant, the state, and the trade is seriously undermining the development of any form of local democratic institution for the management of forest resource. The practice of dealing out logging licenses to members of the state legislature to secure their allegiance is commonplace currency. Thus the potential impact of decentralization on the formal and informal institutions is dramatic.



Fig 13.3: Timber is one of the most significant produce of the forest.

Together with the global climate of decentralization and bureaucratic divestment, this has led to the current situation where forestry (so long impervious to the decrees of the outside world) has been forced to respond to these changes and examines its own institutional framework. This framework for democratization now contains responsibility for a wide range of often-conflicting local management objectives as indicated above. Structures, which were established to fulfill the primary objective of revenue maximization, are now redundant in a world that insists that forest lands be managed for a multiplicity of benefits. The debate about decentralization is by no means confined to the developing world but is a live issue in every country.

The implementation of decentralization process has brought issues of ownership and control to the forefront of debate. In forestry, the historical development of state control over forestlands has meant that the land base held in trust by the institution for the public good is enormous. ‘The following statistics provide an indication of the extent of forestry estates in Asia. In India, Forest Departments control 22% of the national territory (Agarwal and Narain, 1989); in Nepal forests and shrub lands comprise some 4/3% of the total land area (Nield, 1985). In Indonesia, 74% of the territory is controlled by the Forest Department; and in Thailand, the Royal Forest Department administers some 40% of the nation’s land (Colchester, 1994). These extraordinary figures underline the fundamental challenge posed to these departments by the call for devolution of some of this control to the millions of people living in forest areas. The means by which this is being done needs considerably more analysis and the form of the linkages between state and people need to be critically assessed.

The change from primary objective of revenue maximization to multiple objectives ranging from conservation management to development of local organizations for forest management has profound consequences across the forestry sector.

Table 13.1: Regeneration of trees in India, through various options.

Options	Goals	End uses and features
Natural regeneration (NR)	<ul style="list-style-type: none"> - promotion of biodiversity - conservation of soil and water - provision of NTFP - Carbon sequestration 	<ul style="list-style-type: none"> - no felling of trees or clear felling - only NTFP and felled wood collection - harvest of grass or controlled grazing - only protection and promotion of NR + planting of a small number of desired tree species (trees/ha)
Enhanced natural regeneration (ENR)	(same as for NR)	<p>(same as for NR)</p> <ul style="list-style-type: none"> - involves soil and water conservation + protection and promotion of NR + planting of a small number of desired tree species native to that location as desired by local community (100-300 trees/ha)
Community forestry (CF)	<ul style="list-style-type: none"> - to meet local biomass needs - to promote in situ biodiversity - conserve soil and water - seq. of Carbon - to provide grass for livestock 	<ul style="list-style-type: none"> - sustainable harvest of timber - harvest of grass or controlled grazing - felling of trees to meet local needs - mainly for local needs only surplus if any to be exported - conventional silvicultural practices including soil + water conservation – species choice and density to be left to local communities
Agro-forestry (AF)	<ul style="list-style-type: none"> - to meet biomass needs of farmers and generate incomes - seq. Carbon 	<ul style="list-style-type: none"> - harvest of firewood - planting trees on crop land bunds, boundary and in between crop rows – species choice and density to be left to the farmers
Short-term soft wood (ST)	<ul style="list-style-type: none"> - to meet industrial soft wood, packaging and other needs (non-structural timber) - to conserve forests and Carbon sinks 	<ul style="list-style-type: none"> - short rotation forestry every year 1/6 of area clear felled at 6 year rotation for soft wood industry - standing woody biomass to be constant at any given time as 1/6 of area is felled - conventional high density plantation of fast growing tree species -intensive cultivation for high yields (like <i>Eucalyptus</i> plantation)
Long-term timber wood (LT)	<ul style="list-style-type: none"> - to meet timber needs for structural purposes - to conserve forests and Carbon sinks 	<ul style="list-style-type: none"> - timber trees (hard wood) to be felled sustainably - after the trees mature, quantity of wood to be harvested and vested equal to annual C sinks productivity of trees - to ensure sustainable supply of timber and constant standing woody biomass with maturity = 25 years and selective logging - conventional silvicultural practices of timber plantation

13.3 WHAT IS PARTICIPATION?

In recent years, there have been an increasing number of analyses of development projects showing that the participation is one of the critical components of success in irrigation, livestock, water and agriculture forestry projects. As a result, the terms ‘people's participation’ and ‘popular participation’ are now part of the normal language of many development agencies, including NGOs, Government Departments. It has become a fashion that almost everyone talks of participation in work. ‘Participation’ is one of those terms that are very difficult to define because while it is very widely used in today’s language the scope and meaning that are ascribed to it is often different and very widely used. The term ‘Participation’ or ‘Participatory’ is very often used to cover all terms of action by which citizens ‘take part’ in the operation of administration. The word ‘Participation’ is used broadly to refer to the role of members of the general public, in influencing the activities of government or in providing direction to community needs. It may occur at any level – from village to the country as a whole (Fig. 13.4).

Concept of Participation

Participation is a key ingredient of, and an essential requirement for:

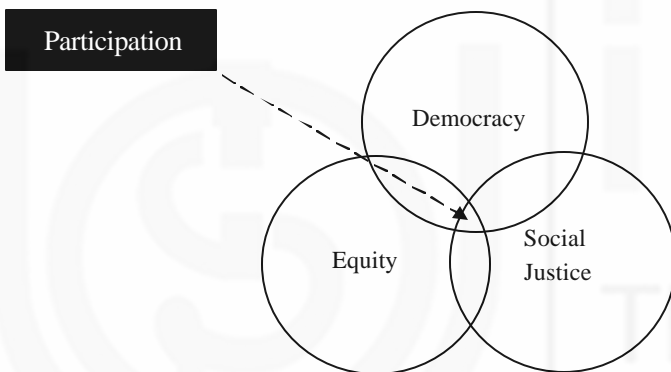


Fig 13.4: Concept of participation.

(Source : nrsp ‘participation’ workshop: session 1)

Participation in real sense means that rural support institutions must have greater involvement of people and empowerment of diverse people and groups, as sustainable development is threatened without it. But there lies a dilemma of authorities. They need the people's agreement and support but they fear that this wider involvement is less controllable, less precise and will have adverse effect by slowing down the planning process.

The term participation can mean different things to different people. In part, rural development projects, participation has often centered on encouraging rural people to sell their labour in return for food, cash or materials. Yet these material incentives distort perceptions, create dependencies, and give the misleading impression that local people are supportive to externally driven initiatives. This paternalism then undermines sustainability goals and produces results, which do not persist once the project ceases and little effort is made to build local skills, interests and capacity. Local people have no stake in maintaining or supporting new practices once the flow of incentives stops.

Participation may be direct, as in community projects and in the work of private welfare organizations. Thus, participation comprises every kind of citizen intervention in administrative action. Participation gives an ordinary citizen a mean of voicing his opinion and action that he is able to take on responsibilities. Participation may take different forms. It may be in form of voluntary contribution, it may also take a form of

empowering people to gain power to influence the decisions that affect their life and livelihood.

Participation in natural resource management calls for shared ownership, shared management and shared benefits from natural resource management. The main workers in the participatory process are voluntary organizations, government department and the people. (Fig. 13.5).

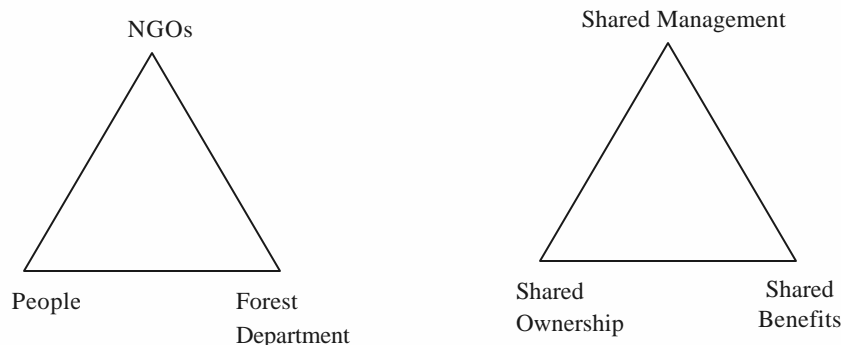


Fig.13.5: Participatory Triangles

The root cause of many of the problems currently being experienced in both India and Nepal can be traced back to the form of participatory practice developed by any project or programme.

13.4 TYPES OF PARTNERSHIP

Now that you have an idea of what is participatory forestry let us discuss about the types of partnerships (Table 13.2). The arguments surrounding the decentralization debate involve discussion of what is an appropriate institutional form to manage forest resources. There is no one solution to these questions, but rather an array of arrangements according to the particular requirements of the forest users. How far the forest bureaucracy can or will divest itself of some of its authority remains to be seen?

However, in an atmosphere of increasing intolerance of bureaucratic inappropriateness there seems little doubt that forest services will be forced to divest some of their authority, at least at the margins of their power base, with the release of some degraded lands to joint management schemes with local people. (Fig. 13.6)



Fig.13.6: Decentralization of power towards - Participatory forestry.

Just as questions are being asked about the role of the state in regulation and management of natural resources, so too are questions being asked about the nature of local organizations being developed by governments and the interests of those they represent. Participatory institutions, which purportedly give the village a role in making rural development decisions, are the facilitators of a paralyzing bureaucratization of village procedure, which has replaced the more informal institutions reflecting on community development practices of the 1960's and 70's. It is disingenuous to characterize development as the two simple alternatives – decentralization or centralization, local people versus government together with the contention that grassroots environmental movements are necessarily going to lead to more widespread benefits. The whole process has to be carefully evaluated.

The call for grassroots development brings into question the conditions under which it is appropriate. As the vast literature on collective action shows that there are many conditions under which collective actions have broken down and resources have degraded. The defining features under which such action is appropriate remain elusive in the forest sector, although certain patterns are emerging – most particularly those seen in resource-scarce situations.

By identifying and separating out these objectives and forming distinct organizations each with primary responsibility for a major objective (Fig. 13.7), conflicts become public (i.e. intra-departmental wrangling is more visible than intra-departmental disputes). Such an approach may also be recommended for South Asia.

Demarcation of territorial responsibility is very necessary which makes accountability easier. As such, the advisory and regulatory functions are the responsibility of the Ministry of Forestry Conservation, a subject that has frequently brought forestry professionals into conflict with environmentalists, and which is considered by many to be irreconcilable with practice of commercial forestry, has been assigned to a Department of Conservation (primary responsible for natural forest conservation). The state-owned Forestry Corporation was made responsible for commercial plantation resource-based forestry activities. In addition, the great power base of a forest service – its land has also been largely privatized.



**Fig.13.7: Cooperation of Ministry people and community people is necessary
(Source Photo: Government of Orissa Directorate of Soil Conservation)**

There is no blueprint for institutional change; the structure of organizations necessary to meet international, national and local imperatives must emerge from the particular circumstance of each nation. The principle of decentralization, although global, does not necessarily lead to a globally uniform response. These responses need to be discussed as this implies transition from public to private sector operation. The degree to which divestment can occur should also be assessed.

Table 13.2: A typology of participation (modified from Pretty, 1994).

Typology	Components of Each Type
1. Passive Participation	People participate by being told what is going to happen or has already happened. It is unilateral announcement by an administration or project management without any listening to people's responses. The information being shared belongs only to external professionals.
2. Participation in Information Giving	People participate by answering questions posed by extractive researchers and project managers using questionnaire surveys or similar approaches. People do not have the opportunity to influence proceedings, as the findings of the research or project design are neither shared nor checked for accuracy.
3. Participation by Consultation	People participate by being consulted, and external agents listen to views. These external agents define both problems and solutions, and may modify these in the light of people's responses. Such a consultative process doesn't concede any share in decision-making and professionals are under no obligation to take on board people's view.
4. Participation for Material Incentives	People participate by providing resources, for example labour, in return for food, cash or other material incentives. Much in-situ research and bioprospecting falls in this category, as rural people provide the fields but are not involved in the experimentation or the process of learning. It is very common to see this so called participation, yet people have no stake in prolonging activities when the incentives end.
5. Functional Participation	People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organizations. Such involvement does not tend to be at early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
6. Interactive Participation	People participate in joint analysis, which leads to action plans and the formation of new local groups or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures or practices.
7. Self-Mobilization	People participate by taking initiatives independent of external institutions to change systems. Such self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

SAQ 1

- i) List the major causes for deforestation.
 - ii) How can the participation of root level people help forestry?
 - iii) How can the devolution of power from bureaucracy help the forestry?
 - iv) Explain how decentralization of power can become the basis of participatory forestry?
 - v) Describe the role of participatory approach in forest conservation.
-

13.5 ORIGIN OF PARTICIPATORY FORESTRY

Throughout last 20 years, international attention has focused on the plight of tropical forests, issues of resource degradation, declining biodiversity and the impact of

decreasing forest resources on global climate. As indicated in many studies, the forest sector has adjusted national policies and practices in response to number of internal and external factors.

At the international level, proportionately less attention has been focused on local issues of decreasing access to forest resources, and the implications for local people dependent on forests for securing their livelihoods. In recognition of this, local forestry programmes have sought to improve the well being of forest dependent villages.

13.5.1 The Eco-crisis and the Basic Needs Debate

The post-war period from the mid 1940s was a period of increasing prosperity, rapid industrialization and full employment within the core countries of the Western world. The economic climate was strongly relaxed in modernization theories, which held that poor countries could follow the stages of growth experienced by developed countries if industrialization and modernization were stimulated by capital investment. The central concerns of modernization theory were the dichotomy between tradition and modernity and the assumption that the advance from tradition to modernity is a simple unilinear progression. The so-called 'Third world' was supplied in the form of large infrastructure packages to develop an economic base from which to promote industrialization and thus economic development in the expectation of diffusion or trickle-down of benefits to urban and rural poor.

Modernization theories permeated all sectors, including forestry. It has been argued by many authors that industrial forestry would stimulate development in underdeveloped countries. They held that forest-backed industries had strong forward and backward linkages with the rest of the economy because they furnished a wide range of goods and services and used mainly local inputs.

The demand for forest products was forecasted to rise rapidly following the rapid industrialization of all economies. This provides a useful critique of the analysis and contends that the drive to an effective economy can only be achieved through the sound development of a productive rural economy rather than by imposition of a modern industrial framework.

These arguments provided the basis for forest policy development in both developed and less developed countries. They strongly influenced the form of forestry development proctored by the new international aid agencies such as the World Bank and the Food and Agriculture Organization, among many others for further references to this era. At this time in Nepal, working plans were being drawn up for the extensive Tarai Sal (*Shorea robusta*) forests. In India too, the increased demand for forest products era met through heavy investment in plantations for the production of industrial wood-based products. Capital was invested in large forest industries supported by the raw material from plantations and intensively managed natural forests. One example was plantation of *Eucalyptus* sp throughout India.

The boom in Western economies ended abruptly with the economic crises of the early 1970s. Inflation, fuelled by the United States spending on the Vietnam War, soared further when the OPEC cartel of oil-exporting nations secured a four-fold increase in the price of oil. **The economic crises led to a realization that industrialization did not necessarily lead to the economic or social development of underdeveloped countries.** Rural and urban poverty became the focus of development theory, with sustenance of basic needs forming the objective of development.

The focus on energy forced attention on the rest of the world where most people are dependent on wood as their main fuel for cooking and heating. Research reports were influential in revealing the growing gaps between rich and poor. This showed how the inadequacy of modernization theories and the policies thus derived from theory has contributed to the increasing poverty of many countries, The debates within development theory pursued the path of fulfilling the basic needs of the poorest and

Participatory Resource Management

Participatory forestry refers to processes and mechanisms that enable those people who have a direct stake in forest resources to be part of decision-making in all aspects of forest management, from managing resources to formulating and implementing institutional frameworks.

More specifically, community forestry refers to a component of participatory forestry that focuses on local communities as key stakeholders for sustainability.

focused on securing the economic advancement of rural populations, This scenario of eco-crisis and livelihood degradation was well developed and has been formative in the construction of forest policy and practice in both India and Nepal.

Participatory forestry emerged as a new world-wide practice for forestry development and was promoted by international organizations and sold in programme and project packages. Although the types of interventions diversified, the profession continued to embrace those traditional practices of forestry which were dominated by the twin dogmas of timber primacy and sustained yield. Forestry was claimed to be the unique vehicle by which the needs of local people could be met and the quality of rural lives enhanced. This was seen as the means by which social change could be affected.

13.5.2 What is Participatory Forestry?

Balancing the effective, sustainable management of forest resources with economic, social and environmental factors has emerged as one of the key challenges in natural resource management. The environment and forum in which decisions concerning natural resource management are made are evolving as a result of global trends such as: growing awareness of and response to environmental concerns; decentralization and devolution of government control; participatory management, the need for secured property rights etc.

Among the responses to these trends is a greater willingness to consider local forest management as a viable alternative to centralized State control. Throughout the world, a large number of forestry activities (national, multilateral, bilateral and non-governmental) with participatory, local and community forestry components are being implemented. Although much remains to be done, it is increasingly recognized that participatory approaches are essential to sustainable forest management. In India we have several successes cases in forest management.

Although much attention was focused on the drudgery and increasing difficulties of fuel wood collection, the social and political problems relating to resource access and property rights were largely ignored. Let us examine the relationships between Property Rights and Participatory Forestry.

13.5.3 Property Rights and Participatory Forestry

At the heart of participatory forestry lies the battle for ownership of forestlands. Property rights structures have for the last century been skewed in favour of the state, at the expense of local people's needs. Under recent forestry initiatives, new tenure arrangements have been introduced. It is not clear, however, that these changes alone have made a sustainable difference in villagers' well being. In some cases, villagers have de facto use rights to forest lands already (and formalization of these rights has in fact led to a diminution in the benefits available). In other cases, the rights were more short-lived than expected.

Although use rights have been important in increasing the villager's security of access to land, there continues to be debate about whether they should press for full ownership. Advocates of indigenous people's rights feel that these communities should have their original land claims recognized by the state. Such views underpin Principle 22 of the Rio Declaration – a Declaration which guides (or should guide) the approaches of governments to local communities and management of natural resources. The principle is reproduced here as it describes the new philosophy and provides the ideological backbone for interventions in the forestry sector. "Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development."

13.5.4 Benefits of Participatory Forestry

The net benefits of promoting participation are manifold and as key elements of sustainability they can be summarized as consisting of four “Es”.

- *Effectiveness* – participation allows people to have a voice in determining objectives; supporting project administration; and making their local knowledge, skills, and resources available.
- *Efficiency* – participation allows more efficient use of resources available.
- *Empowerment* – participation increases people’s sense of control over issues that affect their lives and helps them to learn how to plan, implement, and prepare themselves for participation in broader terms.
- *Equity* – it ensures an equitable sharing of the benefit.

In the following sections the background to the development of participatory forestry approaches in South Asia is considered, including an analysis of the global content in which policies of decentralization and divestment of public sector authority have become the currency of action.

13.6 THE DECENTRALIZATION DEBATE IN THE FORESTRY SECTOR

Why has participatory forestry become such an important initiative within the forest sector? One of the major reasons results from the desire of the international community to achieve sustainability and efficiency through decentralization and public sector reform. Participatory forestry represents the major attempt to achieve this aim. The new management method talks about clients, stakeholders and interest groups, and asks the private and public sector to identify their client groups and their needs, and to respond with services that will support these groups. This new managerialism is mirrored by political theory, where decentralization also requires interaction with these groups, with government bureaucracies restructuring to support their clients. The institutional change implied by these approaches is far-reaching.

Elements of these changes are still unexplored within the forest sector; forestry projects charged with facilitating institutional change are now beginning to address these issues.

In this section, we will consider the following questions surrounding the impact of decentralization as it is manifested through participatory management practices within the forestry sector.

- What are the impacts of this process on to formal and non-formal forestry institutions?
- Under what new institutional arrangements should forests be managed?
- How central government is restructuring the property rights framework to enable effective decentralization?
- Who are the winners and losers?

13.6.1 Decentralizations versus Devolution

There are many questions still to be addressed about the effectiveness of decentralization as a political tool to ensure devolution of power as many authors indicate:

“Decentralization has been seen as a means by which the state can be made more responsive, more adaptable, to regional and local needs than is the case with a concentration of administrative power and responsibility in the central state... But decentralization of government in itself does not necessarily involve devolution of power. The extension of the state outwards and downwards can equally serve the objective of consolidating the poor of state at the center as well as that of devolving

power away from the central state; it can both extend the state's control over people as well as the people's control over the state and its activities. Decentralization is a two-edged sword and at different levels it has different meanings.

We will describe decentralization at different levels and its meaning. At the level of **designing** decentralization means that a person's knowledge and imagination be allowed to contribute to the making of a programme, be it for employment generation, or for preservation and conservation of nature and forests, or for primary education. This prevents monopoly of knowledge and information, which restricts their access to only a few people.

Decentralization of **implementation** implies that the process of translating an idea into action and activities are to be the responsibility of all members of a group who have designed it. Accordingly, this group distributes responsibility and work-tasks equally. Each person has the freedom to take decisions and plan the process of institutionalization. This prevents bureaucratization and ensures team administration. It dissolves the repression and domination that normally accompany the process of accountability. Each person is simultaneously accountable to one's own self and to the group. This makes a person aware of his or her limitations and opens the door to finding out ways of overcoming them.

Finally, at the level of **monitoring** decentralization implies that the group of persons, who have engaged in designing and implementation, must also be engaged to monitor a programme. For themselves they are 'experts', when this occurs, criticism tends to be mutually beneficial. Further, the group comes together as a collectivity in the course of sharing the burden of each other's limitations and benefiting from each other's capabilities. This spirit of criticism could prevent corruption and also work towards creating appropriate conditions for **transparency**. Further, the process of decentralization provides people a feeling of confidence in them. We may say that confidence in one's ability, granting everyone human dignity and operating in an open and honest manner are the main principles of decentralization.

Although the calls for devolution of power to the local level are pervasive across the international community, and all recognize the central role of local users of resources in management, how effective has this devolution been? As discussed, in the earlier section is it necessarily such a good thing? Since much of the experience gained with the implementation of new forms of forestry is relatively recent, it is perhaps too soon to be able to pronounce definitively on success or otherwise. Although major donor organizations and international agreements may all subscribe to the following view, the reality of such a goal is still distant.

The pursuit of sustainable development requires a political system that secures effective participation in decision-making. This is best secured by decentralizing the management of resources, upon which local communities depend, and giving, these communities and effective say over the use of these resources. It will also require promoting citizens, initiatives, empowering people's organization and strengthening local democracy. (See Box 13.1 Aravali Project).

Box 13.1: Aravali Project – Successes of decentralization of power.

The Aravali afforestation project was started with the target of revegetation of 115,000 hectare and distributing 75 million saplings of different species to farmers in ten districts. The project was based on a partnership between NGOs, local people and the forest department. To encourage involvement of the village community, the idea of "Community Controlled Regulated Access Management System" was adopted to replace the "Open Access System" where people were free to exploit the resources. Slowly villagers accepted the idea and became willing to participate in the programme. The Aravali Project has already achieved most of objectives and in several areas even exceeded expectation. This is a case of decentralization of power in participatory management to fulfill the objective of the project.

Do decentralization and devolution lead to greater equity? Is this an obtainable goal? Divestment, privatization is an appropriate response to the needs of villagers wanting to gain greater control over the use of and access to natural resources. Some influential commentators on the political economy of countries such as India question the validity of a direct transfer of Western ideology (Ghosh, 1994). In the following section we have tried to assemble some evidence to indicate the complex nature of the impacts of decentralization (whether partial or total) as Forestry approaches should match the complexity of environments in which it is being developed.

SAQ 2

Give your views on the following statements:

- i) “Participatory Forestry will be only successful if the property rights of forest lies with the people living in it”.
 - ii) Does participatory management fulfils it objective of decentralization or devolution of power?
 - iii) Describe how participatory management can fill the void created by eco-crisis and basic needs of the people in developing countries .
 - iv) Describe the benefits of participation, using the example of a forest and explain its benefits.
-

13.7 PARTICIPATORY FOREST MANAGEMENT IN INDIA*

India offers excellent opportunities to learn about past and future methods of forest management. Under British colonial rule, the nation was one of the world’s first countries to establish a national forest service in the mid - nineteenth century.

Forest Management under British Rule Natural resources have always been an integral part of the Indian economy and culture and are held in high esteem. Even today, some of these so-called self-initiated forest protection groups have survived or have been re-invented in response to the need of the hour to conserve community forest. Given this context, it is necessary to point out at the outset that participatory/joint forest management is not new to India. It is a re-invention of the successful forest management practices of the past.

For management purposes, the British administration divided the forests into four classes, as described in the National Forest Policy of 1894. Using forests to meet people’s needs was not a priority consideration for the British administration. People’s requirements were to be met by the third class of forests – minor forests that yielded only inferior timber, fuel wood or fodder – and by the fourth class of forest ‘pastures and grazing grounds’ to which certain restrictions were applied.

To conclude, people’s interests were made subservient to the state’s commercial interests with regard to forests during colonial rule.

13.7.1 People Resistance against the State

An analysis of the National Forest Policy, 1894 and the Indian Forests Act 1927 suggests that the rights of people to forests under erstwhile rulers in the pre-colonial era were further limited. It is also evident that many of the informal forest management institutions that operated at the grassroots level collapsed after the takeover of the forests by the British administration. However, in some cases people actively opposed the state take over and demonstrated against the curtailment of public rights.

Participatory Resource Management

Two such cases of resistance by local communities in the state of East Bengal (Poffenberger 1995) and Uttaranchal (Guha 1983; Ballabh and Singh 1988; Ballabh et al, 2002).

The tribal communities reacted violently to the British administration in a series of armed revolts. The first of these, popularly known as the Chur Rebellion, lasted from 1767 to 1800.

Today, the state of Uttaranchal has more than 4,800 Van Panchayats managing 244,800 hectares of forest area spread over six districts.

With the passage of time, the tribal communities were marginalized and their traditional usufruct rights were restricted or eliminated. These forest-dependent communities were further affected by worsening ecological conditions resulting from conversion of forests for Sal (*Shorea robusta*) logs to meet the demand for railway network. Even after independence, the living conditions of tribal communities and other low caste people further deteriorated in this region. Tribal community revolted violently and there has been number of protests.

As a result of such protests, the Forest Grievances Committee was set up by the state to look into the matter. Realizing that further efforts to impose forest regulations were likely to be met by stiff resistance and thus strengthened calls for independence. The committee recommended reclassification of state forests. In consequence, the status of reserved forests of low commercial value but of high livelihood value to local people was rebuked and Van Panchayats were instituted for their management. Van Panchayats were instituted on the principle of participatory forest management and gained the full legislative support of the state. This is a classic illustration of how the concept of participatory forest management originated well before the independence of India in 1947 as an outcome of popular resistance to state management regimes.

13.7.2 Genesis of Joint Forest Management

Continuous deforestation and the degradation of forests leading to a decline in forest cover have long been sources of concern for policy makers in India. Indeed, had there not been such large-scale deforestation and forest degradation in India, it is unlikely that any policy maker would have given serious thought to the 'participatory forest management' model (Fig. 13.8). The need of the hour and the backlash of policy failures have led to the emergence of a new institutions and rationale for the origin of a 'participatory forest management' model within the Indian forestry sector. This section discusses why the government commenced participatory forest management in India. (Fig. 13.9).

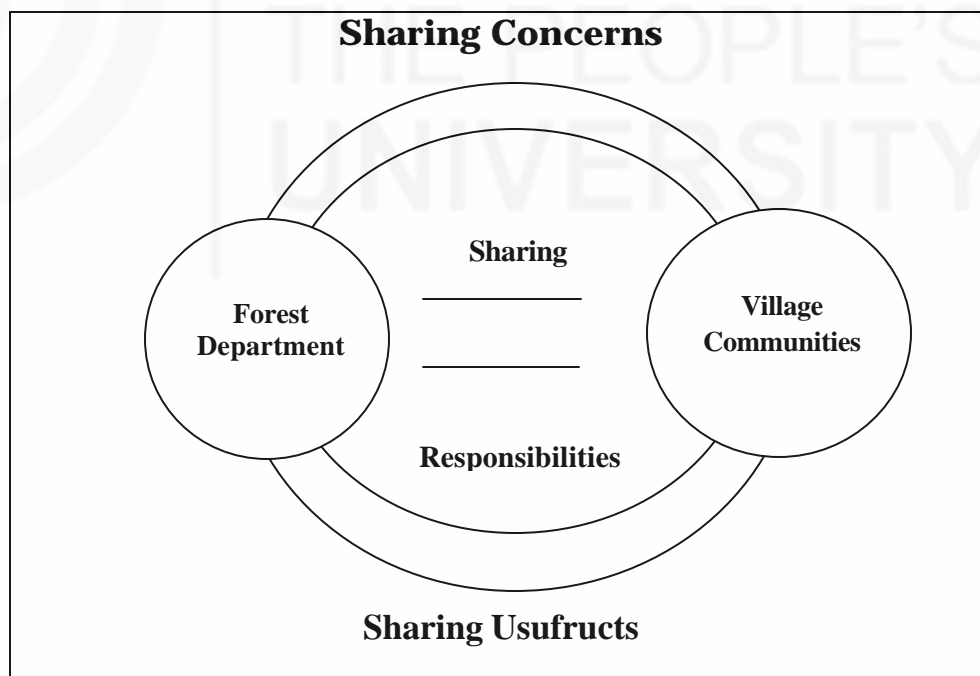


Fig. 13.8: JFM concept in India.

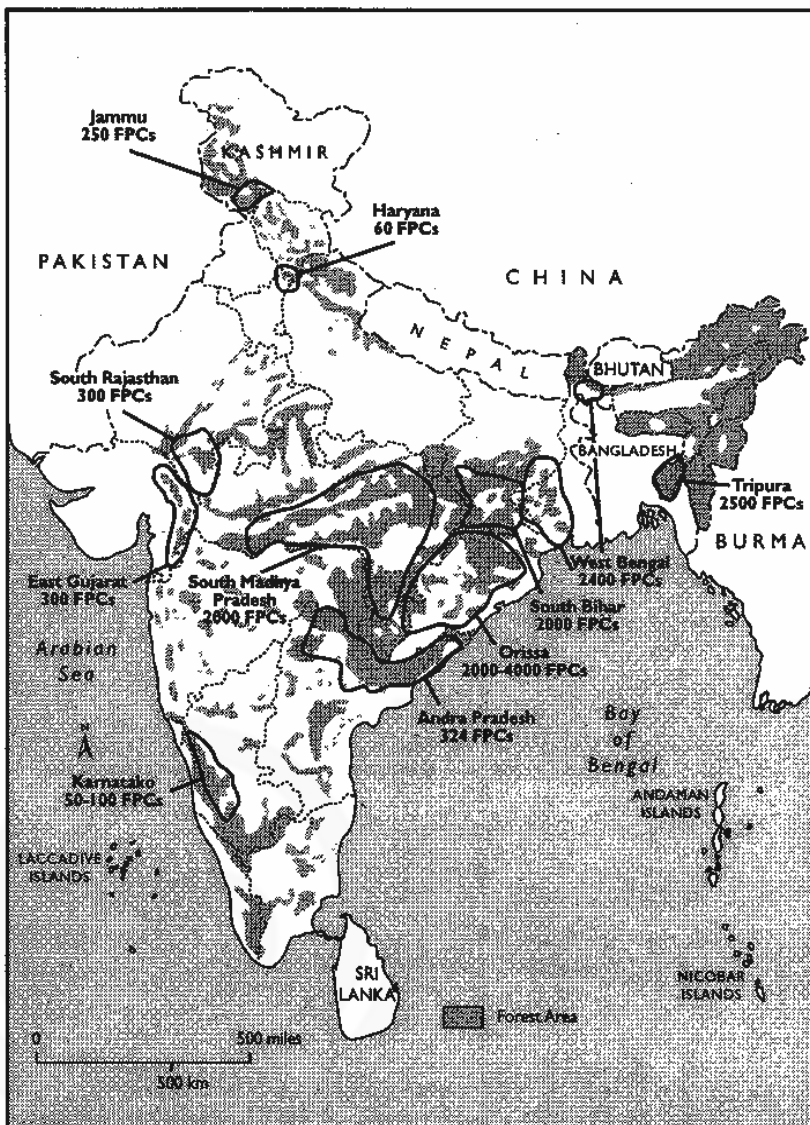


Fig. 13.9: Estimated distribution of India's forest protection committees
(Source: Asia Forest Network)

Joint forest management is the sharing of products, responsibilities; control and decision, making authority over forest department and local user groups. The basic philosophy of JFM is "Care & Share".

JFM is the sharing of three basic things:

- i) Sharing the concerns
- ii) Sharing the responsibilities
- iii) Sharing the usufructs

The Arabari experiments in JFM

The relevance of the 'give and take' principle between the Forest Development (FD) and the community surfaced in the early 1970s. A group of FD personnel realized the importance of 'peoples participation' in regeneration of degraded Sal (*Shorea robusta*) forest in Arabari Range of Midnapur district in the state of West Bengal. This forest rejuvenation started was stated as an experiment and later on replicated on a large scale first in this state followed by its adoption in different parts of country.

This successful experiment led to the development of a new forest management strategy known as "Joint Forest Management" (JFM). The village communities involved in the management of government forests in their vicinity under the JFM became known as forest protection committees. This is the first recorded case of co-management of forests by FD and village communities in India (Yadav et al 1998). It is important to note that the forest protection committees formed in Arabari have emerged out of a persistent conflict between people and the government for control over forest resources as in the case of Van Panchayats in the state of Uttaranchal.

At present, there are 63,618 forest protection committees (joint forest management committees) in India spread over 27 states managing about 14.09 million hectares of forest. This means that 22 per cent of the total forest cover of 63.73 million hectares in India is being managed under JFM. There are also a number of tree growers cooperatives and numerous self-initiated forest protection groups (SIFPGs) managing forests in India on the principle of participatory forest management. They are still surviving, in the states of Orissa, Bihar, Gujarat, Rajasthan, Karnataka, Madhya Pradesh and Andhra Pradesh, and are protecting areas of state forests (Fig. 13.9).

Subsequently, the government of India launched a social forestry programme, including farm forestry on private lands and established community self-help woodlots on community lands on a large scale during the 1970s and 1980s to reduce pressure on the government owned forests and also to incorporate people in the afforestation programme.

13.7.3 Facilitative Role of NGOs

In the development of participatory forest management initiatives, active involvement of non-governmental organization (NGOs) in promoting participatory forest management at the grassroot level is very important (Fig. 13.10). In most cases, NGOs are facilitating the village communities as well as the FD in the formation of JFM committees. In many cases, NGOs and tree growers' cooperatives have developed their own participatory forest management models for JFM based on the policy directives of the government.



Fig. 13.10: Collaborative work of NGOs with community members
(Source: Asia Forest Network)

Over the last decade, however, the state of affairs has changed in favour of NGOs, which may be mainly attributed to the change in mind set of FD personnel towards forest management. Now, substantial rural developmental funds earmarked by the government of India are routed through NGOs for the participatory forest management programmes.

According to Sarin (1998), JFM has gone through three phases since the late 1980s. Primarily idealistic and democratic NGOs and a few liberal officers led the first phase. In the second phase NGO learnt from practical experience an exposure to ground realities. The present third phase is dominated by donor funding with forest departments becoming the major implementers, whereas NGO and community efforts have been pushed to the sidelines. Nevertheless, NGOs remain a major stakeholder in forest policy formulation in the country.

13.7.4 Policy Trends in Joint Forest Management

D) Policy Directives

First forest policy has to emphasize the role of people's participation in forest protection and management. National Forest Policy 1988, the second forest policy after India's independence, has in the last decade changed the face of the Indian Forestry sector (Resolution No. 3A/86-FP, dated 7th December 1988, Ministry of

Environment and Forests, Government of India). It is both conservation and production-oriented. The basic objective of this policy is the maintenance of environmental stability through preservation of forests as a natural heritage. It also places emphasis on increasing substantially the forest/tree cover and the productivity of forests in the country to meet national needs. This policy had been conceptualized in the wake of the success of the participatory forest management scheme in the country, albeit on a small and localized scale (Fig. 13.11).



Fig 13.11: NGOs interacting with men and women of village community
(Source: Asia Forest Network)

II) Creating a people's movement

The distinctive feature of this new policy was mention of creating a massive people's movement with the involvement of women for achieving the above-mentioned objectives and to minimize pressure on existing forests. This is a complete departure from the previous National Forest Policy of 1952 as it envisages people's participation in the development and protection of forests. The National Forest Policy is a harbinger of management change i.e. from government managed to people-managed forests (Also see Box 13.2).

Sites for National Forest
Policy, 1988.
<http://www.rupfor.org/htm.india.htm>.

In some ways, this Act has helped in facilitating the implementation of the JFM programme on forest land, as generally encroachment takes place on land otherwise suitable for JFM management typically at the periphery of existing forests.

III) Establishment of a JFM monitoring cell

Realizing the importance of the ongoing JFM programme for the effective management of forests in the country, the ministry of environment and forest created a JFM monitoring cell within the ministry in 1998. This cell was created with the objective of monitoring the impact of JFM being carried out by state governments for the improvement and protection of forests.

IV) Expansion of JFM to non-forest areas

In India besides the forest land owned and managed by the State Forest Departments, there is a large area (around 76 million hectares) which is non-agricultural and non-forest land, such as barren and uncultivable wastelands, cultural wastelands, permanent pastures and other grazing lands. The revenue department and other government departments own such lands de jure, though in some cases they are de facto common property resources. Mostly such lands are open access resources. Though these uncultivated lands are highly degraded having suffered the tragedy of commons, they nonetheless hold the potential for the expansion of JFM in the country.

V) Sharing of experience

Each state in India has passed its own resolution on JFM to fit local socioeconomic, political and geographical conditions. It is vital that experiences of its implementation both successes and failures be shared with one another. Thus it becomes essential to find ways and means for the sharing of experiences between various states. With this in view, the government established a committee comprising of forest officers from six states and a member of the JFM cell in November 1999. This committee was also given the responsibility of preparing formats for monitoring JFM programmes and identifying items of the JFM programme for systematic funding, with due regard to long-term sustainability.

For example when forty Saora tribal families in Mahapada village began protecting 25 hectares of denuded hillside on Rupabalia hill in Orissa in 1981, higher caste groups ignored them. Fifteen years later, all ten communities surrounding the hill are involved in protecting over 2000 hectares of healthy mixed deciduous and secondary Sal trees. (Fig.13.12)



Fig 13.12: Mixed deciduous secondary sal trees
(Source: Andhra Pradesh Forestry Project VSS members at work)

Box 13.2: Some examples of Community Conserved Areas in India.

- Protection of 1,8000 ha of reserved and protected forest, for more than two decades, by Gond tribals in Mendha (Lekha) village, Maharashtra. This is an offshoot of the struggle towards tribal self-rule.
- Regeneration and Protection of 600-700 ha of Reserved Forests and grasslands, struggle against limestone mining, and *in-situ* conservation of hundreds of varieties of indigenous crops by the villagers of Jardhargaon village, Uttaranchal.
- Protection of sea turtle eggs, hatchlings and the nesting sites by fisher folk community in Kolavipalam, Kerala.
- Traditional conservation of Painted Stork and Spot-billed Pelican nesting sites by villagers in Kolkare Bellur village, Karnataka.
- Six hundred hectares of regenerated village forest in the Loktak Lake catchment's by Ronmei tribe in Tokpa Kabui village, Manipur. Here hunting ban on endangered Sangai deer (Brow -antlered deer) is self-imposed.
- Thousands of sacred groves across the country, though fast depleting, are still being preserved by the local communities.
- Regeneration of forests, revival of traditional water harvesting structures, regulated use of water and forests resources; ban on hunting of wild animals by villagers in and around Sariska National Park in Rajasthan, under the leadership of an NGO Tarun Bharat Sangh.

VI) Creating a JFM network

In order to give added impetus to JFM in India, the government instituted a JFM network at the national level in February 2000. The JFM network act as a regular mechanism for consultation between various agencies engaged in JFM work and also obtains constant feedback from various stakeholders on the JFM programme for proper policy formulation and suitable directions to states.

Given the mammoth size of the ongoing JFM programme on a national level (Fig. 13.13), promoting feedback and exchange including the views and reactions of different stakeholders through the establishment of a JFM network is considered an appropriate step.

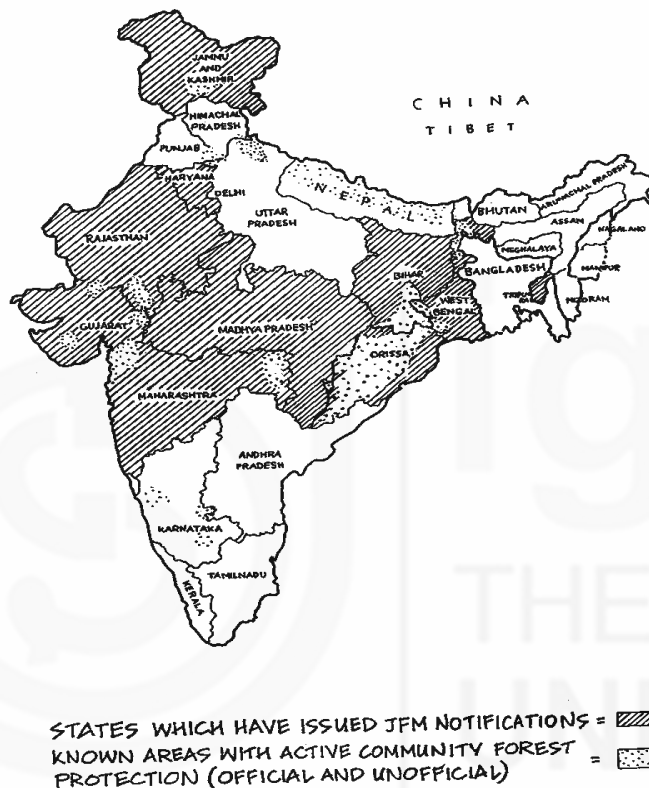


Fig. 13.13: JFM in Indian states.

(Source : <http://www.asiaforestnetwork.org/pub/pub23.htm>)

VII) Issuing guidelines for strengthening JFM

The government has developed guidelines for strengthening the JFM programme based on past experience. Almost a decade after the first governmental notification of JFM was issued in June 1990. These guidelines represent the latest JFM policy directives, and present a structured and broad framework for implementation of JFM in India.

The guidelines set forth a number of measures for strengthening JFM in India, including increased legal support for JFM committees, promoting of women's participation in JFM programmes, the extension of JFM into good forest areas, the preparation of micro plans in JFM areas conflict resolution and the official recognition of self-initiated forest protection groups (SIFPGs). The guidelines also highlight the need to plough back a minimum of 25 percent of the revenue earned on products harvested by village communities into meeting the conservation and development needs of the forests.

VIII) JFM in afforestation schemes

Government's emphasis on participatory forest management, investments in afforestation under the five year plans are being revamped in order to promote people's participation in project formulation and implementation. After the independence of India in 1947, the successive government launched a series of five year plans with targeted budgetary allocations for the development of various sectors. The first five year plan was implemented during 1951-1956. At present, the tenth five-year plan (2002 – 2007) is underway. In short, the purpose of the National Afforestation Programme is to make JFM a central and integral part of all the afforestation projects in the country.

Policy issues and challenges ahead

The emergence of new policy directives from time to time as summarized in the preceding section also implies that JFM is not bereft of problems. The inception of the JFM programme in India was a daunting task for the FD, NGOs and other stakeholders. The state governments issued their own JFM resolutions to set the guidelines for their implementation. However, it was not possible to visualize at the outset the range of problems that would be confronted in each situation and at the different stages of JFM implementation.

Equity in participation

Equity in participation in a JFM context refers to the participation of all stakeholders/users with an emphasis on weaker/under-privileged societal elements (such as the landless labor force, marginal and small scale farmers, scheduled castes, tribal groups and women as defined in the nation's forest policy of 1988. JFM programmes also create employment for poor people and up to 60% of money is spent on the wages. It is important to emphasize here that it is primarily the weaker sections of society that are involved in the plantation and protection activities in JFM.

The government resolutions on JFM in India advocate active participation by women in the decision-making process and in determining forest management priorities. In the state of West Bengal, a woman automatically becomes a member of JFM committee by virtue of her husband being a member, but even then the husband is regarded as the primary member (Agarwal 2001).

A recent study undertaken by the government suggested that the FD should recruit female staff at all levels and also increase the number of women extension officers to reach out to women more comprehensively. Nevertheless, it is difficult to speculate when the much needed and veritable participation of women in JFM in India will be ensured.

Equity in benefit sharing

Equity in the sharing of benefits derived from protected forests managed under the JFM programme is as important as equity in the participation in the JFM programme itself. This is one of the major challenges affecting the sustainability of JFM in India.

Problems regarding benefit sharing have also been confronted by participatory forest management schemes in neighboring countries, such as Nepal (Shrestha 1996) and Sri Lanka (MacKenzie 1998). In the case of India, two sets of problems can be discerned: that relating to the distribution of benefits amongst the users themselves, and those relating to the distribution of benefits between users/village communities and the FD. For example economically, the forests of Sarangi range are most important for Orissa's village women (Fig. 13.14). Fuel wood head loading can bring Rs. 15-30 each day to low income families, while thousands are employed making leaf plates and thus JFM are helping in the family income of poor families.



**Fig. 13.14: Women from Orrisa village benefitted through JFM
(Source: Asia Forest Network)**

In overcoming this problem, it is important for policy makers to examine the history of past settlements during the colonial rule, wherein forest users were granted certain rights (Hobley 1996). These rights should not be abruptly extinguished by imposing new benefit sharing arrangements under participatory forest management, as that will determine the response of local people to JFM. The policies have also to ensure that poor families and women get equal entitlements in benefit sharing.

Institutional finance

The National Bank for Agricultural and Rural Development (NABARD), an apex development bank in India, supports and promotes agriculture and rural development including tree plantations on private and community lands. Inter-institutional cooperation is a pre-requisite for the future success of this strategy. Unless constraints are overcome, the NABARD cannot by itself play any effective role in speeding up the funding of JFM in the country.

Institutional impediments

With the wide acceptance of JFM in India, the need to overcome various institutional impediments, which result in high transaction costs, is being increasingly realized. The JFM programme lacks legislative support even when it is based on administrative orders (Sarin 1998).

For the continued success of JFM, village communities need to be provided with enough flexibility to build institutional arrangements that are sustainable. As such, there is a pressing need to unify policy in at least the more important aspects of JFM structure across the country in order to achieve better coordination among the states and for efficient monitoring and evaluation.

Marketing of forest products is often affected by institutional impediments. For example, in several states, provisions of the Forest Law impose restrictions on felling, transportation and sale of timber.

Lack of appropriate marketing infrastructure for forest produce has always been a serious constraint in the Indian forestry sector, in contrast to the well-developed marketing infrastructure that exists for agricultural produce in the country. It would be a mistake for policy makers to watch and wait rather than to resolve this important issue, as in many states JFM is still in its infancy and marketing has not emerged as a serious constraint.

Moreover, in recent years the amount disbursed by financial institutions to afforestation programmes, mostly for farm forestry projects, has declined considerably (Government of India 2001a). In 1998-1999, the figure was INR 90 million as compared to INR 290.5 million in 1990-91

Most of the funds for JFM come from government sources and donor agencies.

Conclusions

With the passage of time, policy makers have realized the need for new policy measures for expanding JFM programmes together with the need for overcoming the constraints in their implementation.

Furthermore, the present analysis of forest policies on participatory forest management in India reveals the government of India's determination for the successful implementation and expansion of JFM throughout the country. Nonetheless, such a resolve is insufficient on its own without the collective effort of all stakeholders, encompassing governmental and non-governmental organizations. Development of any successful doctrine is likely to be beset with failures also. JFM programme in India currently confronts several teething problems inherited from the past. It is also facing the range of challenges that normally crop up when an institution begins to take root. A sound forest policy is necessary in order to overcome these issues and challenges.

Now, the time has also come to streamline the plethora of forest policies, rules and regulations inherited from the colonial period as well as those formulated since independence, in view of JFM as a major forest management model. To sum up, these issues and challenges to the JFM programme in India require in-depth study and analysis for their expeditious resolution.

It seems reasonable to predict that all forests in India will eventually be managed under the principles of JFM, given the government's resolve to expand the programme to good forests, rather than keeping it confined to degraded forests only. The recent policy initiatives on participatory forest management by the government of India have set an example to be emulated by other countries in South Asia as well as other parts of the World.

13.8 DEVELOPMENT OF SUSTAINABLE FORESTRY CONTEXT: SOUTH ASIA

South Asia has been witness to a series of dramatic experience in the participatory management of forest resources. Since the 1970s social and community forestry programmes in both India and Nepal have attempted to transform the relationship between a powerful state bureaucracy and local people directly dependent on forest resources. There is failure of traditional custodial management of forests by government. There will be no halt to the loss and degradation of the sub-continent's forests, without the active participation of local communities.

The inadequacy of government based approaches to forest protection and management led to the search for alternatives, and experimentation with a number of approaches. These can generally be classified into social forestry, farm forest, community forest, joint forest management and rural development forestry. In this unit, the umbrella term used to refer to all these approaches is participatory forestry, accepting the diversity of interpretations of participatory. Although as some have contended the use of the word participatory is probably more problematic than some of the more clearly focused terms such as collaborative or good forest management.

13.8.1 Advent of Social Forestry

The earliest mention of social forestry was in India where several States pioneered tree-growing programmes outside the traditional forest boundaries. For example, in India, the State of Gujarat in 1970 set up a community Forestry Wing in the Forest Department and Tamil Nadu started a tree-planting programme for local employment generation on tank foreshores and village wastelands as early as 1956. After 1973 half of the proceeds from these plantations were given to local panchayats (the lowest unit

of local government administration) and local people were allowed to collect fodder from the plantation areas.

Social forestry-practice is of raising tree to fulfill the basic needs of fuel wood, fodder, small timber and medicinal plants for local populations (Box 13.3). Under some interpretations of social forestry it could be considered that its formal origins lie in government programmes of the late nineteenth century where village forests were demarcated. However under other interpretations this would be considered to have been a programme of removal of local people's rights to manage forests. Indeed many commentators in both India and Nepal would assert that participatory forestry has been implemented, informally and unrecognized, by local people over many decades and generations, and that the so-called new approaches are merely reproducing (often badly) indigenously derived systems of forest management.

Box 13.3: Bio biodiversity enhancing practices in tribal people.

Kol people (Fig. 13.15) in Satna and Panna districts of Central India, interesting members of the community visiting different places for various purposes collect land races or ethno cultivars currently not available with them. They plant this germplasm near the traditional orchards. Ten such mango orchards were surveyed at Sarai, Amraiha, Barha, Khagaura and Lakhaha villages in and in district Satna, Sugaraha and Dadwaria village in district Panna in Madhya Pradesh. These orchards held 162 types of trees, supposedly landraces, bearing unique fruits. These differed in shape, size, taste, aroma, pulp content, period of ripening, colour of epicarp and other traits. Seeds and vegetative materials of a large number of medicinal plants are also collected and planted near settlements and courtyards. Similarly, people in southern Aravalis plant trees along the fencing around their huts (See Table 13.1). All these practices contribute to landscape heterogeneity and biodiversity enhancement.

Table 13.1: Five most preferred trees for traditional courtyard and farm planting by tribals of Aravalis

No	Species	Traditional use for subsistence
1.	Ber (<i>Zizyphus mauritiana</i>)	Food, fodder, fuelwood, fencing material, grass storage larder
2.	Sandesada (<i>Delonix elata</i>)	Food, fodder, fuelwood, grass storage larder
3.	Bamboo (<i>Dendrocalamus strictus</i>)	Small timber, fodder, fencing, thatching
4.	Aam (<i>Mangifera indica</i>)	Shade, fuelwood, timber, food
5.	Neem (<i>Azadirachta indica</i>)	Shade, timber, fodder, fuelwood, medicine, grass storage larder



Fig. 13.15: Kol tribal people restored Kudada forest.
(Source: Asia Forest Network)

Thus, by the early to mid-1980s it was possible to make some assessments of the social and community forestry programmes. Dichotomy of understanding the meaning

of 'social' in social forestry has interesting and long-running consequences for participatory forestry. In the early years external funding was given on the basis of poverty alleviation where forestry was seen to be the appropriate entry point to reach the more marginal groups in society. However, as evidence from India indicates this ideal was far from realized through the social forestry programmes and in many instances poorer groups are dispossessed from the land they had been using, particularly those groups whose livelihoods were dependent on access to grazing lands. This was also the cause of people's conflict in participatory forestry.

Although there is evidence to indicate that farm forestry in certain parts of India proved to be immensely successful in the initial stages, as demonstrated by the demand for seedlings which far outpaced projects or supply. Private tree growing on a large scale was confined to parts of North-western India, Gujarat and Karnataka, resulting in localized over-production of poles and a consequent depression in prices. Perhaps because of falling prices and local surpluses, the initial boom in farm forestry has slowed.

13.8.2 Drawbacks of Social Forestry

Reviews of social forestry programmes, which had objectives of developing the common property resource, have been far less positive. One of the common factors identified in their failure was the absence of people's participation in planning and management, which led to poor survival rates and the reluctance of community institutions to take over responsibility for the management of plantation (Table 13.3).

Furthermore, even though both these programmes shared the common objective of reducing pressure on forest lands through creating alternative sources of fuel, fodder and forest products, degradation still continued. The intense focus of funds and energy on private and common lands in India, has redirected attention away from investment and management of natural forests.

While community forests are being managed in Nepal, joint forest management arrangements are being explored in India between local people and State Forest Departments, in the process many self-initiated and indigenous forest management systems are being documented and are gaining recognition. Social forestry and farm forestry were the first new practices in recent history to bring foresters out of the forest and into the villages and farms of the people who are the forest's primary users. New community forestry programmes seek to stop further degradation recognizing the role of these users in the management of natural forests – bringing the people back into the forests.

13.8.3 Challenges of Social Forestry

Experiences of practitioners of social and community forestry in India and Nepal suggested that, although there were many similarities in experiences, there were also some major differences. Although these two nations may have many points of interaction there has been little or no sharing of experiences in the forestry sector (Fig. 13.16). Large sum of money is invested yet these new forestry experiments are still evolving, and their focus on local institutions and equity make them more process-oriented, and less amenable to rigid target-based development planning.

People's participation, reorientation and training of forest staff, building local level institutional participatory micro planning, equitable benefit sharing, and gender-sensitive programming have all become new development imperatives. Community forestry in Nepal and joint forest management in India are beginning to take on these challenges in different ways. The nature and extent of the shift of control from State/national to local/ community level also differs considerably.

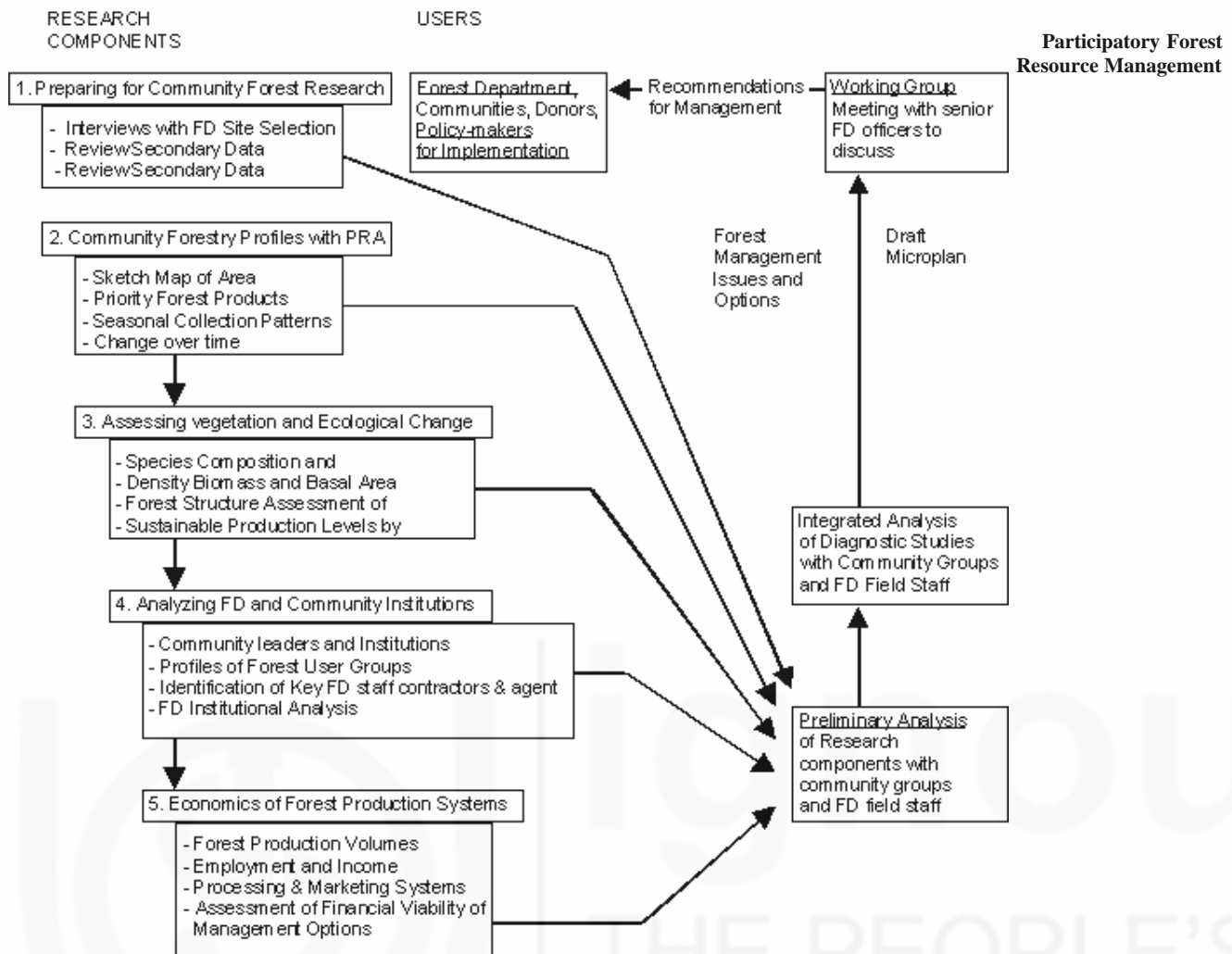


Fig. 13.16: Flow chart of diagnostic research activities, analysis in community forestry

Ironically, the programmes in both countries have focused more attention on initiating community protection (India) (Fig. 13.17) or simple operational plans (Nepal) than on making the more dramatic shift to active co-operative forest managing and to addressing the technical social and economic issues which accompany such a transition. Many of the problems, faced by both countries, are therefore very similar.



Fig. 13.17: Nursery developed by community for social forestry

Table 13.3: Various types of forestry their benefits and short comings.

Alternatives	Strengths / potential benefits	Shortcomings/ potential risks
Traditional forestry	Primary objective was management of timber resources	Environmental and social concerns did not receive attention. Biotic interference continued to degrade the forests
Social forestry	Pressure on state owned forests for meeting requirement of pulp for forest based industries, small timber and firewood for general public likely to be eased. Optimum utilization of waste lands. Small and marginal farmers targeted.	Pressure on forests by local communities for their domestic and livelihood not addressed. Activities too scattered to have impact. No holistic approach to management of forests. Activities were planned and managed with little sustainability considerations.
Joint Forest Management	Improvement in forest density and quality. Community participation leading to better appreciation of forestry issues and better management of forests. Targeted to forest dependent and vulnerable groups.	Forest management driven more by economic considerations. May not be sustainable in long run. Productivity issues inadequately addressed. Community ownership concerns. Initiatives not fully institutionalized and dependent heavily on local leadership.
Community Forest Management	Holistic development of all natural resources. Improved environmental management. Increased forest productivity. Sustainable management of forest and other natural resources. Environmental and social management plans integrated into planning at the village level.	Potential conflicts in big and heterogeneous VSS. Still untested.
Without Project Scenario		Continued degradation of forests, acceleration in run off, and increase in soil erosion; limited recharge of ground water; inadequate fuel wood and fodder supply; limited availability of NTFP; greater biodiversity loses; less sustainable forest management; poverty among the forest dependent communities not likely to be addressed; limited community empowerment; limited women's empowerment; increase in incidence of conflicts.

India's experiences indicate that community forest protection can be highly effective in regenerating degraded natural forest. Government planners in many developing nations increasingly recognize the need, to devolve management downward from forest agencies to local communities. More interaction among planner's, forest administrators and rural communities will provide learning ground, which would accelerate change towards sustainable growth and development.

Sustaining well-being of people in developing countries, particularly in the tropics, can be achieved by bringing people back into the equation and promote community involvement in forest management, through collaborative, strategic and applied research and through the transfer and adoption of appropriate new technologies and social systems for national development. Helping local communities and small

farmers gain their rightful share of forest resources, while increasing the production and value of forest products, can help to conserve forests and improve the livelihoods of people, especially in the tropics.

13.9 SUMMARY

Let us summarize what you have studied so far:

- Forestry, as a follower of development strategies evolved in wider fields, straggled behind the changing modes of development policy. The shift away from industrialization as the vehicle for development slowly percolated through the forestry sectors of aid agencies.
- The wise management of forests is a major environmental priority. Many new plans and programs have been proposed, especially for tropical forests.
- A major goal of forest management is sustained yield; some forests are managed like mechanized farms.
- Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices.
- States should recognize and duly support their identity, culture and interests and enable their effective participation in the achievement of sustainable development.
- There is no blueprint for institutional change; the structure of organizations necessary to meet national and local imperatives must emerge from the particular circumstance of each nation.
- The principle of decentralization, although global, does not necessarily lead to a globally uniform response. These responses are the transition from public to private sector operation.

13.10 TERMINAL QUESTIONS

1. Study the forest Policy 1988 and discuss how it favours the participatory management in India.
2. What is participatory forestry and how it can be used in sustainable development of forest in India?
3. Make a project on JFM of your area describing its successes or failure and why?
4. Make a map of India and show the places where JFM is successful.
5. What measures do you suggest apart from described in unit to make JFM a success.
6. Discuss your views on Participatory Forest management in relation to gender issues, equity and socio-economic development.
7. Give your views on the word "participation" and its importance in forest sustainable development and management.
8. How participatory management can help the people living on the edge of forest and also helping in the conservation of forest, also give examples by going through magazines, papers and case studies in India.
9. What are your opinion or experiences of JFM in India?
10. Is conservation of forest ecosystem possible without involving local people?
11. Are foresters today equipped to reorient their approach to forest management?
12. How does forest dependent people's relationship with forest under go change with the depletion of forest resources.
13. How do the local village communities find access to forest?
14. What type of property regime is joint forest management?
15. Make a list of major items of wood procured by tribal from the forest in your area.

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CAMPAIGN FOR PARTICIPATORY FOREST MANAGEMENT IN KARNATAKA

Sharachchandra Lele, 2001

**The Concept of Participatory Forest Management, its Rationale and Implications for
Karnataka****Background: The JFPM experience**

The question of how forests should be managed has been one of the burning issues concerning rural livelihoods and the environment. About ten years ago, mainly due to the sustained and concerted efforts of activists, scholars and rural communities, the government of India accepted in principle the need for the participation of village communities in forest management. The concept was then implemented under various joint forest management programmes. In Karnataka, the initiation of Joint Forest Planning and Management (JFPM, as it is called) in 1993 coincided with the initiation of the Western Ghats Forestry and Environment Project with British funds. Here again, a coalition of activists and scholars, led by FEVORD-K, was responsible for ensuring that the concept of people's participation was incorporated into the project. Subsequently, JFPM was also incorporated into the Eastern Plains Forestry Project executed with a loan from the Japanese Bank for International Co-operation.

The past eight years of experience with JFPM in Karnataka as implemented by the Karnataka Forest Department leaves much to be desired. While JFPM programmes have engendered significant interest and general awareness in forest management from rural communities in the project areas, JFPM has neither made a serious dent in forest degradation or deforestation, nor has it benefited local communities significantly, whether in subsistence or income terms. The main reasons for this, which have emerged from many rounds of discussions, studies, consultation with Village Forest Committees (VFCs) and independent reviews, are:

- a) lack of clear and adequate rights over forest produce;
- b) lack of sufficient autonomy in day-to-day management and no transparent guidelines for ecological sustainability;
- c) lack of attention to existing rights and privileges leading to confusion and often aggravating intra-village inequities in forest access;
- d) lack of security of tenure and sustainability of institutions due to the programmatic and project-dependent and funding-oriented nature of implementation;
- e) focus on only degraded forest department lands leading to only partial coverage of the public lands used by villagers.

Further, JFPM has not been implemented uniformly in all parts of the state and local communities are not in a position to ensure its implementation.

In short, it is not just the implementation of JFPM that is faulty, but also the very conceptual and policy framework within which JFPM has been set up needs to be thoroughly re-examined. Thus, the time has come for us not just to demand Government's support for continuing JFPM and VFCs as they now exist but rather to revitalise the campaign for truly participatory, sustainable, equitable and economically-viable model of people's participation in forest management. This campaign would have to begin by re-stating the basic premises of participatory forest management in the Karnataka context and pointing to the broad directions of policy change that are required. This concept note attempts to do so.

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Joint Forest Management in HaryanaTERI
2001

The success of the JFM (joint forest management) in Haryana is manifest in the improved status of its forests, socio-economic development of the people and the evolution of an institutional process of cooperation between the HFD (Haryana forest department) and the HRMS (hill resource management societies). The maximum average yield of bhabbar grass

Participatory Resource Management

was 850 kilogram/ha under six years of community protection compared to the yield of 300 to 360 kilograms/ ha in the unprotected areas. The total number of trees/ha increased from a minimum of 700 in unprotected forest areas to a maximum of 3960 in case of 10 years of protection. The number of shrubs/ha is maximum in unprotected forest areas 13,885 whereas in areas protected for 10 years, it is as low as 3247. Water-harvesting structures help villagers to increase their earning from farming through diversifying the agricultural activities. Supply of bamboos to Bhanjda community at concessional rates provides employment and a source of income. Leasing out of forest areas to HRMS for extraction of bhabbar contributed to the development of village infrastructure and also economic betterment of the local communities, especially Banjaras. Leasing out of forest areas to HRMS for extraction of fodder grasses helped the pastoral community to re-stock their livestock with more productive breed.

Forests in India have continued to deteriorate under pressure from the growing population, both human and livestock. A growing number of foresters, economists, social scientists, public administrators, and policy-makers now acknowledge that unless local communities are effectively involved in establishing sustainable forest management systems, deforestation will continue at a rapid rate. Therefore, the challenge for forest regeneration and protection is to develop a management practice that combines the economic interests of forest users and their active involvement in forest regeneration and conservation.

The area under the Shivaliks, which was once covered by dense forests with a variety of flora and fauna, reached its worst form of degradation in the early 1970s. Reckless felling of trees, frequent forest fires, and increasing biotic pressure destroyed the vegetation in the area. Large tract of lands was cleared for agriculture. The problem of grazing was so serious that in heavily grazed areas, 4-6 cm of topsoil used to disappear after just one heavy shower. On the other hand, because of the poor economic conditions of the people, forest laws and traditional methods of forest regeneration proved ineffective. Against this background, an intervention has been designed with three criteria, namely ecological viability, economic feasibility, and social desirability (social and political acceptability).

The programme site is located in the Himalayan foothills (Shivaliks) of northern India covering about 3000 square kilometers of north and north-eastern Haryana. The tract is hilly with rugged and undulating topography. The slopes are gentle to very steep. The seasonal torrents, which originate from the hills and get wider as they enter the plains, are a peculiar feature of the drainage system of the area. The area falls under two territorial forest divisions, namely Morni Pinjore and Yamunanagar, on the forest administration map. The local population consists of Gujjar, Jat, Ramdaisya, Rajput, Banjare, and Bhanjda castes. The economy of the area is primarily dependent on agriculture and livestock. However, agricultural productivity in the area was beholden to the whims of nature in the absence of irrigation. Livestock, the other main source of livelihood, consisted of mainly unproductive stocks because fodder was scarce. The Bhanjdas (the basket-making community) and Banjaras (those who make ropes from a grass locally known as Bhabbar) are directly dependent on availability of such NTFP(non-timber forest products) as bamboo and 'bhabbar'.s

An integrated approach to rural development has been adopted to elicit people's participation in regeneration and conservation of forests. The stress is on fulfilling the social, economic, and human development needs of communities in the belief that a self-reliant community is essential to sustaining forests and should be the basic philosophy for community Forestry Programmes.

TERI began a programme of JFM (joint forest management) support programme in the Haryana Shivaliks in July 1990 in collaboration with the HFD (Haryana forest department), with financial support from the Ford Foundation. The programme envisages people's participation in the management of forest resources of the state jointly with HFD. TERI has been providing all the necessary backup support in developing and implementing the programme.

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UNIT 14 PARTICIPATORY MANAGEMENT OF MOUNTAIN ECOSYSTEMS

Structure

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14.1 INTRODUCTION

Mountain ecosystems are an important source of biological diversity, along with water and mineral resources while forestry, agriculture and recreation are important economic activities in several mountain areas. Further more, mountain conditions, being different from those on the plains, need special consideration. However, these conditions have been disregarded by both conventional development strategies and by mountain people themselves (within the changing demographic, institutional, and technological settings), leading to the breakdown of production systems that are resource-regenerative and there is diversified, indiscriminate resource use intensification, and degradation of environmental resources.

As 10% of the earth's population live in mountain areas this has resulted in various forms of resource degradation reflected by decreasing resource availability and productivity, and general deterioration in the economic conditions of most people depending directly upon mountain resources, especially land-based activities. Thus, proper management of mountain resources and socio-economic development deserves high priority.

In this unit we will stress upon the ecological role of mountains, agriculture, biodiversity and various socio-economic constraints of mountain ecosystem. These days' tourism and urbanization are becoming one of the important factors responsible for degradation of mountain ecosystems. But sustainable ecotourism can also play an important role in conservation of mountain areas. The Hindu Kush-Himalayas travels

along the eight countries and play important role in deciding the economic as well as ecological conditions of these countries. Various issues and long-term goals for sustainable development of Hindu Kush-Himalayan region are dealt with great emphasis on people's participation in this area.

Objectives

After studying this unit you will be able to:

- appreciate the ecological role of mountains,
- describe the environmental importance and fragility of mountain ecosystems,
- list the various issues of socio economic considerations,
- appreciate the participatory management in mountain ecosystems,
- explain the importance of sustainable mountain development,
- list the high priority issues in Hindu Kush- Himalayas, and
- describe long-term goals for sustainable development of the Hindu Kush-Himalayan region.

14.2 MOUNTAIN ECOSYSTEM

The highest mountains of world are in the Himalayas with Mount Everest being the highest.

Mountains are ecosystems with a distinct identity just like the flood plains, deltas, mangroves, wetlands, and deserts, When we attempt an overview of the mountain ecosystem of South Asia, we find a fascinating variety from the high mountains of the Karakoram, Himalayan, and Hindu kush ranges starting from Iran and Afghanistan and ending in Nepal, India and Bhutan to the low flung hills elsewhere in Pakistan, India, Bangladesh and Sri Lanka. Thus, we have the Zagross in Iran and Sulaiman and Central Makram ranges in Pakistan; the Aravalis; Sivaliks, Vindhyaachal ranges, the Khasi, Naga and Mizo hills and the Western and Eastern Ghats in India; the Chittagong hill tracts of Bangladesh which are like a spur from the Himalayas and the central mountains of Sri Lanka.

14.2.1 Fragility of Mountain Ecosystems

Most of the mountain ecosystems are very fragile in the geological sense, prone to seismic movements. Lands slides thus are highly erodible. The Himalayan ecology is always characterized as fragile 'brittle' and vulnerable. The interconnections between different types of vegetation and water are so close and so precariously balanced, that even a slight change or imbalance in one can affect all others. The rocks are often loosely held together and there is evidence from the fossil findings in the Himalayas and even in the rock formations in the Deccan that many of these mountains were raised from the ocean floor millions of years ago. Such movement implied the existence of sand, shale, limestone, marl, phyllites, schists and other marine substances. Hard rocks like granite predominate. Even now there is some evidence of activity, particularly in the Himalayas where the plate movements below seem to suggest that the mountains are rather young.

14.2.2 Ecological Role of Mountains

The mountains of South Asia as in other areas have a definite role to play in the climate of the rest of sub region. For example like Himalayas, (Fig. 14.1) they act as windbreaks or stop the march of the desert. The mountains do have a bearing on the climatic conditions on the plains. Their role as water conservers and moderators of water flows is however better understood and appreciated. Thus, melting snow from the Himalayas keeps rivers like the Indus, Ganga and Brahmaputra all over the year and help in irrigation of the plains below. The other major mountains ranges, the Satpuras, the Vindhya, the Aravalis and the Khasi and Garo hills in the east, fulfil similar roles to a greater or lesser degree.



Fig. 14.1: The majestic Himalayas

The Himalayas (Sanskrit for “abode of snow”), is a mountain system in Asia, comprising a series of parallel and converging ranges and forming the highest mountain region in the world. More than 30 peaks of the Himalayas rise to heights of 7620 m (25,000 ft) or more, and one of these, Mount Everest (8848 m/ 29,028 ft), is the world’s highest mountain.

The major mountain ranges in India are the Himalayas and the Western Ghats. The Himalayas are among the youngest and highest mountain systems in the world. They traverse an arc of about 2500 km between the Indus and the Brahmaputra rivers, with an average width ranging from 100 to 400 km. The Himalayas pass through eight countries: Afghanistan, Pakistan, India, China, Nepal, Bhutan, Bangladesh and Myanmar.

The Himalayan terrain encompasses a large variety of structurally weak rocks and planes that are prone to mass movement. The rocks are weak, sheared, shattered and cleaved due to existence of several faults and thrusts and many of them are still active and show considerable movement. The Himalayan region is still seismically active and prone to earthquakes, which also accelerates soil erosion. In India, this mountain ecosystem is spread over 11 states: Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim, Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal. They are inhabited by 51 million people (6% of India’s population.) covering 18% of the geographical area. The Himalayas have probably one of the highest hydropower potentials in the world, which includes the Indus, Ganga and Brahmaputra rivers. This mountain system represents one of the richest natural heritage sites in the world. One-tenth of the world’s known species of higher altitude plants and animals occur in the Himalayas (IPCC, 2001).

This rich environmental heritage of the Himalayan region is under pressure from natural and human-induced stresses such as earthquakes, landslides, construction activities (roads and dams) and poaching. The impact of these pressures is reflected by declining forest cover in the states of Assam, Manipur, Meghalaya, Mizoram, Nagaland and Sikkim and the loss of wildlife habitat, life and property caused due to natural disasters. Many species of flora and fauna of the region are becoming endangered due to deforestation.

In India, the Western Ghats run to a length of about 1600 kms, more or less parallel to the west coast, starting from the state of Maharashtra and continuing until Kanyakumari, the southern-most tip of the country. The region covers an area of 1.6 lakh sq kms supporting a population of 442 lakh people (Census of India, 1991). The Western Ghats is the source for many major peninsular rivers such as the Godavari, Krishna, Kaveri and Periyar. About 30% of the area of the Western Ghats is forested. The region faces increasing stress from population, submergence of forests areas by river valley projects, encroachment and clearance of forest lands for raising plantations and shifting cultivation (Ninth Five-Year Plan, 1997-2002). The steep topography combined with high precipitation makes this region susceptible to soil erosion. In Kerala for instance, a total of 50 lakh tonnes of nutrient-rich soil is washed away every year (Planning Commission, 2001a).

Participatory Resource Management

Dr. M. S. Swaminathan, the well-known agricultural scientist in his first G. B. Pant memorial Lecture. Said, "the destiny of nearly 40% of our population inhabiting the Gangetic plains depends on the management of the Himalayan hydrological estate. One of the urgent tasks facing us is the conservation and wise use of this extensive hydrological estate, spread over an area of about 6,0,000 sq. km".

The Western Ghats also plays an important role in controlling and directing monsoon. As the rain bearing winds from the ocean hits the Ghats, they drop their moisture on the western side and have little left for the vast space across the hills. Thus Bombay has 100 inches (254 cm) of rain while Puna (160 km away) on other sides of Ghats gets mere thirty inches (76 cm). The Western of seaward slopes of Ghats is lush and rich in vegetation.

Innumerable springs, streams and waterfalls in most mountains help in storing water for drawls in emergencies like long period of drought. There are many lakes among the mountains, which help stabilize the water regime helping the fauna as well as the flocks of the nomads. The waters of the mountains feed some of the most beautiful wetlands (Fig. 14.2) of the world like the Dal Lake.



Fig. 14.2: Renuka Wetland in Himanchal Pradesh
(Source: ENVIS-NODE Himachal Pradesh)

14.2.3 Soil, Vegetation and Agriculture

The mountain ecosystems store a great deal of soil and also add, constantly by the processes of erosion of the rocks, to the silts of the river and deltas enriching food production potential downstream. Excessive run off of soil occurs when the diverse forests on steep gradients are removed. There are cold deserts too in parts of the mountains like Himalayas, which have different types of impacts on climate of the rest of the region. There are grasslands or rangelands too in the mountains like the Alpine meadows, which support large populations of domestic and wild animals. In the Niligiri mountains of South India the grassland forest ratio is a matter of considerable debate. Recent efforts to convert grasslands into forest plantations have encountered resistance from the indigenous population of Toda tribal living there as they have a pastoral tradition.

The South Asian mountains have the special feature of having high human and animal population densities. This dictates a great deal of diversion of land for agricultural settlements and allied activities. When the agrarian practices are not oriented to soil and water conservation, a vicious cycle sets in, denuding a lot of mountain slopes of its soil cover. As the process continues, people go for extensive cultivation to support themselves, in the process destroying the forests and compounding the problems. The mountain regions of South Asia are subject to the greatest amount of shifting cultivation, which involves opening up biodiverse areas having long duration forestry crops for monoculture and short duration crops like cereals. Absentee landlordism is noticed in several areas resulting in fallows and neglect of crop rotations. Intensive cultivation couple with population pressure has resulted in very small land holdings. Thus the average size of holding in Himalayas is smaller than elsewhere and that of the country as a whole.

The 'Shola' forest in South Indian hills, the dense vegetation alternate with treeless grass lands on exposed hill sides.

14.2.4 Biodiversity

The mountain systems in South Asia largely lie in the latitudes nearer the Equator and thus have very rich tropical biodiversity. Himalayas, the entire mountain chain running from northwestern to northeastern India, comprising of a diverse range of biotic provinces and biomes, and 7.2% of the country biomass. Trans-Himalayas an extrusion of the Tibetan plateau, harboring high altitude cold desert in Laddakh (J&K) and Lahaul Spiti (H.P.) comprising 5.7% of the country landmass. The Himalayas have a mixture of diversities, both tropical and temperate. They also have, in pockets like northeast India some of the richest biodiversity, entitling them to the sobriquet of a “hot spot” of biodiversity which you have already studied in Unit 6 of Block 2 of MED-006.

Western Ghats region is considered as one of the most important and one of the richest centres of endemism. The region has 490 arborescent taxa of which as many as 308 are endemics,(43%), of which 235 species of endemic flowering plants are considered endangered. Due to the past geological events, there is vegetation of Indo Malayan origin in these areas. There is tremendous species richness and endemism. These mountains are considered another hot spot. But the advent of roads, industrial projects, townships and mining are destroying the biodiversity; a matter for considerable worry and with deforestation of the Western Ghats the surface horizons of the soil are rapidly carried away by the torrential monsoon rains, the steep slopes hastening the process. There are no chances of reinstating such dense forests on the poor soil that is left behind. Agro forestry practices could partially help redress the balance but they are also rarely used in the South Asian mountain ecosystems.

14.2.5 Management of Biodiversity

Scientific research to document biodiversity and to increase productivity of traditional crops or trees as also of acceptable exotics should be put on a firm footing. Scientists should ensure this is done without destroying the base of biodiversity. There should be no compromise on protection of biodiversity in the mountains and for this purpose full use should be made of the provisions of the Convention on Biodiversity. You have also read about various approaches of biodiversity management in Block 3, MED-006.

Research and extension methods with the co-operation of scientists, technologists, government, farmers and industry should find ways of providing additional incomes and employment in mountain villages by ensuring value addition in the collection and processing of medicinal plants. Successes on this can be replicated with foods like honey, fruits and flowers but care has to be taken that this is instep with human resource development and conservation of natural resources. Any wild swings in standards of living that will promote excessive consumerism and creation of wastes should be guarded against.

National Biodiversity Strategy and Action Plan in India

National bio-diversity Strategy and Action Plan has been initiated by the Ministry of Environment and Forests (MOEF) which aims to formulate local, regional, state and national strategies and action plans for conserving biodiversity for sustainable use of biological resources and achieving equity and fair benefit sharing in such use. The Council has been identified as a nodal agency for co-coordinating the formulation of State Biodiversity Strategy and Action Plan by the state of UP.

SAQ 1

- i) Why mountain ecosystem are considered fragile in nature?
- ii) Describe the importance of mountains in determining the climatic conditions of the sub- regions.
- iii) How Western Ghats help in controlling monsoon rain of that area?
- iv) Lists the activities in mountain areas, which accelerates soil erosion.

- v) List various methods to conserve and manage biodiversity in mountain areas.

14.3 SOCIO ECONOMIC CONSIDERATIONS

The mountains in South Asia harbour nearly 10% of the population of the region except in few countries. Of course more than 50% of the rest of the population depend on the bounties of the mountains like river waters, river sediments, timber and non-timber forest produce, and agricultural and horticultural produce. Landless unemployed are growing in numbers, leading to “money order” economics. This also has increased the burden of work on women who have shouldered the brunt of the household chores for centuries due to social structures and the phenomenon of out migration of able-bodied males. The basic reason is that in the context of rising population, the natural resources are being depleted at a much faster rate than they are regenerated. Consequently many able-bodied males migrate to the plain in search of work.

Knowledgeable observers are of the view that the extent of out migration from Kumaun and Garhwal hill areas is higher than that from any other part of the country. The migration from Chamoli has a specific characteristic i.e. the able bodied educated and skilled manpower goes out of the rural areas leaving their families behind. The migration, itself is a result of disequilibria between resources and needs.

14.3.1 Gender Issues

Gender issues are coming to the fore as literacy spreads, albeit slowly. Also women find the environment increasingly hostile as forests on which they depended vanish and they have to walk longer distances to collect fuel and fodder (Fig. 14.3). The medicinal plants on which, they depended for dispensing ‘grandmothers medicines’ are also disappearing, when they are exploited commercially, rather recklessly. According to Dr. M. S. Swaminathan; “the neglect of traditional food crops like Amaranthus, Chenopodium and buck wheat has not only weakened the household nutrition security system of the hill people, but also prevented the Himalayas from becoming the home of the health foods of the future”.



Fig 14.3: Women are left alone the mountains to do various work

14.3.2 Urbanization

The advent of forces of development, which are bringing roads, transport, telephones, television, are also bringing new diseases too to remote villages. The economic development of the mountain systems has also resulted in distortions. Projects like Dams generating hydel power often evacuate the power to the plains. In India we have 435 Dams built. Roads connecting villages and farms in the hills take away more produce and goods than they bring in. All this is breeding restlessness in the air and the

‘Uttarakhand’ agitation in the U.P. Hills of India is an example. There, the people want full-fledged autonomy and a complete say in managing their own affairs. In the Eastern Ghats of South India the tribal in the hills are agitated about non-tribal people from the plains taking away their lands and assets both by fair or foul means. The fact that many of these complaints are sometimes rooted only in perceptions does not take away the problem.

Urbanization and industrialization are features which are developing to the point of bringing in air and water pollution as well as waste accumulation in the hill economies, which always enjoyed clean air and good quality water, and where all wastes: predominantly organic used to be recycled. Cities like Kathmandu in Nepal, Shimla and Udhagamandalam (Ooty) in India, Thimpu in Bhutan are growing, ringing alarm bells of loss of natural beauty and onset of pollution.

14.3.3 Socio-economic Priorities

The socio-economic and related conditions of the mountain people ranks very high. The degradation of the natural resources is partly a function of natural factors and mostly those caused by human interventions. People use its resources, unsustainably. It is their demand for food, fodder, fuel, fats, and fibre, from the mountain sides and the changes in their lifestyles that make the immediate demands on the flora, fauna, water and land of the mountains. They have to avoid degradation and engage in sustainable utilization of natural resources. For betterment of the lot of their women and improvement in their knowledge of the environment should be revamped. They should be made to play an effective role in managing their own resources. To achieve this, the population has to be literate, healthy and reasonably well off economically. Programmes for eradication of illiteracy especially among women, and promotion of child welfare, health and sanitation should go hand in hand with poverty alleviation programmes tailored to the situation in the mountains.

In relation to gender issues, Regional Conference on Sustainable Development of Fragile Mountain Areas (SUDEMAA) at the meeting convened by ICIMOD in December 1994, advocated joint ownership of resources; and document case studies on the relatively higher status of women in mountain areas and incorporate them into the mountain agenda.

The cultural attributes of mountain people, which are conducive to sustainable development, should be protected. Ethno knowledge is one of the key attributes requiring careful attention with a view to documenting it and recording it too. One of the powerful ways to doing this is to empower communities especially women in the political, social and economic spheres. All programmes should be devised after full dialogue with the local people and this should be village based (also see Unit 13, MED-006).

14.4 ENVIRONMENTAL AWARENESS

The fragility of mountain ecosystem itself creates lots of environmental problems. In most countries of the region institutional strengths are not available to study the ecosystem as a whole and its carrying capacity to chart a path to sustainable development. The few institutions that do exist which traverse long distances to make their work percolate to the people at the end of the chain. Their studies too, with the aid of tools like satellite imagery have to reach the stage where they can influence policy makers to act in time to manage the mountain ecosystems better. The awareness has to increase in the people living in mountain ecosystems, and equally in the people living in outside non-ecosystems using the produce of the mountains as well. Unless others too appreciate the problems of the mountains and the mountain people, there will be no congruence of objectives of policy, legislation etc. Areas of mutual concern should be highlighted especially the need for water conservation, protecting medicinal plants, and preserving the sanctity of, religious worship places, to name a few.

14.5 LEGAL AND INSTITUTIONAL MECHANISMS

There are no specific regulations to cover mountain development. Regulations from the plain areas are applied mechanically to the mountains. This results in mining leases being granted in areas where they ought not to be and opening of mines without precautions. The floor space area index for buildings in the plains is adopted in the hills, adding to the congestion and loss of the mountain skyline. There is hardly

any protective legislation focusing on the fragility of the mountain ecosystems. Even where they do exist as in the Aravali hills in north India the follow up and implementation is weak.

Very often courts of law have been forced to intervene. In Dehara Dun Limestone mining lawsuit, the Supreme Court of India had to step in to stop the mining in mountain areas and appoint a committee to oversee rehabilitation of closed mine areas. The same august court has intervened in the Delhi Ridge, which is part of the Aravalli mountain system that was being overrun by encroachments injurious to the ecosystem. The poor awareness and weak institutional base have not helped in creating proper policy and legal regime under which sustainable development can be encouraged.

14.6 SUSTAINABLE AGRICULTURE

Promotion of sustainable agricultural practices is the second major plank of both policy and people's response to the problems of management of mountain ecosystems. Appropriate technologies for soil and moisture conservation are a must for sustainable agriculture. Sloping Agriculture Land Technology (SALT) and Sloping Watershed Environmental Engineering Technology (SWEET) are two technologies which are used as models for soil and moisture conservation. They were started in the Philippines and are now practiced in China and other countries and ICIMOD is playing a key role in this. They are also being tried out by G. B. Pant Himalayan Institute of Environment and Development as a package for regeneration of degraded lands in Indian Himalayas.

Measures like organic farming and agro forestry (Fig. 14.4) have to supplement the mechanical measures for reversal of soil degradation. Areas of degradation or areas suitable for agriculture or pastures should also be mapped using GIS (Box 14.1) and other techniques in order to determine the most appropriate package for a particular area. This area specific approach must have a people specific approach determining what part of sustainable or traditional practices already being used by people to some advantage (and which they understand better than techniques involving mere extension) and then can be conveniently grafted into programmes or new techniques. Absentee landlordism which results in unnecessary fallows and neglect of conservation of slopes thus impacting on other cultivated holdings must be tackled both by the application of the law and persuasion by communities.



Fig. 14.4: Community nursery.

(Source: <http://www.mountain.org/tmi.cfm>)

Box 14.1: Geographical information system and its application.

GIS is an advanced type of information management system that has presently become indispensable in studies related to environment. GIS is a computerized information system that has capabilities for entering, storing, sorting, manipulating, analyzing, displaying and retrieving geographic data. A well organized and upto date GIS enables the manager to foresee the effects of alternative management plans on the environment, thus helping in decision-making. The input data in a GIS may be obtained from various sources such as satellite imagery, aerial photographs,

toposheets, soil and agricultural survey maps and land use maps. Socio-economic data may be obtained from reports and records.

Typical GIS Application

- Environment impact assessment
- Forestry and wildlife tracking
- Wasteland development
- Ground water resource management
- Land use and thematic mapping
- Urban and town planning
- Health care
- Tourism
- Biodiversity etc.

14.7 INFRASTRUCTURE INDUSTRY AND ENERGY

On the infrastructure and industrial fronts, the fields of energy deserves to be looked at closely with a view to developing alternate energy sources like solar, mini hydro and wind in a big way in India because we are blessed with these natural energy resources. The projects of renewable energy resources should be entrusted to communities and smaller organizations in a decentralized manner and can also act as real alternatives to the creation of large power projects on mountain sides.

The slow rate of growth in economic activities in mountains area is due to the prevailing development barriers of inaccessibility, marginality and fragility. But a more positive strategy would be to capture the opportunities generated by the mountain specific characteristics rather than harping on the constraints. It can therefore be concluded that energisation of mountain communities can be made feasible out of appropriate technological interventions, in terms of energy sources, technologies and institutional mechanisms that are conceived and translated into reality. Energy technology interventions with increased economic activities will lead to environmental degradation. However, if energy transformation is implemented appropriately, even the poor can contribute to it in a significant way, which would affect their lives as well as the overall economy and be important factor for conservation of mountain environment.

All industries that are to be developed must have energy and water conservation as the main part of their agenda. It is desirable that industries creating wastes, especially hazardous wastes are totally avoided in the mountains. For this purpose, a very detailed environmental impact assessment must precede the setting up of every industrial or infrastructure project in the mountains and a public hearing must be mandated in such assessments. The main agenda of highland development revolves round reconciling land-use conflicts, reducing demographic pressure and developing alternate sources of energy. To protect natural vegetation, programming of activities will be more realistic through a better understanding of traditional resource management systems and with full involvement of local institutions and beneficiary participation. In regard to area specific infrastructure development it is necessary to look at ways of avoiding man made landslides in roads or building constructions by proper risk engineering. Proper housing and road laying in seismic areas of mountains also deserves detailing.

14.8 TOURISM AND URBANIZATION

All along the Himalayan foothills, from Srinagar in the west to Darjeeling in the east, are strung towns, situated in the most beautiful locations. Seasonal visitors are an important factor in the economic well being of the local population. So while tourists enjoy their visit, local people get the money. But every area has carrying capacity and has it own dangers, which should be taken into account while promoting tourism in mountains.

Tourism should be determined by using GIS and other techniques to avoid locating them in very fragile areas, but also whatever tourism does get promoted should have a wholesome ecological balance between nature and man. The impact and implications of mountain tourism tend to differ according to the nature, magnitude and seasonality. Lack of concern for 'carrying capacity' and non existence of impact monitoring framework and the overall neglect in relating tourism to community development, local institutional development and gender concerns can harm the mountain ecosystem (ICIMOID - International Centre for Integrated Mountain Development project report)

Strategic intervention by the government through local community groups was seen as an essential aspect in making mountain tourism a vehicle of local economic, environmental and community development. There were several specific issues to each country and region.

It must also be realized that due to tourism and associated economic development the dangers of indiscriminate urbanization and build up of solid waste has already reached the mountain ecosystems. It seems that no part of even the most inaccessible mountains, even the Himalayas, is now left alone. If the terrain cannot sustain any other human activity, it is pressed into use as a tourist area. A hotel brings tourists right up to the base of Everest itself. Unfortunately this seemingly innocent activity, which gives pleasure to so many people, and earns so much foreign exchange for our country, is another source of danger to the health of the mountains. The current popular (and wholesome) interest in trekking and mountaineering has thrown up several alarming problems. A major one is the disposing of garbage, which includes biological waste. It is feared that parts of the Himalayan slopes may soon begin to look like the garbage dumps in our cities. Recent studies have shown that problems of solid waste have invaded the high Himalayas in places like the Valley of Flowers. Mountaineering expeditions to the high peaks are leaving piles of junk behind. If that were so, the growing towns in the mountains will also soon be among the most polluted. The municipalities here should be strengthened to act soon on such issues.

14.9 NETWORKING

In this section we will study about the importance of networking. NGO's working in the mountains does struggle against odds. Rather low priority is given to this even in area planning or national developmental planning. A change in this approach is essential for better management of the mountain ecosystems. A strong networking of all the institutions working together, both in the mountains and plains, can achieve more than fragmented or individualistic thrusts. Networking should be coupled with full dissemination of scientific findings on the dangers ahead on account of natural and man made disasters etc., as well as potential for sustainable growth. Networking should be done by all, whether government, communities, institutions, experts, industry or NGO's. A greater thrust should be given to NGO activities in this direction and in ensuring proper spread of success stories so that successful activities can be applied in other areas.

14.10 SUSTAINABLE MOUNTAIN DEVELOPMENT

Mountains are important sources of water, energy, minerals, forest and agricultural products and provide an area of recreation. They are storehouses of biological diversity, home to endangered species and an essential part of the global ecosystem as they also affect the climatic conditions of the area. The fate of mountain ecosystems affects half the world's people. About 10 percent of the Earth's population lives in mountain areas, while about 40 percent occupies watershed areas below. From the Andes to the Himalayas, and from Southeast Asia to East and Central Africa, there is serious ecological deterioration in these watersheds because of deforestation, excessive livestock grazing and cultivation of marginal soils.

Mountain ecosystems are susceptible to soil erosion, landslides and the rapid loss of habitat and genetic diversity. Among mountain dwellers, there is widespread unemployment, poverty, poor health and bad sanitation. Most of the mountain areas are experiencing environmental degradation.

Proper management of mountain resources and the socio-economic development of people need immediate action. There is need to develop land use planning and management for mountain fed watersheds. Plantation should be done to maintain the ecological balance in mountains. There is also a need to provide services, such as education, health care and energy resources, for local communities and indigenous people. The people also need more opportunities to earn livelihoods from such activities as sustainable tourism, fisheries, environmentally sound mining and cottage industries, such as the processing of medicinal and aromatic plants and renewable produce from forests.

Government should give opportunities and also:

- Promote erosion control measures that are low in cost, simple and can be easily used;
- Offer people incentives to conserve resources and use environment friendly technologies, help them to understand what is sustainable development in mountains and involve them in resource management;
- Provide information on alternative livelihoods involving, for example, crops, livestock, poultry, beekeeping, fisheries, village industries, markets and transport;
- Create protected areas to save Biodiversity (wild genetic resources);
- Identify hazardous areas that are most vulnerable to erosion, floods, landslides, earthquakes, snow avalanches and other natural hazards and develop early-warning systems and disaster response teams;
- Identify mountain areas threatened by air pollution from neighboring industrial and urban areas; and
- Create centers of information on mountain ecosystems, including expertise on sustainable agriculture and conservation practices where people can turn up for help in learning about sustainable mountain development.

The fate of mountain ecosystems affects half the world's people (Micheal Keating, 1993)

SAQ 2

- i) List the socio-economic factors influencing the developing of mountain ecosystem.
 - ii) How environmental awareness can be increased in mountain areas?
 - iii) What is sustainable agriculture and how people can help to achieve it?
 - iv) How tourism is destroying the fragile mountain ecosystem?
 - v) Discuss the ill effects of tourism in mountain areas of India.
 - vi) Why sustainable mountain development is important for the people residing there?
-

14.11 SUSTAINABLE DEVELOPMENT OF THE HINDU KUSH-HIMALAYAS

14.11.1 Overall Trends

Development of the Hindu Kush-Himalayan mountain region (because it covers eight countries, i.e., Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan) poses a serious dilemma with its deterioration and will also affect all the eight countries.

At present, it seems that there is a real danger that the ecological balance of this mountain may be irreversibly disrupted due to several factors which we have discussed in earlier sections. In the past, policy makers did not pay adequate attention to mountain areas because it was generally believed that mountain areas had limited

potentials for development. Consequently, the resources of mountain areas, such as cheap labour, abundant water, and forest resources, were used to support urban-oriented development strategy. The Government Policy generally overlooked the needs of mountain people and the major environmental role of mountain areas.

There was general lack of understanding of the biogeochemical cycle and human resources, characteristics of the mountains due to neglect of mountain areas and, consequently, the natural and human processes affecting these mountains development (Fig. 14.5). Improper understanding of ecological processes can lead to unsustainable development. Thus the development dilemma this region is facing is that, whereas natural resources have to be used to their optimum potential, information and knowledge on such natural resources and the processes affecting them is insufficient. These considerations are reflected in Table 14.1. We have tried to discuss these entire factors in this section.

Table 14.1: Interactions and implications of unchanged biophysical and rapidly changed socioeconomic circumstances in mountain areas.

Socio-economic changes Interacting with biophysical factors, i.e., human interventions in mountain area	Biophysical factors (mountain specificities) and their imperatives			
	Inaccessibility (Semi-closedness, limited dependability of external support, local resource focus of activities)	Fragility and marginality (Incompatibility with high intensivity uses, focus on diversified, low cost, low risk activities)	Diversity (High potential for diversified, interlinked activities)	'Niche' (Products, activities with comparative advantages including human adaptation measures)
Population growth; Changed expectation levels/attitudes; per capita increased activities guided by greed or forced by poverty	Excess pressure on local resources with limited outlets; resource use intensification, over extraction, degradation	Indiscriminate resource use intensification; disregard of resource extensive, diversified practices; reduced resource regeneration; discard of usage regulation, group action	Pressure of food needs; reduced diversification and narrow specialization; resource regeneration	Pressure of food needs, disregard or misuse of natural potential
Market forces, trade links, pressure of external demand; changes in people's attitudes and expectations	Integration with mainstream market situation despite low physical accessibility, additional pressure on resources; market driven corridors of change	Distant demand induced over use of resources, backlash of selective commercialization, decline of environment sensitive local concerns and practices, poverty of ethnic minorities and women	Market driven narrow specialization, reduced diversification; marginalisation section of traditional knowledge practices	External demand induced over exploitation; marginalization of petty 'niche', local concerns, traditional small scale activities
Public interventions a) Generalized development strategies, including investment priorities,	Reduced isolation, increased integration and level of activities; unmanageable increase in pressure or	Direct and side effects on fragile/marginal resources, increased use intensity; degradation	Resource use intensification; reduced diversification and access determined narrow specialization; backlash on	Over exploitation of area with high potential products; disregard of side effects and local

technology choices, macro economic policies price, tax, trade, resource extraction, etc	resources		food supplies	concerns; emergence of a dual sector economy
b) Infrastructure for accessibility; integration; market driven harnessing of 'niche', etc	Application for improved mobility, integration; priority to areas with high potential; regional inequities	Priority to production over conservation; indifference to resource limitations; and long-term consequences; excessive subsidization	High cost external input use; narrow specialization and focus on limited product attributes; disregard of traditional know how and institutional arrangements for diversification	Market drive over extraction; disregard of side effects on environment, people's survival strategies, traditional know how
c) Technological and institutional support: narrow focus, directed to short term needs, sectoral orientation, external origin/ orientation	Inaccessibility-induced invisibility of problems/opportunities, development measures as inappropriate impositions	Focus on current production; high-use intensity; disregard of resource limitations and long-term consequences, sustained through subsidies; neglect of local concerns and consequences	Narrow specialization, through incentives and support systems; technologies disregarding organic linkages and performance of total system; marginalization of traditional systems; increased dependency, subsidization	Focus on revenue generation meeting external demand; extraction levels disregarding the side effects; locally useful, area specific potential given low priority

a. Based on the synthesis of evidence and inferences reported of (Jodha *et al.* 1992; Banskota and Jodha 1992a, 1992b; ICIMOD 1993; Sharma and Partap 1993; Sharma 1993; Sanwal 1989; Singh 1993; Banskota 1989; Blaikie *et al.* 1983; Dev 1992; Bjonness 1983; Lall and Moddie 1981; and Ives and Messerli 1989)

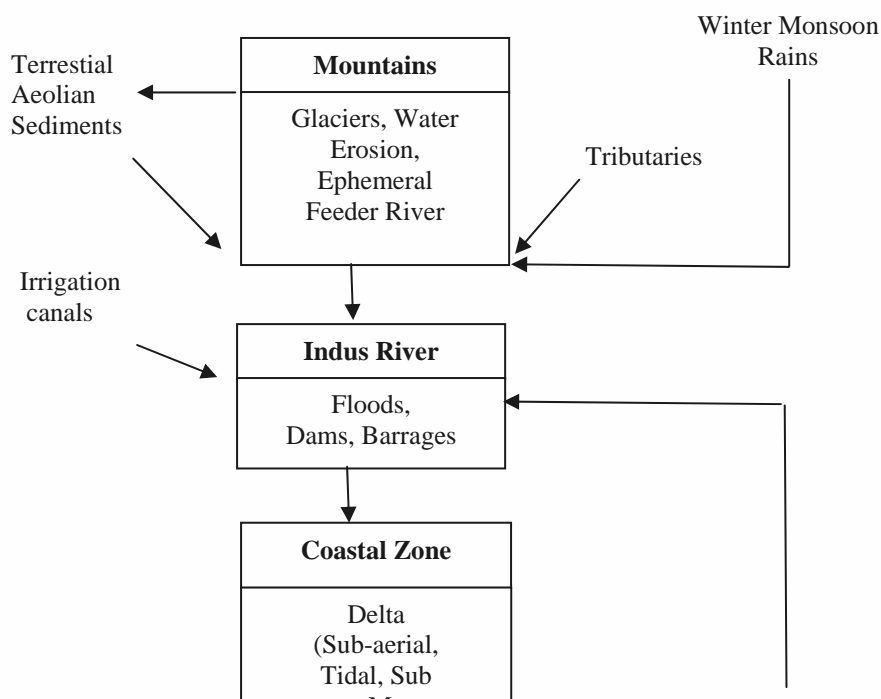


Fig. 14.5: Mountains, The Indus River and the Coastal Zone as interacting system.
(An Asian Example (Integrated Environmental Management) Development, Information and Education in the Pacific Region Edited by Yasumara Itakura *etal* 1999.)

There is a great variation in mountain conditions across the region over short distances. Thus a careful assessment of constraints and opportunities are required in all cases. Mountain people in the Hindu Kush Himalayas have to live within the carrying capacity of the mountain conditions. The resources of the mountain must be used without destroying the fragile environment upon which the survival of people inevitably depends. Modern science and technology must now operate within the limits set by the needs of conservation. The history of development in mountain areas of the HKH countries is very recent and, thus, the changes needed to integrate conservation and development may be less drastic than for many other areas. However, mountain areas are also more fragile and, given the recent pace of rapid change, enduring commitments are needed at all levels (Government and Local People) to move mountain communities towards a sustainable style of livelihood that is harmonious with the mountain ecosystem.

14.11.2 Mountain Areas in Different Countries of the HKH Region

Afghanistan

Afghanistan has been the meeting place of four ecological and cultural areas – the Middle East, Central Asia, the Indian Subcontinent, and even the Far East, for the Pamir Mountain intrude into Chinese Sinkiang. Dominated by the Hindu Kush, the westernmost extension of the Karakorum Mountains, and the Himalayas, the ranges stretch across 960 kilometers literally. Many passes cut through the Central Hindu Kush Mountains and, in the past, provided the main routes to and from the north and south. Out of the eleventh geographical zones in the country, the first six zones (the Wakhan Corridor – Pamir Knot, the Badakhshan, the Central Mountains, the Eastern Mountains, the Northern Mountains and Foothills, and the Southern Mountains and Foothills) belong to the Hindu Kush Mountain system. The remaining five zones embrace the deserts and plains that surround the mountains from the north, west, and south-west (Dupree 1980). Afghanistan is a landlocked country with a wide diversity of habitats and ecosystems, ranging from steppe, semi desert, desert, riverine forest, to mountain areas. The natural vegetation of a significant proportion of the country was originally woodland and forests, but centuries of destruction have resulted in an almost complete disappearance of the forests from the plains and valleys.

Over 80 per cent of the country's energy comes from forest and range resources (ICIMOD 1994). Sustainable development of mountain areas requires rehabilitation of degraded land based resources, their sustainable use, and improvement in the living standards of the people.

Bangladesh

Bangladesh's hilly region is known as the Chittagong Hill Tracts (CHT) and covers about 10 percent of the land area with about one percent of the population. The CHT

are at present inhabited by 13 tribes, each speaking its own distinct dialect. In 1991, the population was 967,420 (Rahman, 1993). The Chittagong Hill Tracts (CHT) have a predominantly agricultural economy. Owing to the subsistence economy, the tribal people, apart from cultivation, are involved in other productive activities to meet their basic needs. The CHT at present constitute a food deficit area. With relatively higher population growth rates in the tribal areas and poor sustainability of the land, more productive farming practice, diversification of agriculture, and generation of environmentally friendly off-farm activities, need to be explored.

The Kingdom of Bhutan

The Kingdom of Bhutan is a small, landlocked country situated on the southern slopes of the Eastern Himalayas, bordering Tibet in the north and the Indian States of Sikkim Assam, and Arunachal Pradesh in the west, south, and east respectively. It has an area of 46,500 sq. km. and a population of 600,000 (in 1992) (NES/PC 1992). The country covers the southern slopes of the southern boundary, which is situated approximately where the Himalayan range rises suddenly from the North Indian plains. Bhutan is a country, which almost totally depends on its own natural resource base. No change in this dependence is likely in the coming decade, although population growth and diversification in employment trade, and consumer patterns will place a heavy strain on this interdependency (NES/PC 1992).

With its small population, largely consisting of farmers living on their own land depending on a complicated traditional system whereby farm, forests, and alpine meadows all contribute to farming productivity, Bhutan is a country which almost totally depends on its own natural resource base.

The major environmental concerns in almost all developing countries reflect the close interaction between population growth, poverty, and environmental degradation. Although these three major factors are all relevant concerns for Bhutan they do not at present form the kind of interlinked vicious circle, which, in so many other countries, impedes forward planning towards sustainability. It is the policy of the Royal government of Bhutan to ensure that the development of the country is sustainable and will remain so in the future to avoid this vicious circle (NES/PC 1992).

India

The Indian Himalayan region, which is more than 2,800 km in length and 220 to 300 km wide, is spread over the states of Jammu & Kashmir, Himachal Pradesh, Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, and part of Assam, along with eight districts of Uttar Pradesh and one district of West Bengal. It has a total geographical area of approximately 591,000 sq. km. (18% of India inhabited by 51 million people (6% of India) (GPIHED 1992). The region, in general, is characterized by a sparse population; undulating terrain; far flung small villages which are difficult to approach; tiny and scattered landholdings, more so on slopes with shallow and gravelly soil; an agro pastoral economy; scanty irrigation; little use of modern technology and inputs; and low productivity. These, coupled with almost no industrial development and, thereby, low employment potential, encourage the local young males to seek employment away from their homes. The problem of youth moving away becomes aggravated in areas where an inhospitable climate outweighs the sentimental attachment of people to their native land. Agriculture is the primary occupation of the people all through the region, but the agricultural land use patterns vary from region to region. While in the north-eastern region, shifting cultivation continues on the slopes, settled agriculture on terraced slopes dominates in the central and north western region. All through the region valleys are characterized by settled agriculture and intensive cropping.

A close association of man, forest, and environment, observed all across the Himalayas, implies a strong perception of ecological principles in the traditional management systems. These systems, however, are becoming weak and are being lost in critical areas. Historically, forests had been treated as a common property resource and thereby freely accessible to those inhabiting the region. Development programmes in the past have not been successful in adequately improving the food fodder energy problems of the area.

Nepal

Nepal, situated in the Central Himalayas, is a landlocked country having both physiographic and climatic contrasts compared to its small area of 147,181 sq. km. The country's economy depends largely on the use of its natural resource base. About two thirds of the country is occupied by hills and mountains with steep to very steep slopes. Nepal's lowland *terai* and the mountains are mostly erodible. Erosion have worsened in areas where agriculture is practiced, especially on the steeper slopes.

Thirty-seven per cent of the country's area is under forest cover, while about 20 percent is under agriculture. Seventy-five per cent of the country's energy requirements are met by fuel wood. Over 5,400 species of vascular plants, including over 245 species of endemic plants, 700 species of medicinal plants, 175 species of mammals, 850 species of birds, 170 species of fishes, 600 species of butterflies, 50 species of moths, and 180 species of dragonflies, have so far been identified in this country. These species are being protected and conserved through national parks, wildlife reserves, and conservation areas covering 12 percent of the country's areas (HMG/N 1992).

Soil erosion, decline in soil fertility, sedimentation, and floods have degraded and continue to degrade scarce land resources.

Rising population pressure on the land and deterioration of the environment have been recognized as major challenges for sustainable development in Nepal. The major environmental problems in Nepal are caused by land degradation, deforestation, and pollution. Poverty is the root cause of environmental degradation. Land and forest resources are overexploited because of heavy dependence on the natural resource base, whereas water and mineral resources are under-utilized owing to lack of financial resources and infrastructure.

Myanmar

Myanmar's highlands are along the border areas and are inhabited by national races, which include the *Shan, Kachin, Loila, Wa, Kokang, Akkha, Palaung, Pa-O,* and *Rakhine* groups who live in the north, north-east, east, and western areas of Myanmar (NCEA 1992). A total of 135 ethnic groups are located in these areas. On account of various factors, these border areas and national races have been deprived of development programmes in the past. More recently, the government has been making a major effort to improve the living conditions of the people in these border areas through different development activities.

Shifting cultivation is practiced by about 2.6 million people, mostly living in the Kachin, Kayah, Kayin, Chin, and Shan states. Most of the shifting cultivators are unaware of any damage to the environment caused by their traditional farming system.

Pakistan

Pakistan has two mountain areas – the Northern Mountains, and the Western Dry Mountains, the Murree-Kahuta tehsil(s) of Rawalpindi District covering 96,340 sq. Km. and which has a population of 7.82 million in 1993.

Land in the region is used either for arable farming, pasture, or forestry, depending upon the altitude, climate, physiography, soil moisture, and socio-economic conditions. Over 90 percent of the areas are comprised of steep to very steep mountain slopes having only a thin and patchy soil mantle. These slopes, being unstable, are generally unsuitable for arable crop production and support natural vegetation that varies from place to place. Large tracts of mountain slopes from between 900 to 3,300 m, they are grazed during summer only. In winter, animals are fed on hay made from the grasses cut from the areas. The majority of the population is subsistence farmers who manage to meet only the barest needs of food, fodder, and fibre for the household.

The Western Dry Mountain region makes the core of the arid land and covers by far the major part of upland Baluchistan, excepting for a narrow coastal belt along the

Arabian Sea. The potential population-supporting capacity of the region is low. However, the total sum of population growth and consumption patterns to produce food, manufactured goods, leaves the region with a highly impoverished environment.

A rangeland-based livestock industry is the major economic activity in the region. About one-third of the region is used as rangeland by dominantly transhumant, nomadic, and sedentary agro-pastoralists. It has very little groundwater resource. The region exports coal, gas, mutton, hides, temperate fruits, and vegetables to other regions and imports staple food and manufactured goods from the irrigated plains. Soil erosion is a major component of the desertification in the region. The main cause of soil erosion is the reduction of plant cover.

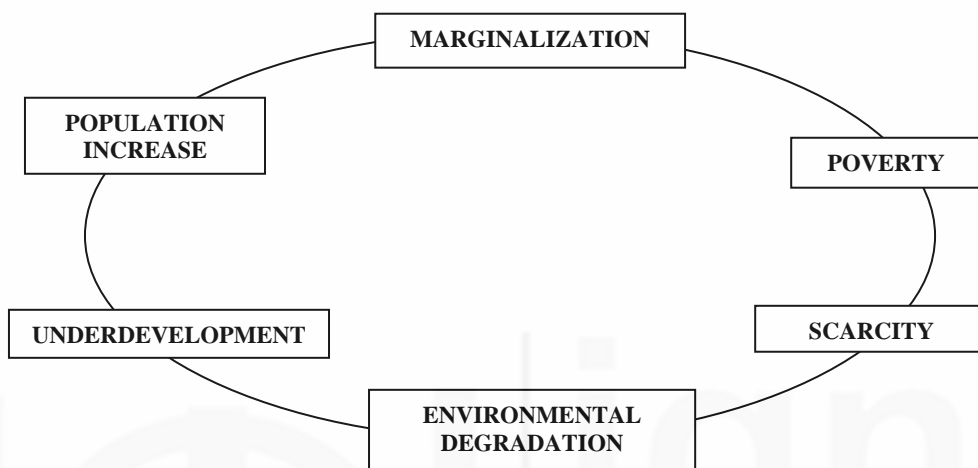


Fig. 14.6: Hindu Kush-Himalayan region with various socio economic causes

14.11.3 Different Development Approaches in Mountain Area

Mountain development problems and options can be differentiated within mountain areas. So specific information on ecology, natural resources, potential and socio-economic activities of mountain ecosystem are essential (Fig. 14.6). Such an approach is useful for focusing on the critical problems in specific mountain areas. The following section is only an indicative scenario and underscores the future work needed in this area.

Developing and Poverty ridden Mountain Areas

Although large parts of mountain areas show the signs of acute poverty in local population, environmental deterioration, low levels of development but there are a number of pockets within the Hindu Kush - Himalayas that also show dynamic signs of economic prosperity. Such pockets are found in all the countries of this region and their indicative conditions include good access, commercialization of agriculture, dynamic market centers, development of human resources, economic diversification, and growing external linkages.

The problems of these areas are more similar to other developing non-mountain areas and are related to sustaining development that is pro-people, pro-women, and pro-environment with adequate measures to cope with rapid urbanization, deforestation, overgrazing, pollution from industries and vehicles, chemicalization of agriculture (fertilizer and pesticide use), management of solid wastes, and educated unemployment. The poverty ridden areas, demonstrate problems of poverty, degradation of resources, poor quality of human resources and infrastructure, and a limited capacity to generate internal resources.

Environmental problems are related to agriculture and the use of natural resources. The major challenge in these remote areas is to help identify measures to improve the quality of life of these people and to promote development options that are sustainable for long term.

Causes of Ecological Variations

Ecological zonation of mountain areas provides a territorial basis for determining overall development potentials and identifying ecological sensitivity. Greater efforts are needed to undertake the zonation of mountain areas to provide an ecological basis for development decisions for each zone. Different ecological factors, such as slope, altitude, temperature, top soil conditions and water etc influence land-use suitability in mountain areas and the extent to which limits posed by these factors are understood and thus could determine the effectiveness of development interventions. With increasing slope and altitude, land-use suitability moves from seasonal crops to perennials and, finally, to protection of natural vegetation. In spite of high moisture in high altitude areas, the limitations of temperature and low soil depth hinder crop growth and development. Ecological zonation, based on the factors indicated above, for specific mountain areas are immensely helpful for identifying appropriate development activities, and for identifying the nature of environmental problems that may be encountered.

The top few centimeters of soil is called top soil and it is only in this soil that seeds can germinate, and young saplings draw nourishment and sustenance.

Analysis of all types of variations and problem that integrates different aspects of the mountain environment and economy will be critical for identifying the overall constraints and opportunities for development.

Locational variations

The Hindu Kush-Himalayan Region covers a wide area consisting of different ecosystems such as forests, wetland, ponds and river etc. Specific regions have their own specific problems and opportunities. Some broad environmental and socio-economic problems are listed below in Table 14.2.

Some problem such as poverty, soil erosion, soil fertility, deforestation, and overgrazing are common, while desertification and shifting cultivation are specific problems. There is a need to develop approaches that take into account both common as well as unique problems of mountain areas. An elaborate work is needed towards sustainable development in future.

Table 14.2: Locational variations in HKH regions.

Regions	Problems of the Area
Hindu Kush-Region	<ul style="list-style-type: none"> ▪ Poverty, inaccessibility ▪ High priority to controlling desertification and protecting pastures and grazing land ▪ Water and fuel wood scarcity ▪ Population density relatively low ▪ Vegetable/horticultural development and biodiversity conservation.
Karakoram Region	<ul style="list-style-type: none"> ▪ Poverty and access problems ▪ Conditions change significantly with slope and altitude ▪ Soil erosion control and soil fertility management ▪ Population density slightly greater than in the Hindu Kush ▪ Deforestation ▪ Good for tourism and high-value crops with irrigation ▪ Water scarcity
Eastern Himalayas	<ul style="list-style-type: none"> ▪ Shifting cultivation; soil erosion and soil fertility management ▪ Monsoon flooding ▪ Good reserve of forests, but deforestation very rapid ▪ Population density low but growing very fast ▪ Priority area for biodiversity conservation
Northern Himalayas (Tibetan Plateau and its adjoining areas)	<ul style="list-style-type: none"> ▪ Poverty and access problems ▪ Protection of pastures ▪ Cold arid where agricultural opportunities are limited ▪ Population density low ▪ Good for tourism
Western and Central	<ul style="list-style-type: none"> ▪ Poverty, access, and communication problems

Himalayas	<ul style="list-style-type: none"> ▪ Monsoon flooding ▪ Soil erosion control and soil fertility management ▪ Population density very high ▪ Seasonal water scarcity problems ▪ Deforestation and overgrazing ▪ Good for tourism ▪ Considerable scope for horticultural development and other high-value crops ▪ Conditions change significantly with slope and altitude
Hengduan Mountains of China Joining the Himalayas	<ul style="list-style-type: none"> ▪ Poverty access, and communication problems ▪ Flooding, debris flows ▪ Soil erosion and soil fertility management ▪ Population density low ▪ Deforestation and overgrazing ▪ Good for tourism and has potential for cash crops

14.12 HINDU KUSH REGION AND HIGH PRIORITY ISSUES

14.12.1 Poverty

In most of the countries of the Hindu Kush-Himalayas the acute poverty of the mountain people has been recognized as a major crisis. Poverty has been exacerbated by many different factors, amongst which the important ones are rapid growth in population, limited development of human resources, stagnant agriculture, infrastructure, and degradation of resources. Migration for search of alternative employment and income opportunities has been a continuing strategy of mountain people throughout the HKH Region, but in recent years this has accelerated in response to the monetary needs of families living in even the most remote areas.

In Hindu Kush-Himalayas several critical areas for intervention have been identified. These are as follows.

i) Development of Human Resources through Improved Physical Infrastructure

There have been improvements in provision of basic education, health, and drinking water. This has enhanced household capacities for socio-economic improvements on a gradual basis.

Improving access is almost a primary precondition for harnessing comparative advantages of mountain areas. Where access conditions have improved, it has been accompanied by improved condition of human resources and availability of improved technology, credit, and extension. Economic opportunities have greatly multiplied through harnessing of mountain comparative advantages. Various NGO's and Government are also working for it.

ii) Promotion of Participatory Development

The most important aspect is the promotion of participatory development and decision-making that is sensitive to the needs of the disadvantaged groups. This has also been an important component of successful anti-poverty activities. In the mountain areas where conditions are more difficult, participatory and decentralized approaches have an even greater role to play in mountain economy.

In many mountain areas the focus should continue to be on improving the condition of human resources and economic services as that will play an important role in improving the quality of life. Participatory management of mountain areas will be helpful in making the livelihood of people more comfortable (Fig. 14.7).



Fig. 14.7: Development through participation in mountain

14.12.2 Environmental Problem in HKH

In this region most evident environmental problems are in three major areas – deforestation, soil erosion, and problems of water management. These problems are related to changes in mountain agriculture. Deforestation is related to the growing food, fodder, and fuelwood needs of hill households. Soil erosion is mostly attributable to natural causes (steep slopes and intense monsoon rains) and also due to human activities, such as cultivation of marginal lands (slash and burn steep slopes), deforestation, and abandonment of old terraces, livestock management systems, and other cultivation practices which have also contributed to increasing soil erosion in the mountains. Loss of forests and vegetation cover, has reduced biodiversity, increased runoff, reduced soil moisture, and increased water management problems in mountain. The main resources affected are given below.

- *Cultivated Land:* declining fertility, fragmentation of land holdings, loss of land area increasing soil erosion, partial desertification, and severe soil degradation and water management problems.
- *Pasture:* large-scale overgrazing and degradation of pastures, landslides, soil erosion, and livestock management patterns that focus on numbers rather than on quality.
- *Forests:* Clearing of forest area has reduced forest areas, decreasing crown cover, continuing encroachment, over-harvested, and very poor afforestation and weakened local systems for protection and management and loss of wild life.
- *Water:* increasing shortages and flash folds, as well as water quality problems.
- *Flora and fauna:* increasing loss of biodiversity and genetic biodiversity (flora and fauna) as human needs and reckless exploitation destroy habitats.

A strenuous gigantic effort is needed to reduce the pressure on these resources through appropriate policies, technologies, and management systems because continued loss of these resources will mean the growing inability of the ecosystem to support any type of human survival. It also need the participation of local people.

14.12.3 Sustainable Mountain Development in the Hindu Kush-Himalayas

The skill and the aptitude to integrate environment and development are generally limited; it is even more so for mountain areas where the history of development is fairly new. There are great difficulties of formulating suitable programmes and their effective implementation are greater in mountain areas where overall conditions are not very favorable.

A determined effort is needed in this field if the other problems of mountain development are to be adequately tackled, not just at the national but also at the sub-national level. Any attempt to strengthen the institutional capacity for sustainable mountain development should acknowledge the enormous scope of indigenous knowledge systems and long-established structures for resource management.

14.12.4 Long-Term Goals for Sustainable Development of the HKH Region

To respond to the equitable aspirations of the people of the HKH and the need for sustainability in natural resources management the following broad goals have been identified for national governments, local authorities, NGOs, and the international donor community during the next ten years by ICMOD which are given below:

Goal 1:

To promote the well being of mountain people by overcoming poverty, inequity, and marginality through:

- development of sustainable mountain farming systems;
- promotion of new income and employment opportunities;
- improving the status of women and promoting gender-balanced decision-making;
- improving access to basic physical infrastructure;
- improving access to basic education and health services; and
- participatory systems of decision-making and development of strong, autonomous local organizations.

Goal 2:

To improve the circumstances of mountain natural resources and environments through:

- sustainable use and management of arable lands, forests, pastures, ranges and grasslands, and water resources;
- promotion of local organizations in natural resources management;
- protection of biodiversity in wild;
- enhancing women's participation and capabilities to improve their management of natural resources;
- better understanding of mountain hazards and identification of mitigation measures; and
- better understanding of mountain climatic changes.

Goals 3:

To improve the capabilities of institutions and organization to promote sustainable mountain development through:

- promotion of participatory development focusing on the poor, women, environment, and local organizations;
- development of policies that address mountain-specific problem and opportunities;
- development of guidelines and monitoring mechanisms for involvement of local group and benefit distribution women and other marginalized groups;
- development of appropriate planning methodologies for sustainable mountain development, at both the macro- and micro-level;
- promotion of national capacities for research in mountain-specific development opportunities;
- support to training in mountain-specific subjects;
- promotion of linkages and collaborative arrangements between institutions and organizations concerned with mountain development; and
- improving awareness and networking in and among mountain development agencies, locally, nationally, regionally, and globally.

14.13 THE ROLES OF DIFFERENT AGENCIES AND INSTITUTIONS

The goals that have been discussed above represent critical areas for sustainable mountain development. The agencies that are concerned with the mountains should give their full support and commitment by promoting the areas of their competence and supporting others to do their part.

- National and sub-national agencies are the most important ones in developing and implementing policies and programmes that can fulfill the local aspirations

and potentials for sustainable mountain development. They should be in the forefront of identifying; and promoting the opportunities for development within national and local institutional, cultural, and ecological contexts. Key agencies are:

- National planning commissions,
 - National level agencies,
 - District-level agencies in mountain areas, research organizations,
 - Non-government organization, community based organizations in mountain areas in particular, and
 - Educational institutions.
- Donor organizations should give a special focus to the Hindu Kush-Himalayas and provide support to the national agencies. Through regular consultations with the key staff of National Planning Commissions and key agencies, they are in a unique position to guide donor funding to mountain areas. The neglected mountain areas in the past and the scale of interconnected problems and opportunities, donor assistance should be accelerated and should be long-term in nature.
 - International agricultural research centers, with their specific orientations and expertise from a global perspective should provide scientific information to mountain areas specific for food crops. Linking international centres with a global scientific research mandate to national and regional agencies with an instructional mountain mandate should be given high priority.
 - Centers such as ICIMOD have a very important role to play in developing concepts and strategies for sustainable mountain development as well as methodologies for assessing specific problems and opportunities of mountains.

ICIMOD mandatory functions are

- a) Information exchange,
- b) Research and Training
- c) Advisory service.

It should concentrate on those areas in which the limited resources in mountain areas can be put to best use and wherever ICIMOD countries share common concerns. Its comparative advantages lie in working in those areas not generally focused on by national agencies those dealing with concepts, methodologies, strategies, innovations, and lessons of experience. Most of all it should provide a regional perspective on national and local sustainable mountain development with people participation.

To sum up we can name the following issues which are important in mountain ecosystem and are of prime environmental concern:

- i) Inaccessibility
- ii) Fragility
- iii) Marginality
- iv) Diversity
- v) Hostile climate
- vi) Scattered population and small agricultural holdings

In the light of the above given issues, the following areas have been identified, which are of environmental significance and need attention on a priority basis:

- i) Construction of highways, massive buildings and big dams.
- ii) Extension of orchards into environmentally sensitive agricultural and forest lands.
- iii) Destruction of forest cover.
- iv) Deep Channel cutting for minerals and open cast mining for building materials.
- v) Pollution and garbage.
- vi) Participatory management of mountain ecosystem.

14.14 SUMMARY

- Mountain ecosystems are important source of biological, water and mineral resources.
- The mountain ecosystems are fragile and are diminishing due to a variety of natural and man made factors. In many mountain areas growing degradation is causing widespread poverty among local inhabitants. Thus proper management of mountain resources and socio-economic development deserves high priority.
- Hindu Kush-Himalayas passes through all the eight countries. Though each country has its own socio-economic problems but enduring commitments are needed at all levels for sustainable development of these mountain areas.
- Long term goals of HKM region are (i) promotion of well-being of mountain people by reducing poverty and inequality, (ii) sustainable use of mountain resources, (iii) development of mountains through regional, national and international level with co-ordination and cooperation of people residing in mountains.
- Mountain development without a substantial commitment to augmenting the levels of investment in critical areas becomes quite pointless. When considering options for investment, care must be taken to ensure that such investments reduce poverty, restore the environment, and diversify the mountain economy in the long run.
- International efforts to deal with mountain development problems have been very limited both in coverage and support. UNCED's Agenda 21 (Chapter 13) represents the first global recognition of the plight of mountain areas and their critical environmental role in different parts of the global. The initiative of Chapter 13 must now be sustained through wider efforts by NGOs, National governments, and international agencies, if mountain areas are to receive the attention and support they deserve. Centres, such as ICIMOD, can play a important role in Hindu Kush- Himalaya for sustainable development.
- Other agencies, Government and Non-Government must develop mountain-specific initiatives within their own mandates if the attention of the global community on mountain areas is to be further strengthened in the future.

14.15 TERMINAL QUESTIONS

1. What ecological role Himalayas play in our country?
2. Describe how Himalayas provides the most important natural resources for our country.
3. Make a project that describes the important of Himalayas with reference to water, hydropower, biodiversity and horticulture for our country.
4. Study the biodiversity of mountain area you visit/or live in. Try to study the population density of major flora of that area.
5. If you are living in near Western Ghats try to study its flora, also name the endemic flowering plant with the help of a botanist.
6. Discuss the causes of migration from mountain area towards plain area.
7. What are the difficulties that the women of mountain areas have to face due to migration of men folks from mountain area?
8. How urbanization is destroying the fragile ecosystems of mountain?
9. List various methods to conserve and manage biodiversity in mountain area.
10. Describe how energy sector of mountain ecosystem can be revamped.
11. Discuss how tourism in mountain ecosystem can become boon or bane simultaneously?
12. How networking can help in sustainable growth in mountain areas.
13. Describe the importance of mountains as store house of natural resources.
14. Discuss various parameters to achieve sustainable mountain developments.
15. "Sustainable development of Hindu Kush region will support the people of all the eight countries of the mountain area". Discuss.

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UNIT 15 PARTICIPATORY COASTAL RESOURCE MANAGEMENT

Structure

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- 15.2 Defining the Coastal Zone
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15.1 INTRODUCTION

About 60% of the world's population lives within 60 km of the sea. Thus the social, economic and environmental significance of the boundary between the land and the ocean is widely recognized. The ecology of coastal lands and coastal waters provide numerous livelihood opportunities, encouraging concentrations of population and development activities in the coastal zone. Earlier concept of infinitely abundant aquatic resources, the infinite capacity of the ocean for dilution of waste products, and the unlimited productive capacity of coastal lands have been shown to be wrong by various examples of mishaps.

Over the last decade the management of coastal resource for their sustainable use has become a critically important issue for the South Asian region. Included among these resources are some of the most extensive mangrove areas in the Indian Ocean and also some of the world's least disturbed coral reefs. These coastal ecosystems have been subject to increasing exploitation particularly over the last 20 years. For example 1/5 of India population lives along the coast such pressures in the tropical coastal zone are not unique and the decline in status of coastal ecosystems worldwide, as a result of non-sustainable use, has become an issue of major international concern.

Recently, the global values of services obtained from coastal systems (defined as the benefits human populations derive from ecosystems) has been estimated at a total US\$ 12 trillion per annum which is equivalent to the estimated combined value of the world's terrestrial and freshwater services. This factor is often given too little weight in policy decisions and for developing countries like those in South Asia, with large and increasing populations; the issue assumes even greater significance since it is the poorer members of society, which are forced to generate income from the coastal areas. It is these sites which are most accessible to the disadvantaged, and which offer

some prospect of support and livelihood though the adjacent land may be marginal and the inshore water bodies degraded as a result of over exploitation of resources.

In India livelihoods of many people in coastal areas are based upon the exploitation of both terrestrial and aquatic resources. However, expanding markets have driven such exploitation to extremes, where levels of investment create imbalance between alternative uses for the same resource. In such circumstances, the poor can be made poorer. Sustainable livelihoods for coastal communities are therefore dependent upon effective management of all interrelated activities in coastal areas to achieve sustainable use of both living and non-living resources, and equitable distribution of the arising benefits. In this unit, we will study major anthropogenic effects on the coastal zone in South Asia and the use of Integrated Coastal Management as a tool for sustainable development.

Objectives

After studying this unit you will be able to:

- appreciate the management of coastal resources for their sustainable development and its importance in South Asian region,
- explain the concept of integrated coastal management (ICM), with special reference to South Asia,
- describe various conservational strategies for mangroves in India, and
- describe history of exploitation of coastal habitats in South Asia and its common weaknesses.

15.2 DEFINING THE COASTAL ZONE

It is important to understand in depth the functions of the coastal resource systems and their characteristics for better appreciation and application of ICM. Before describing such characteristics we should first attempt to define the coastal zone. A coastal zone has been variously described. One possible definition [from the US Commission on Marine Science, Engineering & Resource] is “the coastal zone represents that part of the land affected by its proximity to the sea, and that part of the ocean affected by its proximity to the land”.

A functional definition can be ‘that space in which terrestrial environments influence marine environments and vice versa’. The international legal definition is 200 nautical mile limit from land over which coastal nations exert sovereignty (economic exclusive zone) and the scientific definition depends on the nature and scale of the processes that characterize the land ocean boundary. For most purposes the **coastal zone represents an area of transition where terrestrial and marine environments interact to form unique environmental conditions. The coastal zone embraces inshore waters, intertidal areas and extensive tracts of land.**

Much emphasis has been placed on defining the coastal zone for legal and administrative purposes, while the environmental processes, linking terrestrial and marine components of the coastal zone, are often ignored. A good example is the maintenance of hydrologic linkage between upland catchments and coastal wetlands, which are essential if wetlands are expected to function as feeding, nursery or spawning grounds for commercially valuable fish species.

India has a vast coastal stretch of about 7500 km (5700 km on mainland) on the West; the Arabian Sea washes the shores of Gujarat (Fig. 15.1), Maharashtra, Goa, Karnataka and Kerala State.

Participatory Coastal Resource Management



Fig. 15.1: Coral reef in Gulf of Kutch (Gujarat).
(Source: www.annauniv.edu/iom)

- Seventh longest in the world
- 1/5 of the population live along the coast
- Gujarat has the longest coastline
- Three of our metropolitan cities are on the coast.

On the East, the Bay of Bengal washes the coast of Sunderbans in West Bengal, Orissa, Andhra Pradesh and Tamil Nadu states. The Southern promontory of Indian Peninsula is bathed by the Gulf of Mannar (Fig. 15.2) and India Ocean, along the coasts of Southern portion of Tamil Nadu (Fig. 15.3).



Fig. 15.2: (a) Mangroves in Gulf of Mannar (b) Algal vegetation in Gulf of Mannar.
(Source: www.annauniv.edu/iom)

We should view the concept of the 'Coastal Zone' as a means of focusing attention on the emergence of an innovative framework for planning and management to help make wise and sustainable use of resources. For example, the management boundaries for dealing with lowland flooding will be different from those considered for coral mining. Thus management boundaries need to be issue and problem-based rather than be rigidly defined. Although the coastal zone is an interface between land and sea, the area of real concern is that region where human activities are interlinked with both land and marine environments. This area has been defined as the coastal resource system (Fig. 15.4).

Due to ecological significance of coral reefs and anthropogenic threats to this ecosystem, in India, four coral reef areas at Andaman and Nicobar Islands, Gulf of Mannar, Gulf of Kutchch and Lakshadweep Islands, have been identified for intensive conservation and management.

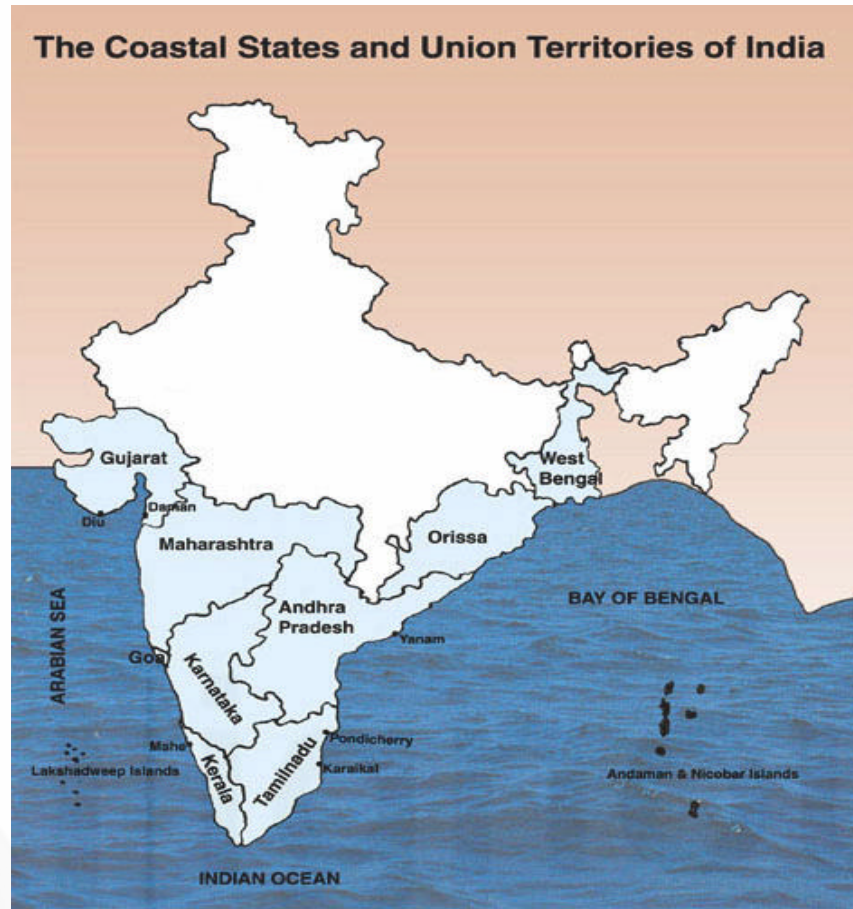


Fig. 15.3: Coastal Zones of India

(Source: http://www.cpreec.org/04_articles/the_coastal_ecosystem/the_coastal_ecosystem.html)

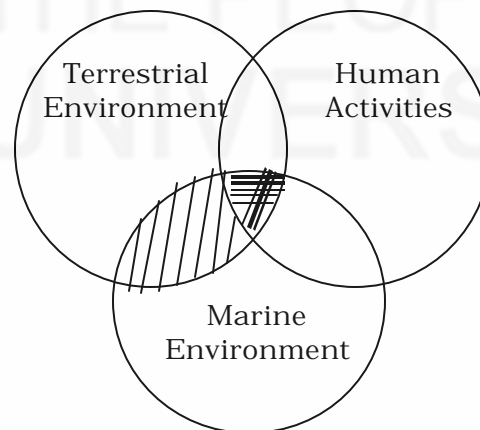
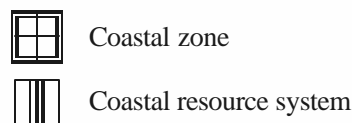


Fig. 15.4: Relationship between the coastal zone and the coastal resource system (after Chua 1993)



15.2.1 Characteristics of Coastal Zones

Coastal zones have the following characteristics:

- i) They may have a wide variety of diverse habitats and ecosystems (e.g. estuaries, coral reefs, seagrass beds, mangrove swamps (Fig . 15.5), creeks, lagoons, bays)



Fig 15.5: Mangrove swamps

- ii) These ecosystems have key inbuilt features, which are described as ‘functions’ when regarded in the context of a coastal resource system. For wetlands these might include primary and secondary production, which sustain the flora and fauna; storage of sediments and organic carbon, which may enhance productivity; linkages between ecosystems, which are essential to the maintenance of food chains, migration routes, and increased production.

For coral reefs (Fig. 15.6) these ‘functions’ would include high primary productivity and high rates of carbon fixation ultimately leading to significant reef accretion; and biological and physical erosion leading to the generation of calcareous sediments.



Fig 15.6: Coral reef area in Gulf of Mannar
(Source: www.annauniv.edu/iom)

- iii) In turn these ‘functions’ generate ‘goods’ (e.g. fish, oil, gas, and minerals) and ‘services’ (e.g. natural defense against storms and tidal waves, recreation and transportation). Such ‘goods’ and ‘services’ have an economic value while some can be traded using market mechanisms but others or equal value do not lend themselves to such straightforward evaluation. Good examples are the valuation of a coral habitat damaged as a result of ship grounding or valued pastimes such as swimming, boating, recreational fishing or simply gazing at the ocean.

For mangroves, consideration has been given to these resources that are not marketed and also to the valuation of ‘goods’ and ‘services’ that might be used some distance from the actual ecosystem in question. Box 1 in Table 15.1 represent the products derived from a mangrove that have a recognized market value while Boxes 2, 3, and 4 represent ‘goods’ and ‘services’ that are generally excluded from analyses of the value of mangroves when decisions are taken to develop alternative uses (e.g. conversion to shrimp ponds). Table 15.1 also indicates ‘goods’ and ‘services’ which are located on and off site.

Table 15.1: Valuation of ‘goods’ and ‘services’ from a mangrove ecosystem (after Hamilton and Snedaker 1984).

Valuation of goods and services	Location of ‘goods’ and ‘services’	
	On-site	Off-site
Marketed	Box 1. Usually included in an economic analysis (e.g. poles, charcoal, woodchips, mangrove crabs)	Box 2. May be included (e.g. fish or shellfish caught in adjacent waters)
Non-marketed	Box 3. Seldom included (e.g. medicinal uses of mangrove, domestic fuel wood, food in times of famine, nursery area for juvenile fish, feeding ground for estuarine fish and shrimp, viewing and studying wildlife)	Box 4. Usually ignored (e.g. nutrient flows to estuaries, buffer to storm damage)

- iv) There is a direct link between environmental ‘functions’ and the generation of ‘goods’, which may be used by more than one form of human activity (e.g. coral rock for building and for lime production). As in a factory the system will not continue to produce products unless attention is paid to the amount and quantity of inputs required to maintain productivity and functional integrity of the system.
- v) In the coastal zone where there is competition between various stakeholders, for land and sea uses which often result in severe conflicts and destruction of the integrity of the resources system.
- vi) Activities in the coastal zone of many states make a significant contribution to the GDP of national economies. For example in Sri Lanka the coastal zone occupies 24% of the country’s land area yet it contributes 40% of the nation’s GDP, with 50% of the population living there. Many coastal communities in South Asia depend upon the oil and shipping industry, coastal tourism, fisheries and primary industries.
- vii) The coastal zone has a high concentration of human settlements and is the preferred site for urbanization. Most of the major cities of South Asian countries are situated on the coast. Many countries like India are currently experiencing significant population expansion, e.g. in Chennai, Mumbai and Kolkata.
- viii) The coastal zone will be a focus for future development in the next 50 years as coastal populations expand and countries extend their shipping, industrial and trade bases (Fig. 15.7), while maximizing their tourism potential. Such developments will lead to increased social and environmental conflicts, which will require the implementation of integrated management planning.



Fig 15.7: Fishing harbour in Coastal Karnataka.

15.2.2 Coastal Zones in India

The coastal ecosystems (Fig. 15.8) are now highly disturbed and very much threatened, encountering problems like pollution, siltation, and erosion, flooding saltwater intrusion, storm surges and other activities due to ever expanding human settlements. Under the Environment (Protection) Act, 1986, the Coastal Regulation Zone Notification was issued in 1991. Through this notification, the Government of India directed the coastal States to prepare Coastal Zone Management Plans with High Tide Line 500m-regulation line, other boundaries, etc for approval of the Ministry of Environment and Forests (MoEF). By the said notification, the coastal areas were classified into four categories. i.e. CRZ - I, CRZ - II, CRZ - III, CRZ - IV. The ecologically sensitive areas and areas of extraordinary natural beauty are included under CRZ - I, where no activity is allowed. The coastal stretches of urban and developed areas are categorized under CRZ - II. In this category, buildings are permitted on the landward side of the existing structures. The areas, which do not come under CRZ - I and II are included in CRZ - III where no construction is permitted up to 200 m from the high tide line. The Lakshadweep, Andaman and Nicobar Islands and small islands are categorized in CRZ - IV. To implement the CRZ notification, we need to identify the Ecologically Important Areas (EIA).

The identified and designated EIA's will be declared as no-development zones. Management plans for these areas will be prepared by scientific institutions and approved by the NCZMA. The approved plan should be implemented by the concerned State/UT Authorities. Such a management strategy will ensure the sustainable development and management of coastal environment.

In the next section let us examine Integrated Coastal Management in theory and practice. Countries included in the South Asian regional seas Pakistan, Bangladesh, India, Sri Lanka, the Maldives, and the British Indian Ocean Territory (BIOT- the Chagos Archipelago). Apart from all having coastlines which are bathed by the Indian ocean, these countries also share the problems of increasing population pressures and resultant increasing demands on the coastal zone, at a level which is almost unprecedented elsewhere in the world. For example in India the population had reached one billion mark with 25% of this number living along the coast; in Bangladesh population numbers are projected to reach 145 million by 2000 with 80% of these inhabiting coastal areas. These problems are further aggravated by the fact that coastal populations in South Asia include some of the poorest members of the community – artisan fishermen, the landless and nomadic pastoralists.

The term integrated coastal management (ICM) is used to describe a continuous and dynamic process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal systems and resources (after GESAMP 1996).



Fig. 15.8: Coastal ecosystem and its components

(Source: http://www.cpreec.org/04_articles/the_coastal_ecosystem/the_coastal_ecosystem.html)

The coastal zone becomes a focus for settlement by poor people because of the accessibility of the coast and its aquatic resources and the lot is not improved by non-sustainable use of resources. Population increases and the attraction of the coast for settlement by the poorest members of the community represent considerable challenges to the countries of South Asia and also to the sustainable exploitation of resources in the coastal zone. Some of these challenges may be met, by an **integrated management approach** to the use of coastal resource. Conventional sectoral management is not effective in addressing the complex management issues of the coastal zone. These issues are **cross-sectoral** in nature with the activity of one sector often adversely affecting the development of the others.

15.3 ESSENTIAL ELEMENTS OF INTEGRATED COASTAL MANAGEMENT

Integrated Coastal Management (ICM) is a framework, which involves comprehensive assessment, setting of objectives, planning and management of coastal systems and resources, while taking into account traditional, cultural, and historical perspectives and conflicting interests and uses. It is an interactive and evolutionary process for achieving sustainable development and implementing a continuous management capability that can respond to changing conditions. ICM includes the following:

- Integration of programmes and plans for economic development, environmental quality management and land use.
- Integration of programs for sectors such as food production (including agriculture and fishing), energy, transportation, water resources, waste disposal and tourism.
- Integration of all the tasks of coastal management from planning through to implementation, operation and maintenance, monitoring and evaluation performed continuously over time.

- Integration of responsibilities for various tasks of management among levels of government - local, state/provincial, regional, national, international and between the public and private sectors.
- Integration of available resources for management (i.e. personnel, funds, materials, equipment).
- Integration among disciplines (e.g. geomorphology, geochemistry, marine biology, economics, engineering, political sciences and law).

As you will realize the essential elements of integrated coastal management are **integration** and **co-ordination**. Any policy and management action, which has been designed to address coastal development conflicts, must be founded on a sound understanding of natural processes and ways in which these may be disturbed (i) on political socio cultural and economic conditions (ii) on present and future demands (iii) social costs involved. The management of the coastal resources system has been likened to a cube consisting of three mutually supporting dimensions. These are **processes, issues** and **actions** and each forms an axis of the cube (Fig. 15.9). The three dimensions are closely intertwined and to consider only one may lead to collapse of the whole management system. This approach to integrated coastal management follows closely that adopted for the countries of South East Asia.

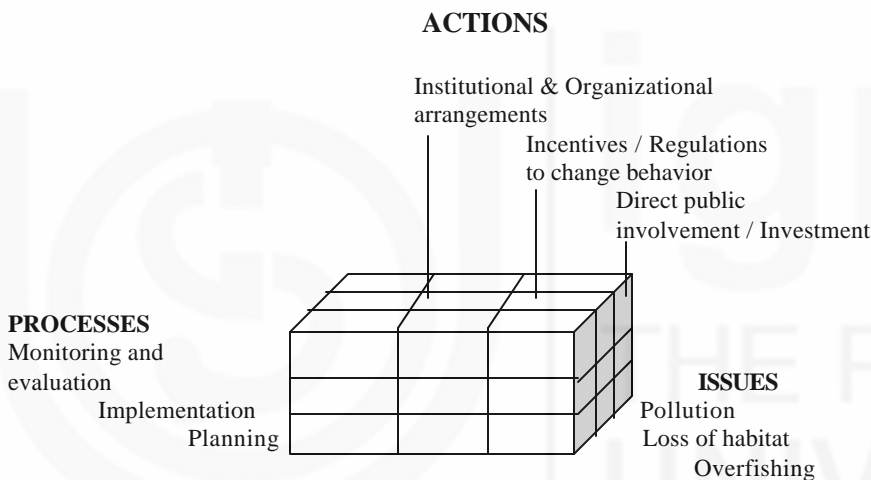


Fig. 15.9: A coastal area management system (after Chua 1993)

Management **processes** identify and analyze management issues and develop the necessary policy and management options. In this model management processes consist of four essential sequential components, namely **planning, implementation, monitoring** and **evaluation**. The planning component constitutes the basic layer of the cube. The management **issues** embrace the conflicts resulting from resource exploitation (e.g. over fishing, coral mining) and use (habitat loss, pollution) and it forms a second dimension to the cube. Management **actions** constitute the third dimension and include direct public investment (e.g. restocking, fisheries enhancement, education and public awareness): incentives and regulation, which might change behaviour (e.g. permits, quotas, rights, monitoring and enforcement). Unlike sectoral management, which is represented by only one sector of the cube (e.g. over fishing), the spell-over effects of one form of development on all others can be addressed in this integrated approach.

15.3.1 Management Processes

The management processes consist of integrated planning, implementation, monitoring and evaluation:

- Integrated planning involves inception, research and analysis, programme formulation, adoption and execution. While the detail and level of planning may

vary according to the conditions at the site and the experience of the planning team, the fundamental steps are essentially the same. They are:

- i) Establishing a multidisciplinary planning team to provide a framework for the management programme, initiate the planning process and identify the key participating agencies. Core staff might include a coastal management expert, a regional planner, a resource economist, an ecologist, a sociologist and an environmental engineer. Obviously the composition of the team will vary depending on the type of project in hand or the management challenge.
 - ii) Adopting a planning process, this should take no longer than 1-2 year to execute. In principle the planning process involves the evaluation of secondary data and also any formal targeted research with a view to the production of a strategic management plan and an area profile. The actual planned life of the project should be between 5-10 years to permit the development of skilled human resources, plans and other measures needed to allow the project to be self-sustaining beyond the limit of donor funding and technical support. **Clear goals should be apparent and acceptable to all participants.**
 - iii) Collection of research data will include secondary information but may also involve instigation of focused research needed for a specific coastal management programme. The research will be multidisciplinary in character and should include attempts to evaluate the 'assimilative capacity' of a system/ecosystem, resource evaluation, and legislation as appropriate. Assimilative capacity can be defined as 'the ability of a receiving system or ecosystem to cope with levels of waste discharges or human activity without suffering any significant effects.'
- Implementation requires funds and human resources and primarily depends upon project design and the capability of the implementing agencies.
 - Monitoring is an important component of the management process and should be incorporated at an early stage of the programme. The aims of monitoring are to see how the projects are progressing; to explore opportunities that could be developed and to assess the impacts and the lessons learned.
 - Evaluation is critical since it enables corrective action to be taken where management plans are not producing the desired results. As a result of evaluation changes in plans, management strategies may be initiated and mistakes corrected at an early stage of the management process. In this way integrated coastal management becomes iterative with scope for learning from mistakes made early in the management programme.

Because the planning, implementation and monitoring and evaluation are sequential they can be depicted as a cycle, often described as the policy cycle (Fig. 15.10).

The most difficult transition occurs between planning and implementation. Each cycle of the policy process for a coastal management programme can be considered a generation. The procedures adopted in many mature coastal management programmes are substantially redesigned in subsequent generations as a result of earlier experiences and such exercises have been termed 'adaptive management'. In this way constructive use is made of lessons learned from successes and failures in the management process.

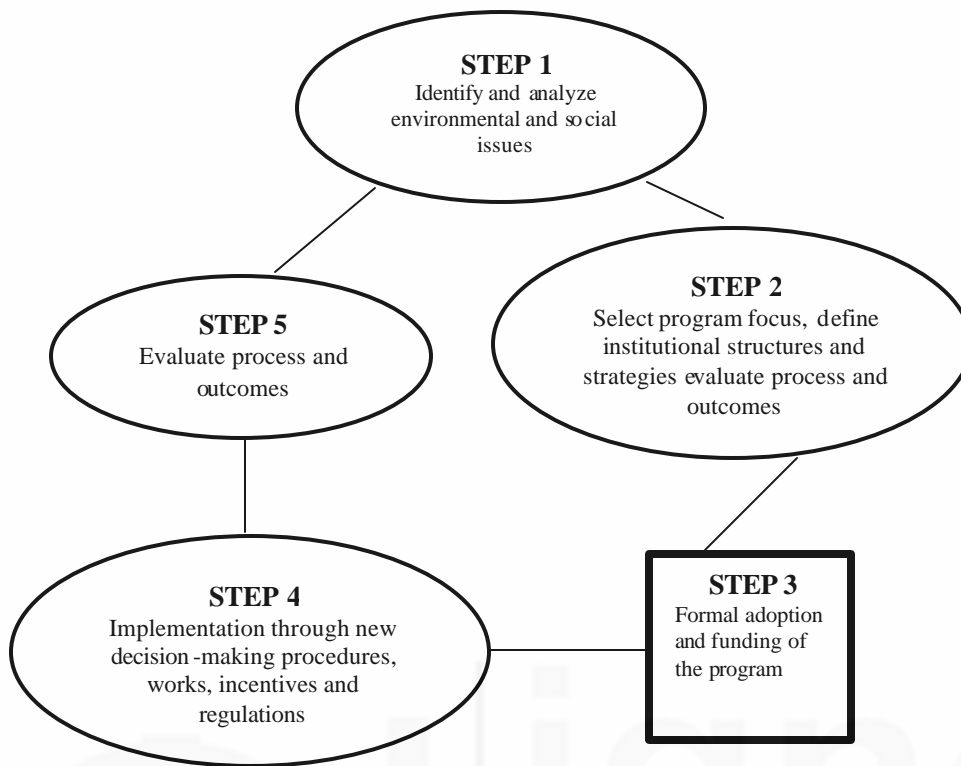


Fig. 15.10: Steps in the evolution of generation of a coastal management programme (Oslen 1993).

15.3.2 Management Issues

Management issues include resource use (over fishing, tourism potential, destruction of habitats etc.); environmental quality (population, coastal erosion) and institutional concerns (conflicts in legislation, intersectoral conflicts, ineffective law enforcement etc.). While depicted in the cube model as individual issues, many clearly overlap and serve usefully at this point to highlight another aspect of coastal management that of multiple use of coastal environments.

At the heart of this concept lies a recurrent problem in coastal management described as a sectoral approach to resource use. This approach favours a single purpose and exclusive use of land and water resources. However shared coastal systems generate a wide variety of 'goods' and 'services'. It has been argued that we should be looking for an optimal mix of uses that generates the greatest economic benefit to society. That optimal mix is hard to achieve and demands an effective and integrated coastal management policy if resource conflict is not to occur. In Sri Lanka coastal lagoon areas are frequent sites, which suffer from multiple resource conflict (fishing, mining and tourism). In India dredging is done in many atolls in Lakshadweep and one beautiful underwater garden of the atolls is totally depleted. Such locations have been considered under the heading of special area management sites where collaborative management plans have been set up to resolve conflicts. It is clear from a large number of case histories that the diverse range of 'goods' and 'services' cannot be managed adequately through private ownership or control by sectoral agencies.

15.3.3 Management Actions

Management actions provide the most important dimension of a coastal management programme since they involve the application of measures directed towards achieving the desired changes e.g. maintaining the functional integrity of the ecosystem, improving water quality and changing human behaviour. They include:

- International and organizational arrangements, which clarify legal rights and obligations, strengthening enforcement capability and undertaking monitoring and evaluation.
- Incentives and regulations to change human behaviour which might involve establishment of subsidies, fishing permits or quotas, taxes, fishing and mining bans, regulations of vessels and fishing activities.
- Direct public involvement which would involve investment by a government into increasing public awareness, conducting appropriate research, providing basic infrastructure (e.g. waste disposal systems) and technical assistance where needed.

Box 15.1: Regional policies and action framework of South Asia

A regional meeting for countries in South Asia was held in November 1985 in the Maldives. A major output of this meeting was to identify options for a regional policy and action framework which are as follows:

- Promotion of research and monitoring, and exchange and sharing of data and information among member States.
- Promotion of methods and practice for the management of human activities that safeguard environmental quality and utilize resources rationally and on a sustainable basis.
- Assessment and evaluation of causes, magnitude and consequences of environmental degradation.

At the regional meeting, country delegates recognized four major anthropogenic influences affecting the coastal zone in South Asia. These were:

- sedimentation (from dredging, land derived run off and land reclamation);
- marine resource exploitation (sand, coral, mangrove, fisheries);
- pollution; and
- tourism.

The relative significance of each factor varies from country to country as shown in Table 15.2

Table 15.2: Major anthropogenic influences (listed in order of importance) in the coastal zone of South Asian countries: as agreed at the 1995 ICRI meeting.

Sri Lanka	Maldives	India	Bangladesh	Pakistan
1. Sedimentation (land development and mangrove clearance)	1. Marine resource exploitation	1. Sedimentation (Poor land practice)	1. Marine resource exploitation	1. Marine resource exploitation
2. Marine resource exploitation	2. Sedimentation (from dredging)	2. Marine resource exploitation	2. Sedimentation (Mangrove clearance)	2. Pollution
3. Pollution	3. Tourism	3. Pollution	3. Pollution	3. Sedimentation (Mangrove clearance)
4. Tourism	4. Pollution	4. Tourism	4. Tourism	

SAQ 1

- i) List the anthropogenic influences on coastal zone of India according to your thinking. Do you think tourism is degrading our coastal area? Explain.
 - ii) Why cannot management of Coastal Area alone bring sustainable development?
 - iii) Define ICM, why has it become an important tool for sustainable development.
-

15.4 THEORY INTO PRACTICE: KAVERI BASIN ECO-SYSTEM DEVELOPMENT: PROBLEMS AND TASKS AHEAD

River systems are interwoven with human civilization - this being particularly so in India. In fact, river banks have been considered to be the cradle of major civilizations in the world. For instance, about the Ganga, Jawaharlal Nehru wrote:

“The story of the Ganga from her source to the sea, from old times to new, is the story of India’s civilization and culture”..... “The Ganges is the river of India, beloved of her people, round which are intertwined her racial memories, her hopes and fears, her songs of triumph, her victories and her defeats. She is a symbol of India’s age-old culture and civilization, ever-changing, ever-flowing and yet ever the same Ganges.”

Besides fulfilling the prime needs for life processes, rivers have been used for domestic, agricultural, fisheries, industrial, recreational, aesthetic, navigational and power generation purposes. Our progress in the agricultural sector is, to a great extent, attributed to the presence of an irrigation system involving a chain of rivers, canals and channels in the country. The irrigation systems have been very vital for our agriculture from times immemorial.

In our country there are five major river systems – the Ganga, the Brahmaputra, the Indus, the East Coast and the West Coast river systems – covering a length of over hundred thousand kilometers. Kaveri is an important river of the East Coast river system, nearly 850 km long. Originating from Brahmagiri Hills on the Western Ghats at an elevation of about 1,340 metres above the sea level, it is the largest river south of Krishna. The important tributaries of Kaveri are the Harangi, the Shimsha, the Arkawathi, the Lakshmana Lirtha, the Kabini and the Suvarnavati in Karnataka, and the Bhavani, the Noyil and the Amaravati in Tamil Nadu. Its main catchment is located in Karnataka and is fed by South-East monsoon. It covers a drainage area of nearly 67,785 square kilometers. Of this, an area of 40,663 sq km is subjected to South-West monsoon while the rest is under the influence of the North-East monsoon. The annual rainfall in the basin varies from less than 60 cm over North-Western part of Amaravati sub-basin to more than 600 cm in the source region of the Kaveri river.

The Kaveri basin area in Karnataka is 41.2 percent, in Tamil Nadu 55.5 percent and the Kerala 3.3 percent. The annual flow in the main Kaveri river at Chunchanakatte (about 48 km upstream of Krishnarajasagar dam) is 2.91 thousand Mm³ (102.7 TMC; average for 58 years). Forty percent of flow occurs in July, followed by 30 per cent in August; September brings about 11 percent and October about 6 percent. The flow in June is slightly less than nine percent. The contribution of the remaining seven months, November to May, taken together, is less than five percent of the annual flow, while the five months June-October account for 95.4 percent. Essentially, therefore, it is a monsoon river.

Surface water resources are rather scarce in Peninsular India and have to be supplemented with ground water. According to the UNDP study done in Tamil Nadu

* Keynote Address delivered at the Inauguration of the Workshop on Kaveri Basin Eco-development organized at Kodaikanal by the Madras Science Foundation, January 10, 1985 by Dr. T.N. Khoshoo.

region of Kaveri basin, the total replenishable ground water that can be made use of in the delta amounts to about 3,650 million cubic metres per year. This water which is reported to be of good quality, can be utilized for drinking purposes by nearby towns and also to feed water supply channels.

No estimates of ground water potential are available for Kaveri basin in Karnataka region. Detailed hydrogeological and geophysical studies in the region should be undertaken to exploit the hidden water resources.

Kaveri system is one of the best regulated and fully exploited river basins. It is an excellent example of stored system of river as against the perennial alluvial rivers of northern India (Kulandaiswamy, 1985). Rice bowl of Kaveri delta is chiefly located in the districts of Thanjavur and Tiruchirapalli.

Kaveri is interwoven in the cultural life of Karnataka and Tamil Nadu where the river is associated with Agastya Muni. The two island towns of Srirangapatnam and Srirangam are famous pilgrim centres. Besides, there are a large number of temples in Thanjavur and Tiruchi districts. The river system was navigable during the early Cholas who established their capital at Woriyoor on the banks of the river near Tiruchi. Many famous schools of philosophy, music, dance, crafts, etc. have flourished on the banks of Kaveri in many hamlets.

Impact of Riverine Ecology

With rapid industrialization and urbanization in the country in the post-independence era, a large number of dams and barrages were built for irrigation, flood control, navigation and power generation. Dams, rivers and barrages act as physical barriers to migration of fish, tending to prevent their access to the usual breeding, rearing and feeding grounds. Consequently, substantial morpho-ecological changes occur in the original riverine ecology both above and below the dam site. Kaveri cannot possibly be an exception to this.

It is now established that construction of dams modifies the physical natural of soil in the vicinity. The prevalence of “knock-knee” deformity or “genu-valgum” among adults and children in some districts of Andhra Pradesh and Tamil Nadu is attributed aetiologically to excess fluoride concentration in water after construction of dams in the region.

Other changes include turbidity and siltation in the man-made reservoirs, leading thereby to the imbalance in the population of aquatic flora and fauna with direct impact on food chain. Considerable reduction in water flow due to artificial barriers also affects ecology, rendering large areas of land unproductive. Sizeable chunks of land that become inhabitable after getting inundated, force the population to rehabilitate itself elsewhere often at State expense. Large reservoirs and the irrigation channels also affect the local climate.

Like all other rivers in the country, Kaveri too has been subjected to the onslaught of the negative impacts of industrialization and urbanization. A number of dams, reservoirs and “anicutts” (man-made impoundments of water) have been built on Kaveri to utilize almost 95 percent of its water for agriculture and hydroelectric power generation. Construction of huge masonry structures like Krishnarajasagar Dam (44,827 million cft capacity) and Mettur Dam (83,500 million cft capacity), the latter being one of the world’s largest, are responsible for progressive growth of this region. The entire Kaveri system, together with its delta and mangrove regions is subjected to intense land and water use and other man-made influences.

Industrial Discharge

Our rivers are particularly vulnerable to an indiscriminate discharge of industrial effluents. Mass mortality of fish fauna is often reported from different parts of the

country. The old industries located on river banks continue to discharge effluents affecting water quality. The pollution load is very heavy in rivers passing through industrialized belts of the country. Effluents from pulp and paper mills, synthetic rubber factories and chemical factories and fly ash from coal washeries cause extensive pollution in some of our rivers. Some of the industrial effluents include dangerous carcinogens such as arsenic, nickel, asbestos and vinyl chloride. Again, Kaveri cannot be an exception of such a situation.

Synthetic pesticides and fertilizers used extensively in modern agriculture are washed out to rivers and tributaries. Direct access of such highly toxic chemicals into the water is not only hazardous for pisciculture but also from public health point of view. Concern has been expressed about the occurrence of pesticides and phosphate fertilizers in Kaveri waters in recent years. The problem is very serious when seen in the context of use of synthetic fertilizers and pesticides in the Karnataka and Tamil Nadu regions.

Following types of industries are located in and around Kaveri basin:

- a) Chemicals
- b) Plastics
- c) Dyestuff Units
- d) Solvent Extraction Units
- e) Paper Mills
- f) Aluminium
- g) Sugar
- h) Distilleries
- i) Textile Mills
- j) Cement
- k) Leather Tanneries
- l) Dairy and Allied Industries

There appears to be no bacteriological contamination except for the occasional presence of the faecal coliforms which were found upto 16,000 as the most probable number per hundred millilitres. The total coliform is also of the same magnitude indicating presence of the coliforms of faecal origin only.

Information on communicable diseases like malaria, cholera, typhoid, dysentery, etc. is nearly 15-20 years old and needs to be reviewed. It would, however, be worthwhile to see latest records of Ministry of Health to have an idea about the current situation.

No status report on pollution of Karnataka region is available but needs to be compiled at the earliest.

Afforestation Programmes

Any serious attempt to undertake improvement and preservation of Kaveri Basin should take into account the afforestation programmes. There has been a sharp reduction in forest cover around Hosnagar in Shimoga district in Karnataka after Linganamakki Project. The dense forest which existed in these areas in 1934 has been drastically reduced (Meher Homji, 1985). Similarly, after construction of railway tracks linking Hassan and Sakleshpur, forests have been cut. All these areas, according to the investigations have shown a tendency towards diminishing rainfall.

As is evident from the studies, the environs of Bhavani river (an important tributary of Kaveri Basin) have undergone perceptible changes with regard to land use. Forests have been converted into agricultural land and industrial sites. Without any significant change in rainfall in Bhavani watersheds of Katterly and Coonoor, the peak floods during monsoon have increased alarmingly, obviously due to a reduction in forest

cover (Chinnamani, 1985). The population has suffered immensely because of indiscriminate felling of trees.

It is well known that deforestation leads to runoff rainwater which does not sink in soil, leading to unpredictable stream flow as also to soil erosion and consequent sedimentation of streams and water bodies. On the other hand, afforestation helps in holding rain water and downward percolation and recharging of underground aquifers. Therefore, the best strategy to guarantee water in perpetuity in Kaveri Basin is to have a massive afforestation programme.

Presence of luxurious mangrove forests near Coleroon and Muthupet and adjoining estuaries and lagoons contribute significantly to high primary biological production. The estuarine transport of chemical wastes, trace elements and nutrients and organic compounds and heterotrophic process need a careful study.

The mangrove vegetation of Pichavaram, South Arcot District at northern extremity of the Kaveri delta, needs special care. Although the area is highly populated, 1400 ha mangrove vegetation in this area is well preserved. This should be continued at all cost (Meher Homji, 1985).

Some information is also available on the disappearance of wildlife from Kaveri Basin in the past century. Higher mammals like nilgai and cheeta can no longer be seen in this area. The wolf, wild fox and tiger have been reduced in number (Sukumar, 1985).

The Central Board for Prevention and Control of Water Pollution under the Department of Environment has published two comprehensive volumes on Yamuna and Ganga Basins giving all the relevant information as also detailed inventory of pollution sources of the respective basins. In the years to come, such studies would be extended to all the 14 river basins which collectively account for more than 83 percent of the land mass, 85 percent of surface runoff and 80 percent of the population of the country. The whole exercise on Ganga Basin has been summarized in the form of six maps in a calendar (1984 – 85) on Ganga issued by the Central Board. The calendar summarizes information on:

- a) Physiography of ground water and stream flow
- b) Soil types and climate
- c) Land use and fertilizer consumption
- d) Irrigation and pesticide consumption
- e) Pollution generating potentials and generated load
- f) Abstraction and stream classification, the designated use like:
 - i) Drinking water without conventional treatment but after disinfection
 - ii) Outdoor bathing
 - iii) Drinking water source with conventional treatment followed by disinfection
 - iv) Propagation of wildlife and fisheries, and
 - v) Irrigation, industrial cooling and controlled waste disposal.

Our integrated eco-development programmes already initiated in the Himalayas, Western Ghats and Ganga Basin would now be extended to the Eastern Ghats and Kaveri Basin shortly. Department of Environment has also prepared a report on Nilgiri Biosphere Reserve. Discussions have been held with the concerned States to finalize concrete action on this Biosphere Reserve. Once initiated, it would cover a large stretch of Kaveri Basin.

The Central Board for the Prevention and Control of Water Pollution which is an associated organization with TERI has established a country-wide network of about 120 monitoring stations which monitor the water quality in respect of 19 parameters. Fourteen major inter-state rivers of the country are thus monitored to assess the pollution problems. In respect of these rivers, zoning and classification has been completed by the Board. As far as possible, Department of Environment will provide

laboratory and other infrastructural facilities for water quality monitoring of Kaveri Basin.

What the Ganga is to the North, the Kaveri is to the South. Kaveri has been worshipped as a family deity by Coorgs. The purity of its water, therefore, has to be maintained. It is from this point of view that workshop on Kaveri Basin revised the following issues for consideration of the participations:

- a) Water resource management in the river basin with special reference to water budgeting for various uses, leading to classification of the river for designated uses.
- b) Detailed exploration of flora and fauna of the region particularly the identification of pollution indicators and population studies on threatened species.
- c) Ecological functioning of the entire Kaveri system and of its self-purification mechanism involving constant recycling of organic compounds, transport of metals by river water into estuary and their uptake by microbes.
- d) Pollution control of industrial effluents and agricultural chemicals runoff.
- e) The role of Kaveri river in maintaining the biogeochemical cycle of carbon.
- f) Prevention and reclamation of saline and alkaline soils due to combination of drainage and successive surface irrigation.
- g) Protection of river banks through biological and engineering methods.
- h) Programme of extensive afforestation and soil conservation with the help and the support of voluntary agencies and public at large.
- i) Problems of salinity ingress and micronutrients depletion in the estuarine area.
- j) The cultural impact of river on the people living in adjoining areas.

In the ultimate analysis, the only guarantee for a river system to flow in perpetuity is to have the catchment area in a healthy condition. This alone would ensure water conservation in an effective manner. A good river is essentially a living and a self-purifying system. It can continue to remain so, if the extent and nature of onslaught of pollution is not heavy and continuous. A river can be kept in a healthy condition by monitoring the extent and nature of pollution on a continuous basis and by taking corresponding mitigative measures wherever and whenever needed.

15.5 CONSERVATION STRATEGIES FOR MANGROVES IN INDIA *

India has a total area of 4,871 km² under mangroves. About 57% are found along the east coast (Bay of Bengal), 23% on the west coast (Arabian sea) and the remaining 20% on the Bay Islands (Andaman & Nicobar Islands in Bay of Bengal).

There are three major types of coastal settings on which mangroves in India exist and they are (i) deltaic, (ii) backwater-estuarine and (iii) insular categories. The deltaic mangroves occur along the east coast (Bay of Bengal) where the mighty rivers (Ganga, Brahmaputra, Mahanadhi, Krishna, Godavari and Cauvery) make the deltas. These deltas have nutrient rich alluvial soil and hence the mangroves are luxuriant. The backwater-estuarine type of mangroves that exists in the west coast (Arabian sea) is characterized by typical funnel-shaped estuaries of major rivers (Indus, Narmada, Tapi with delta formation is almost absent) or backwaters, creeks, and neritic inlets. The insular mangroves are present in the Bay Islands, where many tidal estuaries, small rivers, neritic islets, and lagoons support a rich mangrove flora.

15.5.1 Floral and Faunal Resources

Mangrove species have been counted as the plant species that exist within the limit of saline tidal water flow and unstable muddy substrates. According to the given definition, the mangroves in India comprise of 69 species (excluding salt-marshes and other associate species, under 42 genera and 27 families) are present on the east coast; 37 species (25 genera and 16 families) on the west coast and 44 species (28 genera

under 20 families) on the Bay Islands. The East coast has 91% of mangrove species west coast has 53% (Fig 15.11).



Fig. 15.11: Mangrove vegetation.

There are a total of 53 species of prawns/shrimps in Indian mangroves, of which 53 (68%) in the east coast and 22 (42%) in the west coast. There are 91 crab species in Indian mangroves of which 67 (74%) in the east coast and 13 (14%) in the west coast. Similarly, there are higher numbers of molluscan and fin-fish species along the east coast than on the west coast.

15.5.2 Conservation Status of Floral and Faunal Species

Conservation status of mangrove species

Mangrove ecosystem as a whole is in vulnerable condition. Hence, all the components of the ecosystem need to be conserved critically. It is necessary to prioritize the rare, endemic and endangered species for immediate conservation measures. Extensive field study reveals that 20 mangrove species are either rare or endemic species (Fig. 15.12).



Fig 15.12: Mangrove vegetation in Kerala coast.

More widely distributed species like *Aegiceras corniculatum*, *Acanthus ilicifolius*, *Avicennia marina*, *A. officinalis*, *Excoecaria agallocha*, have great ecological amplitude and a remarkable ability of vegetative regeneration. Due to high productive values in fuel energy, timber, fodder, boat and house building materials, tannin, paper pulp and in other sustainable life supports, some common mangrove species of *Avicennia*, *Excoecaria*, *Bruguiera* and *Rhizophora* (Fig. 15.13) may come under the threatened category with the increasing human pressure and if regular regeneration programme through afforestation are not taken up immediately, they may decline in the near future. India has been taking efforts to save the biodiversity components of the vulnerable ecosystem.



Fig. 15.13: Special types of roots are found in mangrove vegetation.

15.5.3 Threats to Mangroves

The mangroves in India experience several threat factors in different maritime states of our country. Three problems are very common in most of the mangrove ecosystems and they are: (1) over-exploitation of fishery resources, hampering regeneration of mangrove seedlings and unnecessary cutting of trees, (2) damage of trees for firewood, cattle feed, rehabilitation, reclamation and conversion activities, and (3) lack of peoples' awareness and participation in conservation activities. The most significant threat is of human pressure on mangrove-resources for forestry and fishery products. Hence, the Ministry of Environment and Forests has given increasing attention for sustainable management of the mangrove resources, with the local peoples' participation.

15.5.4 Remedial Measures

Remedial measures for the important issues that are related to mangrove conservation and management are given here-under.

- To all the local communities to cultivate the fast growing mangrove species like *Avicennia* in degraded areas.
- To provide alternate sources of timber (like *Casuarina*).
- To implement silviculture strategies like practicing the crop rotation once in 15 years in alternate strips (60 m wide at an angle of 45° to the waterways), and regeneration naturally by using seeds of nearby mangrove trees.

Cattle grazing

There is a heavy grazing by cattle especially on seeds and seedlings during monsoon that result in poor regeneration of mangroves.

- To ban on entry of cattle during monsoon.
- To provide alternate source of fodder.
- To encourage the people to cultivate fodder species through inter-cropping with *Casuarina*.
- To implement Dairy Development scheme for the local communities.
- To develop bio-fencing using toxic mangrove species like *Excoecaria agallocha*.

Unsustainable fishing practices

- To prevent mechanized raft operations in shallow waters of mangroves.
- To allow the fishing nets with > 20 mm mesh size that prevents the catch of juvenile fishes.
- To ban fishing activities during the critical stage of fish breeding (premonsoon & summer) thereby allowing development of juvenile fishes.

Lack of people's participation

People who dwell in and around mangrove habitats are careless of mangrove resources, due to lack of awareness or to not involving them in conservation processes.

- To create awareness of mangroves about the conservation of mangroves.
- To involve the local people particularly womenfolk in planning and implementation of management action plans.
- To cease fire-arms from license holders for preventing poaching of wildlife from mangroves.

Prawn farming

The Govt. of India has put a ban on intensive or semi-intensive type of prawn farming practices, especially along the ecologically sensitive mangrove areas. Extent of mangrove areas that are reclaimed for prawn farming practices and that of abandoned ponds are not clearly known.

- To restore and recover abandoned shrimp ponds, with mangrove planting.
- To develop environmentally sound aquaculture integrated with mangrove silviculture and fisheries for benefit of local communities.

Reduced fresh water supply

The freshwater supply that feeds estuarine mangroves is reduced due to poor rainfall and dam construction in upstream areas. The freshwater is required for germination, and sprouting of seeds and seedlings of mangroves.

- To prevent the water flow reduction in rivers that feed mangrove habitats.
- To ban any waterway barrier that affects the mangroves drastically.

Hyper-salinity

The brackish waters, which accumulate in the bowl-shaped mangrove habitat during monsoon, turn hyper-saline during summer, ultimately killing or retarding the growth of mangroves and those central areas thus become barren after some years. This situation becomes serious due to poor precipitation and poor flux of freshwaters/tidal waters.

- To flush the dry hypersaline soil with tidal waters through the construction of artificial creeks.
- To drain the stagnant saltwater in the mangrove habitats before summer.

Heavy siltation

Siltation blocks the river mountains and reduces the fertility of estuarine systems.

- To implement massive planting programmes to strengthen the river banks.
- To plant mangroves on the mudflats that are formed newly by siltation.

Natural calamities (danger of frequent storms)

- To identify the cyclone-prone areas and strengthen it with mangrove planting.

15.5.5 Conservational Strategies

The Govt. of India launched a Scheme on Conservation and Management of Mangroves in 1986 through its Ministry of Environment and Forests. In this context, a National Committee on Mangroves consisting of forest managers and scientists was constituted to advise and oversee implementation of the scheme. Based on the recommendations of the National Committee, 32 mangrove areas all along the country have been identified for intensive conservation and management. Management Action Plans have been prepared for the identified areas and grants have been released to the

respective State Government/Union Territories for implementation of Management Action Plans. Main activities of the management action plan include afforestation, regeneration of degraded mangrove areas, protection measures, eco-developmental activities so as to reduce human pressure on the mangrove ecosystem, and education and awareness related to conservation of the fragile ecosystem. The National Committee reviews regularly the progress of implementation of management action plans on the identified areas.

The National Committee has identified thrust areas for management-related research activities for funding, so as to integrate the research findings with management of mangroves. The thrust areas are as follows:

- Taxonomy and distribution of mangrove species.
- Status of endangered/threatened species and measures for their conservation.
- Restoration of degraded mangrove areas.
- Status of health of mangroves.
- Biodiversity of mangroves including flora, fauna and microorganisms and their interrelationships.
- Studies on aquaculture in the mangrove areas.
- Impact of mangrove afforestation on the coastal erosion and role of mangroves in flood damage control.

The Govt. of India protects mangroves with the support of legislative and regulatory measures. The mangroves are recognized as ecologically sensitive areas under the Environmental (Protection) Act-1986. Mangroves and activities are regulated under 6(1) category of the Coastal Zone Regulations.

Mangroves can be developed as 'cash crops' and as sources of high value commercial products and fishery resources and as sites for a burgeoning ecotourism industry. Their unique features may also make them ideal sites for experimental studies of biodiversity and ecosystem function (Kathiresan & Bingham, 2001). All this will require that the resource is understood, carefully managed, and protected. Involvement of local communities in conservation and education in 'wise' use of our precious mangrove resources will ensure that these unique ecosystems flourish.

15.6 SUCCESSFUL CASE STUDY OF COASTAL SALINE REGION OF WESTERN INDIA

Vankar Cooperatives Take to Vanikama 1: In a Coastal Saline Region of Western India

Genesis

Historical deprivation of socially and economically marginalised groups in degraded environments often lead to learned helplessness among such groups. Some of the factors that contribute to this state of helplessness include: a) fragile ecosystems and poor natural resource base, b) limited access to new technology and financial resources, c) low self-image and lack of faith in one's own skills and intellectual resources.

The Vankars (scheduled caste people) of a coastal saline region of Gujarat called the Bhal found themselves in precisely such a situation about two decades ago. It was largely through the courage and visionary zeal of a few of their leaders, that the community was able to emerge from this state of helplessness into a state of self-help and self-esteem. Recognizing the limits to economic emancipation through individual management of resources, the Vankars decided to resort to community action. Joining forces with an urban based NGO called the Behavioral Science Center (BSC)³, they established over the next decade, a string of cooperatives which made possible the demarcation of open-access saline wastelands as a common pool resource, for the

exclusive use of the scheduled caste. Pooling of land, labor and knowledge pertaining to the use of local resources and experimentation to build upon local knowledge and adopt technology from outside the region were integral parts of the strategy.

The Vankars saw in the proposed cooperatives a unique opportunity to a) improve their access to resources and markets; b) improve their ability to use these resources to create common pool assets; and c) to cope with the variety of risks involved in starting the new venture. But above all, they saw the tremendous possibility of bringing about a seachange in their social and economic status.

Starting with a single cooperative in Vadgam village in 1979, the cooperative movement of the Vankars spread to neighboring villages. By 1990 there were eight cooperatives which had federated together to form a two tier structure. The cooperatives established their own technology to cultivate a salt tolerant tree species popularly referred to as gando bawal or "the mad babool" , (*Prosopis juliflora*). The wood cultivated on these lands had poor market value but the charcoal made from this wood fetched a good price in urban markets. The establishment of such plantations over more than 1112 acres of saline lands proved to be the turning point for the Vankars, who picked up their new found confidence to establish several other economic enterprises during the next decade.

Raising the Mad Babool: Tribute to Local Ingenuity and Knowledge Systems

The saline wastelands of the Bhal had defied solutions over the past generations. The levels of salinity ranged from 4 to 100 millimhos/cm. This was interspersed with patches of alkalinity. It was through a process of trial and error that the cooperatives developed and mastered simple techniques to harness the productive potential of these lands. A number of incremental innovations took place, making it possible to establish plantations of "gando bawal" on land with salinity upto 8 millimhos/cm. Microcatchment water harvesting structures were created to harvest the rainfall needed for individual plants. The moisture was enough to mitigate the moisture stress caused due to salinity. It was also available uniformly over the monsoon season, resulting in significant growth during the months of July through November.

Outcomes

The Vankar cooperatives today have diversified into fisheries and rice milling in a big way. They have also been able to set up community services for credit and supply of agricultural inputs. A few have purchased their own tractors which provide services to individual farmers. Others have set up their own fair price shops and health care services. A survey conducted to assess socio-psychological change among the Vankars during 1990 showed significant differences between the behaviour of villages with and without such cooperatives.

Source: The World Bank/WBI's CBNRM Initiative, Author Astad Pastakia (1998)

15.7 GENERAL INTEGRATED COASTAL MANAGEMENT PRACTICE IN SOUTH ASIA REGION

In the earlier section, you read about the successful venture of a Gujarat Tribal Community. Let us now examine the Integrated coastal management practice currently being developed throughout the region. In most countries legislation requiring coastal states to prepare coastal management plans is relatively recent; in others such as Sri Lanka coastal management has been a concern since 1963. In 1979 a lead agency, the Coast Conservation Division (CCD), was set up to help coordinate sectoral activities between relevant agencies and government department in Sri Lanka.

The implementation of the Coast Conservation Act by the CCD in 1981 was an important first step in the evolution of a Coastal Zone Management Plan, which was finally approved in 1990. This plan was concerned primarily with coastal erosion and shore front construction. CCD's planning and regulatory programme for the coastal zone is complemented by research and planning activities for the National Aquatic Resources Agency (NARA) established in the same year as CCD. Looking to the future, CCD activities are projected to broaden to cover wider issues of concern in the coastal zone. The agency itself will aim to transform its primarily regulatory function to one of a service-orientated organization, which facilitates locally based planning and implementation efforts. The lessons learned from the 18 years of experience of the CCD should be recognized at an early stage during the development of ICZM programmes in the region. They may be summarized as follows:

1. Coastal management in Sri Lanka has evolved a necessarily supportive national framework but has not yet focused on how to involve coastal communities and local government in the resource management process.
2. Coastal management activities are presently too restricted to coastal erosion management and regulatory development along the shoreline.
3. Resource management that focuses on regulation is too narrow in scope and cannot meet the complex needs of coastal communities. Regulation alone tends to alienate the coastal residents affected.
4. Facilitating co-operation between sectoral interests has not been easy. Strong leadership by a coordinating agency is needed if it is to be effective in pro-active approaches to coastal management.

In India the coastal regulation zone (CRZ) notified in July 2000 Pachmarahi in Madhya Pradesh as an eco-sensitive zone.

In India, we have legislation and the Government of India's notification of 19 February 1991 declared coastal land up to 500 metres from the high tide line along the seas, bays, estuaries, creeks, rivers and backwaters as 'Coastal Regulation Zone' (CRZ). The high tide line is defined as the line up to which the "highest high tide reaches at spring tides". In order to control excessive exploitation of coastal resources and unrestricted development, the notification prohibited certain activities within the CRZ. Among other things, it included the setting up and expansion of industrial operations and processes except those directly related to waterfront or needing foreshore facilities. However, the notification provides that the CRZ's extent can be modified while preparing the 'coastal zone management plan' and it cannot be less than 100 metres from the high tide line.

The Government of India has set up the 'National Coastal Zone Management Authority' and similar State authorities to regulate the CRZ. The State Governments are required to prepare 'coastal management plans'. Thus, the Central and the State Governments control the development in coastal areas. Ministry of Environment and Forests must clear development projects after assessment of their environmental impact. However, the procedure is frequently changed to suit the requirements of interest groups.

The lessons learned from Sri Lanka, Pakistan and India have many common features, namely the need for investment in seeking alternatives for coastal communities dependent on artisanal fisheries; the need for community involvement at all stages in the development of a management plan; the need for a multicultural approach to management of the coastal zone and a formal strategy to effect such a proposal; the need to combine both regulation and incentives in any management action and finally the need for targeted, interdisciplinary research on specific problems in the coastal zone.

15.7.1 Good Coastal Management Practice

At this point it is worth reiterating what constitutes good coastal management practice. Essentially there is no generalized prescriptive recipe for the management of coastal resources; each case, each site brings with it its own unique set of issues for consideration. There is however a general framework within which coastal resources

can be sustainably exploited through appropriate policymaking, management, and technological intervention - this framework as you would have understood by now is integrated coastal management (ICM). It is most effective when it is pro-active and the process of developing ICM can be described as a series of steps. These are

I Awareness

- Developing awareness of the value of coastal resources within national economic and social development programmes.
- Developing awareness of the ability of coastal ecosystems to sustain more than one economic activity.
- Developing awareness of the common dependence of different groups of people on the availability of goods and services generated by coastal systems and their conservation.

II Cooperation

- Promoting cooperation among different sectoral agencies, the private sector and community groups, to achieve common objectives.

III Coordination

- Developing coordinated policies, investment strategies, administrative arrangements and harmonized standards by which performance can be measured.

IV Integration

- Implementing and monitoring policies, investment strategies, administrative arrangements and harmonized standards as part of a unified programme, and making adjustments where necessary to ensure stated objectives are being met.

ICM can operate at all levels of governance. It is not always necessary to wait until national guidelines are in place before attempting to use the ICM principles. Key elements of good practice in ICM, which apply to all coastal management situations, include the following:

- The adoption of a systematic, incremental approach to developing and implementing ICM projects and programmes.
- The involvement of local communities in the ICM process.
- The establishment of mechanisms for integration and coordination.
- The establishment of a sustainable financing mechanism.
- The development of ICM capacity at all levels.
- The monitoring of the effectiveness of ICM projects and programmes.
- Integrating environmental, economic and social information from the very beginning of the ICM process.

What lessons are to be learned from the exploitation of coastal habitats in South Asia thus far and what elements of good coastal management practice need to be reinforced in the region? These aspects can best be assessed and understood by summarizing the problems, causes of the problems, and actions that should be taken in the following situations/cases.

Case history 1: The extraction of coral and sand resources in the region

PROBLEMS:

- Removal of large quantities of dead and living coral reef for construction purposes, exotic coloring for making jewellery and other decorative objects leading to reduced coral cover and long-term damage to the reef. Because of changed conditions at mined sites coral fail to re-establish themselves. Thus the reef habitat is degraded with consequent loss of associated fish, and sea defense potential of the living reef.

- Considerable quantities of sand have also been removed from marine habitats where sediment budgets are unknown. So the dynamic equilibrium of coastal system can be disturbed. Problems of land erosion have been reported as resulting from such extractive processes.

CAUSES:

- A failure, until recently, to encourage the use of and improve the quality of alternative building materials.
- An increasing demand for construction materials as a result of increased population pressures and tourism.

ACTIONS:

- To develop alternatives and improve building materials and encourage their use through education of local residents and those in the construction trade.
- To provide more detailed estimates of sediment budgets on coastlines earmarked for sand extraction, before sand is removed.
- To encourage collaborative, participatory projects between coastal communities and government departments whereby participants actually regulate resource extraction themselves.

Case history 2: The conversion of mangrove areas to shrimp farms

PROBLEMS:

- There has been significant loss of mangrove habitat in countries in the region as a result of conversion of mangrove areas to intensive shrimp farming. Consequently there is reduction in biodiversity, nursery and refuge areas for fish and shellfish of economic importance, sea defense potential and a whole range of other goods and services.
- Because of poor aquaculture practice in shrimp farms, problems of disease and environmental pollution have led to low yields, chemical alteration of pond characteristics and ultimately abandonment of ponds.
- Without supply of nursery fry there are major demands on wild fry, which can lead to high mortality of other shrimp and fish larva e during their capture.

CAUSES:

- The high financial gain from exploiting shrimp worldwide and high demands for the product.
- Inappropriate siting and inadequate management of shrimp ponds.

ACTIONS:

- Appropriate evaluation of sites selected for shrimp culture including a chemical, assessment of soil type prior to establishment of ponds, realistic economic evaluation of mangrove areas and cost-benefit analyses of conversion.
- Improved environmental management of ponds through better education of site managers and workers.
- Rehabilitation of damaged areas through remediation of abandoned ponds and restocking of mangroves.

Case history 3: Effects of environmental pollution in the coastal zone

PROBLEMS:

- Sewage from domestic urban areas and tourism facilities and the absence and/or inadequate collection and treatment of sewage.
- Industrial pollution from urban areas and run off from agricultural lands.
- Tanker and ship bilge discharges in coastal waters.
- Dredging activities in inshore waters.

CAUSES:

- Increased urbanization by rural people of coastal areas and in some cases informal settlements that compound environmental pollution associated with discharge of water and disposal of garbage.
- Inappropriate siting and construction of outfalls and poor treatment of existing discharges.
- Intensification of world tanker traffic in the region.

ACTIONS:

- Invest in low cost sewage collection and treatment facilities for local communities.
- Enforce regulations and standards of tourism development in terms of waste water discharges.
- Demand EIA procedures are followed prior to the modification of the site. If possible a general environmental assessment, which should be seen as a proactive process, should precede EIA. The former would enable environmental information to be incorporated into the planning process before development of a coastline is even contemplated.
- Develop oil spill contingency plans based on oil spill trajectory predictions and sensitivity mapping of sensitive areas.
- Create a response network and training for clean-up operations.
- Ratify existing conventions and other instruments, which provide protection and assistance when marine pollution occurs.

Case study 4: Reef-related fisheries in South Asia

PROBLEMS:

- Over fishing is taking place in the coastal zone of many countries.
- The MSY of certain aquarium fish, groupers has already been exceeded and beche de mer and giant clam have also been over exploited.

CAUSES:

- Lack of enforcement of regulations and legislation.
- The high market prices paid for products such as beche de mer, giant clam and grouper.
- The high numbers of rural poor, which depend on fisheries as a last resort.
- Inadequate education to assist fishers in the use of more sustainable fishing methods.

ACTIONS:

- Development of fishery management plans within the framework of ICM.
- Analysis of standing stock, catch data and socio economic issues.
- Development and implementation of regulation of fishing activities.
- Promote suitable mariculture and aquaculture.
- Protective zoning of critical ecosystems such as mangroves and coral reefs.
- Increase returns from fisheries by minimizing post harvest losses and improving storage and processing.
- Involvement/education of fishers, and local communities.

Case history 5: Coastal tourism

PROBLEMS:

- Deterioration in coastal water quality and coastal erosion.
- Degradation and loss of habitats such as mangroves and coral reefs.
- Increasing traffic noise and congestion.
- Social conflicts between tourists and local communities.

CAUSES:

- Rapid increase in the number of tourists in the region, exceeding the 'carrying capacity' of some sites.
- Ill-conceived development of resorts in the coastal zone and lack of appropriate management strategies in controlling tourism development.

ACTIONS:

- Environmental education of tourists, tour promoters, resort owners and dive guides.
- Implementation of codes of practice for environmentally sensitive tourism development enforcing set back, landscaping, adequate water supply and waste disposal, and good diving practices.
- The enforcement of regulations of building construction and environmental protection.

Case history 6: River basin management and the coastal zone

PROBLEMS:

- Increased or reduced siltation of rivers, reduced river flow, salinisation of ground waters.
- Deterioration in the status of coastal ecosystems, particularly mangroves and coral reefs.
- Consequent loss of livelihoods and habitation of coastal communities.
- Increased susceptibility of coastal communities to the effects of natural and man made perturbations e.g. cyclones and sea-level rise.

CAUSES:

- Increased population pressures and the need to establish habitation in marginal areas.
- Increased abstraction of water upstream; the creation of dams and flood embankments.
- The lack of freshwater flow and nutrient supply to mangrove ecosystems.
- A potential increase in silt load to ecosystems such as coral reefs.

ACTIONS:

- The integration of river management plans into a broader management programme which includes the coastal zone, where appropriate.
- Support for international agreements, which promote management of river basins.
- The greater coordination of agencies dealing with management of river basins and the design and implementation of management policies that deal with activities from source to sink in the river basin.
- An improvement in the understanding of river sediment budgets as they might affect coastal dynamics.

15.7.2 Common Weaknesses

Above case histories indicate that the marine habitats of South Asia are subject to a wide range of uses by man, with resource exploitation a major concern for every country in the region. In some instances the lack of sustainable extraction is all too evident, e.g. coral mining; intensive shrimp farming; beche de mer, grouper, and giant clam fisheries. Despite the very varied nature of case histories described there are five common weaknesses evident in almost every example. They are:

1. A lack of enforcement of existing legislation.
2. A need to involve greater community participation in management of resources.

3. A lack of relevant scientific information needed to underpin sustainable management, and a requirement to improve dissemination of what is already known throughout the region.
4. A complex array of institutional agencies involved in the management of a single resource with often an inadequate coordination of environmental policy by the nominated lead agency.
5. Few truly integrated coastal management programmes, apart from one or two exceptions in the region.

It is worthwhile considering briefly each of above weaknesses in turn.

- **Enforcement of existing legislation**

Enforcement of existing legislation is often a universal problem in many management programmes. Countries in South Asia have been among the first to recognize such weaknesses and have adopted practices, which encourage compliance with bans and licensing schemes. Their experiences show that too much reliance on regulatory measures can lead to hostility and a breakdown of relations between the enforcing body and local community. In Sri Lanka, a failure to regulate coral and sand mining in the 1980's by bans and licenses led to an alternative approach being adopted by the Coast Conservation Department. This involved public education of adults and schoolchildren of the importance of sustainable management of marine resources, and also community based collaboration in management of resource extraction.

More effective management of mining activities followed, proving that penalties and incentives used together can provide valuable tools in achieving compliance of enforcement. Incentives might include economic benefits (tax incentives, tradable permits, user charges) capital investments (construction of public works, acquisition of land rights) education and training programmes and participation in policy and decision making processes. It is quite clear that such an approach works very well where the geographical area of jurisdiction is small and where the goals of the policy are well understood and accepted to be fair, both by public officials and coastal residents.

However, even considering the vast geographical extent of islands in the Maldives there is scope for greater effectiveness of public education and community management. Such a programme could be effected through the Ministry of Atolls Administration, and the network of respected chiefs in each atoll, with the same positive consequences as those achieved in Sri Lanka. Land based projects in India, such as the social forestry programmes in West Bengal and other States, have also proved to be successful in both rejuvenating and raising new forests through community participation. Encroachment and felling are minimized as local communities experience the economic benefits of locally managed forest resources in cooperation with the Ministry of Environment and Forests.

- **Community participation**

It is clear that public participation in management programmes is fundamental to their successful implementation. Perhaps the single greatest weakness in all the case histories cited above has been the failure to involve local people in resource management decisions, whether it be alternative coral mining strategies in the Maldives, conversion of mangroves to intensive shrimp farms, EIA procedures, fishing bans, improved fish processing, tourism conflicts, and flood action plans in Bangladesh. Underlying such involvement is the need for meetings to educate and explain relevant issues and ultimately the election of respected individual to advisory committees that truly represent community views.

One of the central concerns of ICM is to integrate participatory mechanisms into decision-making processes and into the planning, implementation and evaluation of ICM programmes. Stakeholder participation is a process whereby stakeholders those with rights (and therefore responsibilities) and/or interest play an active role in decision-making and in the consequent activities which affect them. A participatory approach to management increases the probability that the rights and interests of stakeholders are fairly reflected, thereby encouraging ownership, and improving the likelihood that local stakeholders will cooperate in any proposed management scheme.

Participatory processes may operate at all levels with government departments in which regulation of resources may be devolved to the local community and where management policies may be derived from community involvement, to collaborative research projects between government scientists and local fishers/farmers. A model for the former is described in the following integrated management case history while a model for the latter has been developed in East India and Bangladesh. These projects concerned the integration of aquaculture into agricultural practices and involved the selection, testing and development of innovations relevant to local need and conditions. Research scientists worked in collaboration with local farmers and farm based trials were integrated with on site research. Such models could be very easily transferred to the coastal zone, particularly in the case of mariculture of beche de mer, and giant clam, where participatory projects between scientists and local communities may reverse the non-sustainable extraction of these species. Similar collaboration, between scientists involved in marine algae culture and local fishers, could also yield benefits. Such initiatives should develop closer partnerships between those living in the coastal zone and those (locally and remotely) directing their efforts towards support of sustainable management through research. In this way strategic research becomes focused on relevant problems.

- **Applied science underpinning management**

A lack of scientific knowledge of coastal ecosystems and their linkages (as they affect management decisions) is a common problem worldwide and its mention might be seen, by some, as an excuse for failing to take action when conflicts of interest become difficult to resolve. In the case of South Asia, where the marine habitats are both extensive and remote, it is not surprising that many areas have not been studied. Indeed there was greater scientific interest in the distant habitats (Chagos, Maldives, Laccadives, Andamans and Nicobars) in the late nineteenth century than ever since. Thus there remains, with the limited trained manpower available, considerable ignorance of both the extent and status of marine resources in the region. The inadequate scientific database is a significant limitation, both in identification of priority issues and strategies to cope with them. Much of the science practiced in the region continues to be descriptive and there is a need to identify applied problems, which can be tackled by interdisciplinary team of scientists, engineers, economists and social scientists.

Whatever expert advice is given by the scientists it should be both objective and balanced to suit both regional and local needs; it cannot be given in isolation. Management strategies which are adaptive and in which science is a significant part of the planning, evaluation and modification of the programme, offer a valuable forum for interdisciplinary interaction and are likely to yield more effective environmental policy as a result.

- **Institutional problems**

Specific institutional obstacles to ICM include sectoral bias toward planning and management of human activities, fear on the part of agencies of losing control over resources and revenues they may generate, lack of clear mandates for a role

that different agencies should play in coastal management, lack of policy direction to foster interagency cooperation and coordination, lack of funding to implement ICM, failure to integrate scientific information into policies and plans and a focus on short term financial returns.

A valuable lesson that has been learned is that total reliance on sectorally based management can lead to competition for the allocation and exclusive use of areas and resource. Many coastal systems are capable of directly and indirectly supporting the developing of different sectoral activities and integrated approaches to the management of coastal areas can reduce adverse economic, environmental and social impacts from development. Experience has shown that agencies can be encouraged to cooperate with one another in resolving common problems and working towards a consensus on how to improve the allocation and use of coastal resources. Already in certain coastal management issues in South Asia e.g. coral and sand mining in Maldives and Sri Lanka, tourism in Maldives and Sri Lanka lead agencies have been appointed. The number of agencies involved in these issues is still considerable and coordination between all involved could be improved.

Integrated Coastal Management in South Asia: The Case of Muthurajawela Marsh and Negombo Lagoon

Every country in the region can boast of isolated examples of good management practice but the case histories described illustrate that these practice are rarely fully integrated in the true sense. One exception is a major initiative in Sri Lanka, which was undertaken in 1989 as an integrated coastal development for an estuarine system (Muthurajawela Marsh and Negombo Lagoon) on the western coast of the island, north of Colombo. This project involved several Sri Lankan Government agencies with outside assistance from the Netherlands Government.

The estuarine ecosystem is situated in a heavily populated urban location; it provides livelihood to about 3000 fisher families, and serves other multiple uses with a high annual economic value (Table 15.2). About 80% of families, who are dependent on fisheries, have a monthly income of less than US\$ 15. Pressure on the fishery resources is high, and destructive fishing methods are used. Unplanned landfill, mangrove encroachment and the sitting of illegal housing all impose additional pressures on the environment.

Table 15.2: Estimated annual economic value of multiple uses of the estuarine ecosystem

Direct Use	Value (US\$ million)
Lagoon fishery	3.0
Coastal shrimp fishery	0.5
Coastal small pelagic fishery	1.5
Discharge outlet and sink value for 45 industries in Ekala Industrial Zone	6.0
Discharge outlet and sink value for local domestic and municipal waste	3.0
Recreational value for tourists	0.1
Amenity value	2.0
Anchorage for marine fishing craft	6.0
Land for housing in Muthurajawela Marsh	0.3
Intertidal sand shoals as land for housing	1.1
Total	23.5

The coastal wetland is 6,232 ha in extent and consists of a lagoon (3164 ha), which is connected to the sea by a single narrow opening in vicinity of Negombo town. The marsh (3068 ha) extends southward from the lagoon. The main inflowing river drains a catchments of 727 km² and discharges at the junction of the lagoon and marsh. The entire wetland is separated from the sea by a sand barrier on beach rock formed during past sea level changes. Some of the major management issues in the area include:

- Changing land use patterns affecting watershed vegetation, run-off rates, hydrology and use of agrochemicals.
- Land-use control by local government officials who have little understanding of the environmental linkages between elements of the wetland complex.
- Rapid population growth with an expected land need for new housing to exceed 4,000 ha in the next 10 years.
- Illegal encroachment of poor families onto the marsh areas.
- A potential labour force projected to be 50,000 by 2001 while the number supported by fisheries will decrease.

The first step taken was to develop a Master Plan for the estuarine area based on four characteristics of the ecosystem, namely;

- a. linkages,
- b. structural complexity,
- c. resilience and,
- d. dynamic stability.

First an ecological and mapping survey was conducted, together with an evaluation of the socio-economic status (occupation, land tenure and use and other perceived problems) of the community and an evaluation of potential investors/projects for the area. On the basis of this information a zoning plan was drawn up which addressed the issues of development, ecology and equity. Four zones were recommended and a range of scenarios (in terms of size of zones) was proposed. A series of open meetings were then held to negotiate allocation of land areas to different uses. As a result of this open negotiation, land apportionment was as follows: a conservation zone (91% of the continuous wetland), a buffer zone (6.4% of the continuous wetland) a mixed urban zone (2.5% of the continuous wetland), and a residential zone (41.7% of the total planning area).

The Master Plan was approved by the Cabinet of Ministers in 1991 for implementation, and a multi agency steering committee without legal power was convened for supervision and monitoring of implementation. This committee included both community and non-governmental representation. The plan was prepared in such a way that separate components could be implemented independently by each responsible agency, but with co ordination by the steering committee. Over the period 1991-94 five major activities were planned. They were:

1. Developing a relocation and community development package for encroacher communities living on Muthuragawela Marsh.

A package for 200 households, in the first instance, was prepared in consultation with target families. These families were relocated to a site where they were given legal ownership of land, financial assistance for house construction and improved amenities. Responsibility for the relocation was given to a local respected Non-Governmental Organization (NGO). The initial relocation proceeded successfully and was to serve as the template for all remaining encroacher communities. However there was a change in the presidency of Sri Lanka in 1993, consequently the contrasting needs of local communities were accommodated in the Conservation Management Plan.

2. Preparation of an EIA for sand filling the area designated as a mixed urban Zone, followed by a land use plan and marketing plan for the new land.

An EIA report for a 4 million m³ sand fill was made available for public enquiry and subsequently approved by the Central Environmental Authority. The sand fill has been completed, drainage installed and an arterial road constructed. Land use and marketing plans for the Mixed Urban Zone were prepared with a major focus on employment generation.

3. Preparation of a detailed conservation management plan for the conservation zone.

This area comprised a multiple use area that included a segment of the marsh and the lagoon. The marsh provided housing and served as a flood buffer while acting as a habitat for range of plants and animals while the lagoon provided a livelihood for fishers. A major problem foreseen for this zone was the integration of community groups (fishers from 26 villages) into the planning process. In order to do these, workshops were held on environmental education and the need for sustainable exploitation of resources. Data obtained in the earlier scientific surveys were used in the management plan, which emphasized the important ecological linkages between watershed - marsh - lagoon and sea. Ultimately community representative agreed that lagoon productivity had to be safeguarded. The resulting conservation management plan included four basic tenets:

- that sustainable use of the lagoon resources was a basic condition.
- that community involvement in management was essential.
- that measures for pollution control should be instigated.
- that alternative job opportunities be created which included development of environmentally sound recreation and eco tourism.

4. Preparation of a land use plan and screening of investment proposals for the buffer zone.

Planning for the buffer Zone was not straightforward with a range of different ideas on potential land use and control. Views ranged from those of developers who suggested total control by the private sector to protect their investment, to those of local communities who wanted right which would not be influenced by politically powerful groups or individuals. A draft land use plan, incorporating the viewpoints of all sides, has now been produced which aims at recreational use by both private and public sectors.

5. Development of a cost recovery system for conservation management.

The Central environmental authority identified a visitor centre that would provide information and excursion to national and international tourists, nature education for children and a place for studies and community activities as a viable mechanism to earn money to pay for conservation management activities. The visitor centre has been highly successful, attracting over 1000 visitors per month, well above anticipated usage. It currently employs 25 staff who are engaged as guides, rangers, and in general maintenance duties.

This case history highlights the importance of community participation management process. Since the beginning of the project, the fishing communities have become increasingly active in planning the protection of lagoon resources. The lagoon fisher folk have organized themselves into the Negombo Lagoon Integrated Fishermen Organization (NLIFO) and have met and presented the Minister of fisheries with a draft Conservation Management Plan. Community participation is not only providing momentum to plan implementation but it has also been contributing to greater coherence and environmental awareness in the coastal community. NLIFO is currently collaborating with the local administration to address one of the most difficult tasks

for management of the area boundary demarcation of the lagoon to prevent further encroachment. Such collaboration is a particularly good indicator of institutional strengthening, since for decades fisher and the local administration criticized each other, rather than working to prevent further encroachment. In 1997 a boundary was constructed along the most critical area, using the monies raised by the local community organization. The boundary has enabled the CCD (in partnership with government agencies) to begin to take firm action against illegal land filling with community support.

Progress with further management of the area is not without its problems, however, some local NGO's oppose tourism as an alternative livelihood; the Ministry of Fishers plans to develop a major anchorage in the outlet of Negombo Lagoon, while other groups object to the increased power of community participants. Despite these setbacks the present Government has approved the continued implementation of the Master Plan and already there are direct socio economic benefits to be seen from its implementation. These include:

- Sustained income and employment for about 3,000 fishing families in the Negombo Lagoon.
- Improved living conditions and secures land title for 2000 local families, with new job opportunities in eco tourism and resource management in the marsh and conservation areas.
- Housing for 9,500-16,500 new residents and permanent employment in industry, transport, trade and service for 14,000-28,000 workers in the mixed urban zone.
- Permanent employment for about 250 workers at a future golf course and another 300-500 in potential activities associated with a marsh botanic garden, urban park, sports complex and herbal garden.

The weaknesses identified in other case histories described earlier have been avoided here. Scientific information was gathered and fed into the management process at an early stage, thus allowing the plans to evolve around the principles of ecosystem function.

15.8 A FUTURE VISION OF ICM IN SOUTH ASIA

There are considerable skills in the South Asia region, not only in the multiplicity of disciplines needed for ICM but also in negotiation and conciliation with both scientists and policy makers. These skills should be recognized on a regional basis and opportunities provide for greater interaction between scientists, practitioners of ICM and policy makers on a regular basis. The ASEAN Australian Marine Science Project on living Coastal Resources (part of the ASEAN-Australian Economic Cooperation program), which operated over the period 1984-1994 in neighbouring South East Asian countries, is a good example of how regular meetings, technical workshops, symposia and newsletters, fostered valuable interdisciplinary exchange and cross fertilization of ideas on the status and management of key coastal ecosystems.

An extension of this model will be developed in the Global Coral Reef Monitoring Network (GCRMN) for South Asia, which is shortly to be initiated from the IUCN office in Sri Lanka (funded by the Department for International Development, UK). The aim of this initiative is not only to support environmental assessment of coral reef ecosystems but also to link such assessments with the solution of key managerial issues as they affect coral reefs in the region. Ultimately it is the aim of the international Coral Reef Initiative (of which GCRMN is a part) that other ecosystems, such as mangroves and seagrasses, are considered in a similar way to coral reefs and that a network of expertise is built up in the region.

The South Asia Cooperative Environment programme (SACEP) has a central role to play in regional coordination of integrated coastal zone management which you have

already read in Block 2 of this course. Such a role was recognized in 1994 when the Economic and Social Commission for Asia and the Pacific (ESCAP)/UNEP/SACEP Intergovernmental Meeting in New Delhi endorsed integrated coastal zone management as a priority element for sustainable development of marine and coastal areas in the region. The Action Plan proceeding from that meeting highlighted the need for regional cooperation and proposed that pilot activities in ICM should be initiated in individual countries. The guidelines for the development of pilot projects were very ambitious, involving preparation of coastal profiles, analysis and forecasting, definition of goals and strategies and implementation of management plans. In the early stages of development of ICM capabilities it is perhaps wise to begin with existing small-scale projects, to learn from the lessons that they provide and to expand from a solid foundation, which recognizes the centers of expertise within the South Asia Region.

The challenges in ICM for South Asia, like any other region in the world, are considerable. However, unlike other parts of the world, ICM is recognized by all those countries bordering the Indian ocean as a high priority; project are already underway which demonstrate successful integrated management that relies on community participation and programmes have been initiated which will begin to coordinate regional expertise. The future success of ICM in the region rests not in elaborate, over ambitious plans but in solid achievements at the local level using the many and increasing skills of personnel in the region.

SAQ2

- i) Describe the major steps in good coastal management practice.
 - ii) What measures do you suggest for prevention of environmental pollution in coastal zones of India?
 - iii) List the common weaknesses which you have studied in cases histories of this unit.
 - iv) Describe how community participation can help in ICM process.
-

15.9 SUMMARY

Let us summarize what we have studied so far:

- Water is essential for life of human being and other organisms. Although water exists in substantial quantities on earth, however, human activities are continuously affecting this resource both quantitatively and qualitatively. Effective use of water and associated resources is essential.
- Coastal resources are one of the important resources of water and continuously affected by human activities at coasts. An integrated coastal management programme involves integration of government and community, science and management and policy and legislative framework.
- The essential elements of integrated coastal management are **integration** and **co-ordination**. Any policy and management action which has been designed to address coastal development conflicts must be founded on a sound understanding of natural processes and ways in which these may be disturbed; on political socio cultural and economic conditions; on present and future demands, as well as social costs involved.
- The challenges in ICM for South Asia, like any other region in the world, are considerable. However, unlike other parts of the world, ICM is recognized by all those countries bordering the Indian ocean as a high priority; project are already underway which demonstrate successful integrated management that relies on community participation and programmes have been initiated which will begin to coordinate regional expertise. The future success of ICM in the region rests not in elaborate, over ambitious plans but in solid achievements at the local level using the increasing skills of personnel in the region.

15.10 TERMINAL QUESTIONS

1. Define coastal zone and make a map to show the coastal lines of India. Describe the characteristic of coastal zone.
2. Do you agree with the coastal area management system given by Chua 1993. What are the merits and demerits of this system?
3. Describe the Management Issues of Coastal Zones with examples from India. Also suggest some actions apart from those described in the unit.
4. Which of the case history are related to the India Coastal areas and why.
5. Make a list of questions you would like to ask for making a plan for ICM of mangrove conservation in India.
6. What is your Future vision of ICM in India?
7. Do you think that Participatory Coastal Resource Management can sustain the growth and developments of Coastal zone if yes/no give reasons?

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APPENDIX

S.O.16(E), [4/1/2002] - Gujarat State Coastal Zone Management Authority [[html](#)], [[pdf](#)], and [[word](#)].

S.O.17(E), [4/1/2002] - Daman and Diu Coastal Zone Management Authority [[html](#)], [[pdf](#)], and [[word](#)].

UNIT 16 PARTICIPATORY IRRIGATION MANAGEMENT AND WETLAND CONSERVATION

Structure

- 16.1 Introduction
 - Objectives
- 16.2 Problems in Irrigation Management
- 16.3 The Participatory Approach
 - What is Participatory Irrigation Management?
 - Some Good Examples of PIM
 - Benefits from PIM
 - Difference between PIM and Irrigation Management Transfer
 - Management of Irrigation by Farmers
 - Problems with PIM
- 16.4 Irrigation and Poverty
- 16.5 Gender and Participatory Irrigation Management
- 16.6 Participation in the Irrigation Sector
 - Benefits
 - Costs and Risks
 - Conditions for Success
- 16.7 Participatory Irrigation Management – India
 - Analysis: Institutional Preconditions to Collaboration
 - Implication for PIM
- 16.8 Integrated Watershed Management for Sustainable Productivity through Community Participation
- 16.9 The Sukhomajri-water Shed Management Project: A Success Story of Participatory Approach
- 16.10 Wetland Resources
 - Reasons of Wetland Loss
- 16.11 Integrated Wetland Management
- 16.12 Integrated Wetland and River Basin Management (A case study of Loktak Lake)
- 16.13 Summary
- 16.14 Terminal Questions

16.1 INTRODUCTION

Water is absolutely fundamental to life. There can be no life without water. The earth is the only known place in the universe, where liquid water exists in substantial quantities. Oceans, lakes, glaciers and other bodies of liquid or solid water cover more than 70% of our world's surface. Water performs a number of direct and indirect functions in the ecosystem, which you have studied in Block 1 of MED-006. In this unit we will describe only about irrigation and related issues

Sources of irrigation water include ground water, nearby watercourses, such as rivers and streams, natural lakes and rivers and artificial reservoirs. Large-scale irrigation also causes environmental problems, such as construction of reservoir changes the local environment. Some natural habitats may disappear; stream pattern changes and erosion rates increase in the watershed of the reservoir. Around 40% of the world's food crops are produced by irrigated agriculture. The performance of irrigation and drainage is critical to the food supply and to farmers' incomes, as well as to the environment.

In this unit we will study about the participatory irrigation management and various other factors such as irrigation and poverty, gender and participatory irrigation

management; and participation in the irrigation sector (benefits, cost and risks and conditions for success.

We have also discussed participatory irrigation management in India; wetland resources which constitute an important part of our resources, and integrated wetland management and conservation in India; and integrated wetland and river basin management.

Objectives

After studying this unit you would be able to:

- define participatory irrigation management – A new user-oriented approach to irrigation,
- describe participatory approach for irrigation management,
- list various factors such as benefits, costs and risks and conditions for success in participatory approach for irrigation management, and
- describe integrated management and conservation of wetland resources through participatory approach.

16.2 PROBLEMS IN IRRIGATION MANAGEMENT

The distribution of water often is described in terms of interacting compartments in which water resides for short or long times. Human concerns regarding water can be divided into two categories; quantitative and qualitative. Quantitative refers to such issues as, is there enough water to meet our needs? What are the impacts of diverting water from one point of the cycle to another? Qualitative refers to such issue as; is the water of sufficient purity so as not to harm human or environmental health?

Managing irrigation so as to achieve efficiency, equity and sustainability is very difficult. Market mechanisms are not enough. High prices for water when it is scarcest mean that low-income users may lose their access to water. Unrestricted use, if prices are low may lead to pollution, waterlogging and over-use of groundwater.

In India governments intervene, and even directly manage irrigation systems. However, when a centralized agency is in charge of planning and operating an irrigation system, the result is often too much bureaucracy. Too much money is spent on staff salaries. As a result, the cost of water becomes high, and yet the irrigation service remains poor. The result is a vicious circle of high costs, poor services and low payment of fees, leading to inadequate funding and further deterioration of services.

The ultimate goals in managing irrigation water are efficiency, equity and sustainability. Efficiency has been achieved if every drop of water has been properly allocated and used, without any waste. The goal of equity means that water is fairly distributed among users. Influential farmers may have better access to water than poor farmers. In some cases, ideals of efficiency and equity may be in conflict. The goal of sustainability means that the users of today should maintain the quality and quantity of water resources for the use of future generations

One way out of this difficult situation is the participatory approach to irrigation management. Users are involved at all levels, including construction and operations. It seeks to give greater efficiency at a lower cost.

16.3 THE PARTICIPATORY APPROACH

World Bank has carried out a program of Participatory Irrigation Management (PIM) since 1994. One of the first countries where it was applied was Mexico. By 1995, more than two-thirds of the nation's irrigation network had been transferred to 316

irrigation associations. Following Mexico's lead, other countries, including Turkey and some Indian states, have adopted similar systems. PIM is not a new idea. Irrigation associations have existed in many parts of Asia for decades, including Japan and Taiwan. Governments also get benefit from PIM by reducing subsidies for irrigation. Farmers also usually are winners, since they enjoy a sense of ownership and improved services. The irrigation department may be a loser, as its budget, staff and authority are all likely to decrease.

16.3.1 What is Participatory Irrigation Management?

Participatory Irrigation Management (PIM) covers a variety of different ways in which water users can be involved in the planning, construction, operation and maintenance of irrigation systems. Participation ranges from being informed and able to express views to situations where users and their representatives jointly or solely hold authority to govern irrigation systems and determine the irrigation services to be provided.

PIM or irrigation management transfer (IMT), in which farmer's groups take over the repair, management and maintenance of Government irrigation canals in exchange for water supply from state-controlled reservoirs (Parthasarthy, 2000).

16.3.2 Some good Examples of PIM

The majority of irrigation systems around the world which were originally built and managed by local communities, constitute examples of good PIM. This includes centuries-old locally governed irrigation systems in most regions with irrigated agriculture, including Asia, Europe, Africa and North and South America. During the twentieth century, government agencies took an increasing role in directly building and operating large scale irrigation systems, often in ways that limited the capacity for user participation. More recently, initiatives in many countries have sought to reverse this process, making agencies more responsive and giving users a greater voice in management. The Indian state of Andhra Pradesh has transferred all management control to local bodies within large scale systems irrigating millions of hectares, and similar initiatives are now underway in many other places.

For PIM as with other kinds of reforms, there is sometimes a tendency to idealize "models," with exaggerated success stories. Increasing participation in irrigation management requires compromises and tradeoffs, building coalitions, effective management, dealing with political and financial constraints and continuing learning and adjustment. There is always scope for improvement in PIM.

16.3.3 Benefits from PIM

Participatory irrigation management can result in more responsive irrigation services, which may include more timely, adequate and reliable water delivery. Canal cleaning and other maintenance tasks are often done more effectively, due to more productive use of available budgets and increased provision of resources by irrigators. When other conditions are suitable, PIM can facilitate more efficient and profitable irrigated agriculture.

PIM is often advocated as a way for farmers to take over more responsibility for paying the costs of irrigation, and often does result in farmers providing more resources in cash and kind. The financial capacities of farmers are shaped by the profitability of irrigated agriculture, and by the institutional arrangements available for financing major repairs and improvements. If effective mechanisms are not in place to provide for maintenance and rehabilitation, then any apparent savings in government subsidies for operation and maintenance are lost due to deferred maintenance and infrastructure degradation. Overall economic benefits to farmers and society depend on increasing the efficiency and productivity of irrigation management.

The distribution of benefits from PIM depends on how the benefits of irrigation itself are distributed. In many countries, benefits of aggregate investment in irrigation are largely received by food consumers rather than farmers, in the form of lower prices resulting from food production surpluses. Increased yields and cropping intensity can provide more employment for cultivators and agricultural laborers. Reforms to promote PIM do offer an important opportunity to make management more democratically accountable to stakeholders, strengthening their rights to irrigation water and their participation in governance of a vital resource.

16.3.4 Difference between PIM and Irrigation Management Transfer

Irrigation management transfer (IMT) involves a particular kind of change, it is a form of PIM where user representatives have not just a voice in management but hold the power to choose what services they will receive. This often takes the form of a body of farmer representatives who determine key policies and plans for irrigation system management. IMT is thus a particular form of PIM, which typically requires a comprehensive set of institutional changes in order to be effective.

16.3.5 Management of Irrigation by Farmers

A common question is whether farmers actually have adequate technical knowledge and skills to manage irrigation. A first simple answer is that in many cases farmers can and do manage irrigation. In India, our farmers were managing irrigation system. This is even clearer if one looks at the large role farmers play, sometimes informally, even in large irrigation systems. Practice in the field often differs from official policies that may formally restrict farmer's roles below tertiary level outlets. PIM provides a way to draw on the knowledge and skills that water users have concerning all levels of management. However the most important part of PIM concerns involvement of farmers in key governance decisions, which can then be implemented by farmers or specialized technical staff. Where specialized skills are needed, agency-governed or farmer-governed organizations can hire engineers, gate operators and others with technical skills.

16.3.6 Problems with PIM

PIM like any significant change may face difficulties, requiring formulation of new policies and procedures, retraining of those involved in managing irrigation, rearranging irrigation finance and other structural changes in irrigation institutions.

The obstacles facing PIM and IMT are sometimes simplistically seen as just a matter of government withdrawing or reducing resources for irrigation. However long run success requires good communications and facilitation during a transition to new management arrangements, proactively developing local organizational capacity, ensuring technical and financial services available from the public and private sector, and focusing government agencies on carrying out suitable regulatory roles in basin water resources management.

The concerns of farmers, irrigation managers, water resource management agencies and other stakeholders need to be addressed to develop policies that will continue to receive broad support through a process of learning and adjustment. Institutions need to be developed so that benefits are not captured by a few people, but instead are equitably dispersed to the interests of all water users and other stakeholders.

If responsibility and institutional arrangements for financing major repairs and improvement are not well worked out, then farmers may be discouraged from investing in good maintenance, which may then threaten the sustainability and benefits of PIM reforms. As competition grows for scarce water resources, it becomes increasingly important to clarify and strengthen the access of farmers to water.

PIM is not a panacea. By itself, PIM cannot overcome adverse crop prices, drought, corruption, poor governance, highly skewed distributions of land and political power, or other problems, but PIM can strengthen the capacity of farmers to cope with such problems.

16.4 IRRIGATION AND POVERTY

Let us discuss some issues, which are directly related to irrigation and poverty. Irrigation is an important means by which poor people sustain and improve their livelihoods. Participatory irrigation management can enable the poor to have greater voice in decisions. Conversely if poor farmers are excluded and their interests are neglected, then irrigation development may disrupt livelihoods and increase inequity. Experience shows that participatory irrigation management offers important opportunities to empower the poor farmers in good governance and to provide benefits for the poor.

Irrigation impacts on poverty: Irrigation can affect the livelihoods of poor farmers in many ways. These include not just direct impacts on income, expenditures and nutrition but also other dimensions such as access to resources, social capital and the status that comes from being informed and included in making decisions. Some of the main ways in which irrigation may affect the poor include:

- Increased employment for agricultural labourers,
- Higher agricultural productivity for small-scale cultivators,
- Reduced vulnerability to drought and more stable yields,
- Multiplier effects on local communities from increased demand for agricultural inputs, processing of outputs and greater demand for other goods and services, and
- Lower food prices, including subsidies for the many poor rural households.

Making labor more productive : Examining the linkages between irrigation and the poor highlights the importance of how irrigation can help make poor people more productive. Just as increasing concern with basin management has shown the need to look more closely at water productivity, not just land productivity, “more crop per drop,” concern for irrigation as a tool for alleviating poverty points out the importance of “more jobs per drop”. Simply increasing yields may deliver gains to landowners which are capitalized into land values, while poor people only benefit if their most importance resource, their labor, becomes more productive.

Targeting: Government assistance to irrigation can do more help to the poor if it is effectively targeted. Untargeted assistance may help big landowners and urban consumers while providing fewer benefits for the poor. Geographic targeting to apparently poor and more disadvantaged locations may be appropriate in some cases. Asking the poor themselves about their priorities is an important starting point in identifying how participatory irrigation management can best help the poor. Community meetings, walkthroughs, participatory rural appraisal (which you have studied in Unit 1 of Block 1 of this course) and other activities should pay special attention to ensuring that the poor, both women and men, are included and able to voice their concerns.

PIM and poverty: PIM is often introduced as part of policies intended to reduce government subsidies to irrigation and increase beneficiary contributions to the costs of irrigation. The poor would only gain if improvements in irrigation performance and agricultural productivity are sufficient to offset any increased costs they must bear. Gate guards, laborers and others irrigation field workers may lose employment (or try block reform), so attention should be paid to reducing and mitigating labor impacts, particularly for poor workers. Greater reliance on local management may facilitate use of more labor-intensive methods for operation, maintenance and construction,

benefiting rural laborers. Further study and experimentation is needed to explore ways in which PIM can best help poor people.

16.5 GENDER AND PARTICIPATORY IRRIGATION MANAGEMENT

Efforts to promote participatory irrigation management create opportunities for improving women's participation and gender equity in irrigation management. Attention to gender roles can reduce the risks that gender biases and stereotypes lead to women being ignored, disadvantaged or marginalized. Attention to the influence of gender roles on irrigation management can make activities more effective, inclusive and equitable.

Women as stakeholders: Women use water as farmers, and in other livelihood activities. Changes in irrigation management may have very different impacts on women and men, and depend on women's roles as decision makers, landowners, wage laborers and unpaid family workers. Increased social and economic change in rural areas, particularly temporary labor migration and diversification in household livelihood strategies (e.g. "part-time farming") bring a need to adjust irrigation management accordingly. In many cases women take key decisions about irrigated agriculture, but cultural stereotypes may lead to such situations where their needs are ignored or misunderstood. In addition to irrigated agriculture, most irrigation systems do not only deliver water for field crops, but supply water for domestic use, whether washing and bathing in canals or using shallow wells which rely on irrigation water to replenish groundwater aquifers, bringing in a wider range of interests and stakeholders concerned with the management of irrigation.

Roles and rights: Women's access to and control over irrigated land is structured by whether they hold land rights on their own, jointly with husbands, or depend on husbands or male relatives for their access to land. The extent, to which women are included in community meetings and decision-making, expands or diminishes women's opportunities. Such participation is affected by general cultural norms and stereotypes, and by specific matters such as whether meetings are held at times and at places convenient for women. The availability of credit and other financial services may be crucial in opening or blocking opportunities for women to profit from irrigated agriculture.

Gender and PIM: Gender roles have an important influence on how irrigation is managed, and on who does or does not benefit from efforts to improve participation in irrigation management. Women are affected in multiple roles, growing crops, raising livestock, cooking, washing, bathing and other water uses. Women and men should be involved from the beginning and in all stages of activities to change irrigation management that affect their lives. These provide a foundation for ensuring that projects and programs include women and men and equitably address their concerns. Doing this effectively often means looking not just at water distribution and infrastructure improvement but also at how rights to land, participation in community decision-making and access to information, credit and other resources can help promote gender equitable development.

16.6 PARTICIPATION IN THE IRRIGATION SECTOR

The irrigation sector provides a rich source of experiences and lessons in user participation. Participation by farmers in system design and management helps to ensure the sustainability of the system, reduce the public expenditure burden, and improve efficiency, equity, and standards of service. Mobilizing support at all levels and establishing the participatory process, however, involves costs; it also demands

knowledge of the incentives facing each group of stakeholders and of the essential elements in building effective user organizations.

16.6.1 Benefits

Efforts to increase user participation have been spurred by poor performance in efficiency, equity, cost recovery, and accountability of many large irrigation systems managed by government agencies. Greater participation by farmers through water users associations has helped overcome many of these problems.

System performance: The overriding reason for increasing participation in irrigation is to improve system performance. Clear gains in efficiency and standards of service are achieved when design and management of the irrigation system are transferred to farmers. System design benefits from local knowledge, and farmers have the means and incentives to minimize costs and improve services. For example, irrigation user associations can reduce labor costs by paying lower wages than government agencies; local farmers can provide closer supervision of staff than distant agency supervisors; also breakages are reduced when farmers feel a greater sense of ownership.

Public expenditure: One of the most noted effects (although this has nothing to do with farmers' motives for participation) is the reduction in government staff and expenditure requirements caused by farmer management and contributions of cash, labor, and materials. Farmer associations have proved more effective collectors of user fees than government agencies. It is not unusual for farmers to be willing to pay more than the original user rates after transfer of the system to their control. Increased collection of fees, however, does not motivate farmer participation. Participation must also result in direct benefits to participants.

Sustainability: Building irrigation systems that are wanted, supported, and owned by users themselves provide the best assurance of sustainability. Physical and fiscal sustainability of the irrigation system beyond the project is enhanced when operation and maintenance costs are met from user fees rather than high levels of government subsidy.

Equity: More equitable organizational arrangements and water delivery have been noted when participatory approaches are followed. A contributing factor is the socio-economic status of the leadership, which tends to be closer to that of the ordinary member, involving more tenants and small farmers than in non-participatory systems.

Spillover effects: The transformation of water users from beneficiaries to partners in irrigation development can have a widespread impact as farmers become trained and organized. It can increase local ability to coordinate input supplies, for example, and to deal with other government agencies involved in rural development.

16.6.2 Costs and Risks

Establishing user participation involves costs in mobilizing field staff, training, and organizing farmers and carrying out socio-economic research. Subsequent savings in construction costs and higher loan repayment rates, however, usually offsets these additional costs.

A bigger problem can be the additional time needed to establish a participatory approach and get the project off the ground, especially in the absence of existing local institutions for cooperation. Developing farmer organizations is often a slow process. But once the participatory approach has been established, it is not unusual for participation actually to reduce the implementation period. The kinds of problems that typically delay the implementation of non-participatory irrigation projects, such as difficulties in negotiating rights of way or obstruction by farmers or local politicians may be avoided or solved through effective participatory processes.

16.6.3 Conditions for Success

The success of participation efforts in the irrigation sector depends on how well the project mobilizes support and builds effective farmers' organizations.

Mobilizing support: Participation changes but does not eliminate the role of government agencies in irrigation development. Building support from policymakers and agency staff as well as farmers and other water users is essential for successful participatory projects and involves paying close attention to the incentives relevant to each group. The greatest receptivity to participation is often found in crisis situations.

Project implementation rests ultimately with agency staff. Internalizing support for participation within irrigation agencies often involves structural changes to link agency budgets firmly to farmer contributions instead of government allocations and to promote a more service-oriented approach. Because agency staff typically come from engineering backgrounds and are not oriented toward dealing with farmers, incentives for them to support farmer participation need to be backed up by training programs. Study tours to farmer-managed irrigation districts can be particularly effective, not only for their demonstration effect but also in raising the prestige of participation, exposing staff to new possibilities, and the most important creating a bond among participants.

The strongest opposition to farmer participation is often encountered at the field level, especially when civil service unions are strong. When field staff perceives the proposed changes as a threat to their jobs and livelihood, these vested interests can retard or even sabotage participatory projects. Clear directives are needed from policymakers, supported by performance measures linked to bonuses and promotions, to encourage greater accountability to the farmers. The new ethos can only develop gradually. Sudden cuts in the status quo should be avoided, and the changes in composition of staff should be allowed gradually.

Building effective farmer's organizations: Teams of trained specialists acting as community organizers have proved to be the most successful catalysts in participatory irrigation projects. In cases of very hierarchical social structure and inequitable distribution of assets, it may be unrealistic to expect fully democratic local organizations. To control vested interests, the varying incentives for different categories of farmers should be identified and accounted for in project design (for example, in defining water rights), along with the resulting problems of achieving collective action.

Appropriate incentives are needed if farmers are actively to support the user associations that are essential channels for participation and to assume the additional costs in time, materials, and fees. The most important of these incentives are improved irrigation services and a voice in management decisions through a user organization that is fully accountable to its members. The support of farmers is most likely to be sustained and organizational capacity developed when they are involved from the beginning in decisions on system design and their organization has full ownership and management control of the system. It is essential, for example, that specialized staff be selected by and accountable to the farmer organization, even if they have been trained by government agencies.

To be successful, farmer organizations must interact constructively with government agencies and technical experts. This relationship works best when consistent rules and procedures are established and supported by government regulation for the turnover of responsibility to farmers throughout the project or sector. Building the necessary organizational capacity for this turnover involves training farmers for a variety of new functions, including basic literacy, accounting, how to hold meetings, how to deal with agencies with legal regulations, possibly even computer applications, and water management and operation of equipment.

Fundamental to meeting all these conditions is a strong and transparent legal framework for the organization from the outset, providing farmers with rights and benefits as well as duties and responsibilities. This framework should also be flexible enough to allow farmers to evolve their own organizational structure and to permit the organization's responsibilities to grow in line with its capacity.

SAQ 1

- i) Define participatory irrigation management and its uses.
 - ii) How benefits from participatory irrigation management reaches up to the lowest order of poor people or farmers.
 - iii) List the benefits from participatory irrigation management to the people lowest in chain.
 - iv) Differentiate between PIM and IMT.
 - v) List the role of women in participatory irrigation management.
 - vi) List the benefits of participation of farmers in irrigation sector.
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16.7 PARTICIPATORY IRRIGATION MANAGEMENT – INDIA

Much of the institutional and physical infrastructure of modern Indian irrigation can be attributed to British colonial rule over India. Although there was a significant irrigation infrastructure built by previous kingdoms and was in place prior to the 19th century. It had been largely neglected by the colonial administration until the early 1800s.

The first renovations to the Grand Anicut of the Cauvery delta in Southern India, for example, initially consisted of desiltation and were only augmented with infrastructure in the 1830s through the efforts of Colonel Arthur Cotton. Similarly, in Northern India, restorations to an extensive Mogul canal network commenced in 1817 and continued into the 1830s.

In British India responsibility for public works (such as irrigation) fell primarily upon the top military authority, the Military Board, until the establishment of civil departments of public works in the 1850s. Early irrigation construction at a large scale consisted largely of restorations to existing canals, some of which measured hundreds of miles in length, anicuts (irrigation dams), and weirs that had been built by previous kingdoms. As a result of this preexisting infrastructure, the colonial government's initial expenditures on irrigation centered only on canal restoration. With little capital expenditure costs, the British were able to bring a considerable revenue from the sale of water and taxation of land brought under irrigation.

At this early phase in colonial irrigation, there was no coherent or well-defined framework for irrigation policy. Irrigation was seen by the British government as a state responsibility and was centered largely on restoring and maintaining existing works. The profitability of irrigation, given the minimal need for capital investment and the gains from taxation, made it attractive.

The costs of irrigation continued to increase as problems of poor drainage arose near canals to which outbreaks of fever and malaria were attributed. A great famine from 1837 to 1838, however, demonstrated some of the benefits of irrigation, because only crops in the canal districts survived the drought. As a result, the colonial administration increased its expenditure on new canal construction, most notably with the massive Ganges Canal that opened in 1854 measuring almost 900 miles long and irrigating 1.5 million acres of land. This was, however, the first of India's canals to be built with borrowed money (from loans raised in London) and was a harbinger of the increasing investments and decreasing profits that the government was to reap from irrigation.

Between 1880 and 1900 there was a 60% growth in government-funded irrigated area. Although many irrigation projects were providing a reasonable return on investment (7% on average), the vagaries of weather and famine (two great famines from 1887 to 1888 and from 1899 to 1900 combined with dramatic regional differences in topography and soils) led the Irrigation Commission of 1900 to study more closely the benefits (in terms of revenue and risk protection against drought and famine) and costs of irrigation (Khagram, 1998).

The mandate and powers of irrigation administration in India since 1947 (i.e., from independence to the present day) are reflective of colonial experiences in at least four respects. Irrigation departments have been largely technocratic in emphasis with engineers occupying many of the top managerial and operational positions (World Bank, 1999). As a result, the irrigation agencies have done little by way of clarifying the relationship of government rights to customary rights, both in terms of rights over water as well as rights over land on which irrigation canals (Fig. 16.1) and distributaries are built.



Fig. 16.1: Outlet canal.
(Source: <http://www.itczm.ait.ac.th>)

Second, although the states retain primary responsibility for regulating water, there are very significant jurisdictional overlaps between states and the Centre Government.

This brings us to a third key regulatory feature, which is that rights over surface waters are poorly defined. Because all surface waters are public property under Indian statutory law, the government has the right to regulate, develop, and administer surface water.

Finally, a fourth key characteristic of the water regulation framework in India is that rights over groundwater are treated entirely separately from rights over surface water. Groundwater is defined as being purely private and is tied to ownership of land. Moreover, this means that resource access is biased not only in favor of landowners but also toward big farmers who have higher pumping capacities and deeper tube wells. Government control over groundwater has generally been very limited.

In sum, the history of colonial irrigation in India has been marked by large investments in infrastructure, both in major and minor projects. In addition, because of decentralization reforms, irrigation was seen largely as a responsibility of states and localities with the exception of interstate rivers and valleys. Independent India thus inherited a significant number of capital projects that fell largely to the state governments to maintain and expand as well as a system of rural water resource management in which states exercised monopoly power. Present-day irrigation arrangements continue to be characterized by state domination but with a major federal role in big dam projects as well as by a complex web of poorly defined surface water rights and privately held groundwater rights.

Present-day irrigation departments, like their colonial predecessors, continue to face problems concerning financial remuneration. Many state irrigation departments regularly face expenditures well in excess of revenues, although this may be attributable to numerous factors including internal inefficiencies and low (often flat-rate) water tariffs. The consequent pressures on irrigation departments to cut costs have resulted, in part, in the deterioration of irrigation infrastructure nationwide, especially of minor canals. Although governments at central and state levels have continued to

Participatory Resource Management

Although public opposition to big dams in India can be traced back at least to the Silent Valley Project in the Southern state of Kerala in the 1970s, few anti-dam struggles have garnered international attention at the scale of the Sardar Sarovar projects on the Narmada River.

seek and appropriate funding for major projects such as the controversial Sardar Sarovar projects on the Narmada River, existing minor projects remain in disrepair.

Partly in response to fiscal constraints, there have been efforts by state irrigation agencies in recent years to transfer partial responsibility for the operation and maintenance of canal systems to local water users associations (WUAs) (Parthasarathy, 2000). For example, the Government of Gujarat established a PIM program in 1995, which is launched with 13 pilot projects to transfer irrigation management to users groups (Narmada and Water Resources Department, 1994, 1995). The state government allocated funds to subsidize the repair and rehabilitation of irrigation works to be implemented with the oversight of the Irrigation Department and, in some cases, of NGOs. The Government of Andhra Pradesh went even further in establishing the Andhra Pradesh Farmer Managed Irrigation Systems Act of 1997 that mandated that all of the states major, medium, and minor irrigation schemes should involve WUAs (a total of 10,292 groups). The government allocated funds for repair and maintenance of canals on a per-hectare basis, and it also initiated efforts to elect WUA representatives and to form federations of these associations (Van Koppen & Parthasarathy, 2001)

The adoption of PIM in India is not without precedent in other parts of the world. Fiscal necessity has been a primary cause of the transfer of irrigation control from government agencies to users in Australia, Japan, the United State, and Spain. The growing emphasis on minor and medium scale PIM in India is also a result of a changing political climate characterized by increasing citizen dissatisfaction with major dam projects.

However, it is difficult to assess the PIM efforts and their progress in India. Irrigation departments in numerous states have indicated an agency-wide interest in pursuing PIM, not only for cutting costs but also for better meeting annual irrigation targets (Fig. 16.2). As of 1999, eight states had passed or were in the process of passing legislation on PIM, thus suggesting that the time was right for PIM.



Fig 16.2: Irrigation cannal system in India.
(Source : <http://www.itczm.ait.ac.th>)

16.7.1 Analysis: Institutional Preconditions to Collaboration

The issue of property rights is closely linked to regulatory frameworks concerning specific natural resources such as forests and water. It is useful to clarify what is meant by property rights and how they are relevant to the public administration of forest and water resources in India. The term *rights*, as used here, refer to the legal or customary claims to a resource or good. In general, customary claims over forests and

water (i.e., traditional community arrangements) have been subjugated to legal rights set through legislation.

The issue of rights is complicated when the resources at issue are *common-pool resources* (CPRs) – that is, “goods that can be kept away from potential users only at great cost or with difficulty but that are subtractable in consumption and can thus disappear” Such goods include forests, pasturelands, water resources, and any environmental sink over time. Although it is often difficult or costly to exclude people from using such resources, some form of resource management becomes necessary when the good is subject to over consumption, as is demonstrated by the decline in forest cover and groundwater resources in India.

Contrary to conventional wisdom, vague property rights are sometimes more beneficial for enabling collaboration than the clear rights. **Property rights over water are vague in India.** The setting up of common-property regimes, in which community groups share rights to water and trees with government agencies, can be expected to be more difficult in cases where public agencies would compromise their authority (and possibly their historical mandate) by sharing right and resources. A key initial challenge for agency-citizen collaboration thus lies in opening up spaces for negotiation between citizens and agency officials without immediately posing a threat to agency authority. Ironically, it is sometimes an ambiguity over property rights to a resource (rather than clarity about such rights) that can provide such an opening.

16.7.2 Implication for PIM

First, the ambiguity of property rights over surface waters suggests that there is some possibility for negotiation between irrigation departments and WUAs (Water Users Associations). Although agencies would likely to seek to retain ownership over canals and reservoirs, a turning over of the operation and maintenance of the canals is not likely to generate a conflict over the governments’ rights of ownership.

In PIM, the basic orientation of irrigation and other departments remains intact although allowing for a substantial devolution of responsibility. Although PIM requires a significant shift in how irrigation departments perceive the capacities of farmers groups in managing water distribution (an necessitates the training of irrigation officials in community building skills), but it does not significantly alter the authoritative structure of irrigation distribution. The irrigation department remains in control of water in canals and reservoirs and is able to achieve its mandate of water distribution, albeit through semi-autonomous users associations. As such, although PIM is innovative in its organizational arrangement (Fig. 16.3) but does not pose any serious challenge to Government authority and control.



Fig 16.3: Water sampling and *in situ* measurement in the narrow canal.
(Source: <http://www.itczm.ait.ac.th>)

The primary motivation for the irrigation departments to engage in PIM is the long term possibility of reducing their own financial costs while simultaneously increasing irrigated land area. In doing so, they hope to better fulfill agency mandates (through annual irrigation targets) at a lower cost. In the past, poorly maintained canals have led to poor utilization and thus a low return on investment. According to Shashidharan (2000), Gujarat State spends more than 450 million rupees per year on operation and maintenance, of which more than three quarters is used for salaries and wages of a large and inefficient workforce.

The threat of bankruptcy has forced the irrigation department to explore alternative and more efficient management approaches including PIM. In addition, allowing WUAs to maintain the canal infrastructure and possibly to build their own distributaries from canals may provide a way for irrigation departments to hand off the complex issues of equity and distribution to WUAs.

Finally, the fact the irrigation departments have no control over privately held groundwater rights means that canal irrigation must compete with groundwater irrigation in a broader water market. Groundwater markets are important to participatory canal irrigation projects in that they affect the price of water that WUAs can charge their members.

Commercial tubewells are also sometimes viewed by farmers as being more dependable, because they are better able to predict water quantity and timing than are WUAs that are subject to uncertainty in the behaviour of irrigation departments concerning water releases. Thus, improved collaboration between irrigation departments and WUAs presents opportunities for improving the reliability of canal irrigation and thus its ability to compete with commercial groundwater sources.

In sum, there appear to be numerous incentives and opportunities for collaboration between irrigation departments and WUAs through PIM. Although state irrigation departments hold primary rights over surface waters, these rights are exercised largely through the ownership of canal irrigation works that are intended to distribute water to farmers.

Since the 19th century, the emphasis of irrigation departments has been on the construction of irrigation works for the purposes of water distribution to increase irrigated land area and to mitigate famine. As such, opportunities for improving the distribution of water through WUAs do not conflict with the property rights, mandates, or regulatory and historical orientation of irrigation departments. Moreover, financial and performance pressures provide strong incentives for pursuing PIM. We hope in coming fifty years we will have successful Participatory Irrigation Management in India.

16.8 INTEGRATED WATERSHED MANAGEMENT FOR SUSTAINABLE PRODUCTIVITY THROUGH COMMUNITY PARTICIPATION

The watershed approach is, being increasingly used in various development programmes like water and soil conservation, erosion control, command area development, rainfed farming, reclamation of ravines and other waste lands. Land and water conservation, development and management are fully achieved by watershed approach. The hydrologic units are very important for development of water resources through major, medium and minor projects and water harvesting structures.

What is Watershed?

Watershed is a geohydrological unit of area that drains the run-off to a pre-determined single outlet. Flowing water as well as underground water forms the major components of the economy of the any nation. Watershed management envisages

systematic and scientific study and approach towards conservation, harvesting, proper utilization and safe disposal of flowing water from the moment it strikes the land surface in the form of rain.

For the protection of our natural resources like land, water, vegetation and livestock and their development programmes, watershed is taken as a unit of development instead of administrative or revenue unit.

Participatory Watershed Management

Effective and strong farmers groups are the foundation and central feature of successful watershed development programmes. In recent years organized efforts are being made for people's participation in natural resource management in South-East Asia. The primary aim of this activity is building strong farmers' groups, which will pursue watershed management programmes and also income generating activities ensuring women empowerment and development in the region.

Watershed Development

Watershed development involves:

(1) Water Resources

- Water resources generated, distribution and legal aspect organized;
- Construction of water storing structures;
- Land affected in the forest area due to construction of reservoirs, dams;
- Clearance from the appropriate authority;
- Legal aspect for ground water exploitation; and
- Flood water storage.

(2) Technical Issues

- Watershed conditions; and
- Technological package according to the watershed characteristics like geology, soils, land use, climate, state of land and environmental degradation.
- Package is simple and acceptable to the local people. They can maintain and manage after the development.

(3) Social Issues

- Land holding pattern, category of farmers – marginal, small, medium or big;
- Other people dependent on these activities;
- What benefits are they going to achieve through watershed development projects;
- Immediate employment opportunities equally available to every household, increase in their income; and
- Project would enable them for social and economic change.

(4) Legal Issues

- Land records updated;
- Revenue *patta* for the landowner;
- Area leased for other activities like mining, forestry etc.; and
- Cases under courts, etc.

(5) Conservation Measures

- Contour bunds, check dams, terraces, gully control, afforestation, diversion channels, grassed waterways, farm ponds and water harvesting tanks.

Prerequisites for Watershed Management

(1) Watershed Characteristics

- Soil and their distribution, physiography, Status of land degradation, land cover and land use, agro climatic unit.

Participatory Resource Management

- (2) Water Resources and Use
 - Seasonal water availability for drinking, livestock use;
 - Water resources available in the area;
 - Water bodies like ponds, lakes, tanks, wells and others; and
 - Extent of irrigation.
- (3) Ownership Pattern
 - Land holding – various categories of farmers, agricultural labours and other human population dependent on village activities.
- (4) Socio-economic Data
 - Distribution of human population and livestock;
 - Age-wise distribution of both men and women;
 - Occupational pattern;
 - Educational status of both men and women; and
 - Expenditure pattern.
- (5) Vegetation and Biomass
 - Forest cover and their area and status;
 - Dominant tree species, grasses and other shrub coverage; and
 - Existing requirement of fuel, fodder and timber in the watershed.
- (6) Agriculture
 - Cropping pattern in an area;
 - Crops and their varieties;
 - Agricultural practices;
 - Crops and their yields;
 - Cost of cultivation of each crop; and
 - Crop residue available for use.
- (7) Livestock
 - Category of livestock;
 - Grazing facility; and
 - Improved and irrigated green fodder available.
- (8) Other Data and Maps
 - Local institution and other infrastructure;
 - Educational, medical, industrial, marketing, roads etc.;
 - Land degradation map, contour map, soil map;
 - Land use map;
 - Projected land use map; and
 - Location of the works to be undertaken.

Steps in Participatory Management

- (a) Selection and identification of site of the watershed, its area;
- (b) Resources assessment – land, water, forestry, humans and livestock;
- (c) Identification of beneficiaries from watershed area;
- (d) Inventory of the needs of the local population;
- (e) Identification and analysis of problems;
- (f) Identification of technological options and detailed discussion with the local people and their leader and also panchayat;
- (g) Source of finances;
- (h) Survey and project plan preparation and budgetary estimate;
- (i) Activity schedule – training of local people;
- (j) Commencement of programme and involvement of local population through employment and supervision; and
- (k) Maintenance mechanism and responsibility of farmer groups.

Some important Case Studies from Watershed Management in India

Gopalpura in Aravalis in Alwar District, Rajasthan

Ralegaon Siddhi

Sukhomajri Project

Tejpura Project

In the coming section we will describe a successful story of people participation in Sukhomajri project

16.9 THE SUKHOMAJRI-WATER SHED MANAGEMENT PROJECT: A SUCCESS STORY OF PARTICIPATORY APPROACH

Sukhomajri, a small hamlet of about one hundred families with average land holding of 0.57 ha, is located in the foothills of Shivaliks in Panchkula district of Haryana. It is at a distance of about thirty kilometers by road to the northeast of Chandigarh. A successful experience of participatory natural resource management, which has been proved to be conducive for bringing about socio-economic and cultural transformation of the village community, have been initiated by Central Soil and Water Conservation Research and Training Institute, Chandigarh. Until 1975, Sukhomajri had no source of regular irrigation. The entire agricultural land (52 hectares) was under rain-fed single cropping. Small land holdings (lesser than one hectare per family) coupled with frequent crop failures due to erratic distribution of rainfall, made agriculture least dependable as a means of adequate livelihood. Consequently, the people of Sukhomajri were forced to keep a large number of sheep, goats and cows to eke out a living. But, once the domestic animals, especially the goats and cows, were allowed to graze freely in the nearby hills, followed by indiscriminate felling of trees for fuel and other domestic consumption, the hill slopes, once covered with lush green vegetation, soon became bare and not even a blade of grass was to be seen.

Sukhna Lake to Sukhomajri

In the year 1975, the continuing problem of silting of the prestigious man-made Sukhna Lake in Chandigarh drew the attention of the Central Soil and Water Conservation Research and Training Center, Chandigarh.

A reconnaissance survey conducted by the Centre under the leadership of Officer-in-Charge, revealed that the major source of sediment was about twenty-six percent of the catchment area located in the close proximity of Sukhomajri and a few nearby villages. Sedimentation was caused by the erosion of the bare hill slopes that was caused by over-grazing particularly by goats whose rearing had been the traditional occupation of the Gujjars inhabiting the village.

Constituting of Village Society

The attitudinal change as manifested in the concept of 'social fencing', was strengthened through the constitution of a village society in 1979 called the 'Water Users' Association', which later emerged as "Hill Resource Management Society" (HRMS), duly registered. The HRMS discharges three main functions; (i) protection of hilly areas from grazing and illicit felling of trees, (ii) distribution of irrigation water from dams on payment basis and (iii) maintenance of dams, water conveyance systems and other assets. The sources of income to the society are: irrigation water charges, sale of bhabbar and fodder grasses from forest area, income from leasing dam for fish culture and, one time membership fee. With the increase in income, both from farm and dairy sector, the economy of the villagers has shown a quantum jump. The villagers have been spending part of their income for constructing houses and a part in acquiring assets and modern gadgets.

To address the problem the Research Center applied soil conservation techniques developed by comprising of mechanical and vegetative measures. This reduced the runoff sediment from the highly eroded Shivaliks at a spectacular rate from eighty tonnes to less than one tonne per hectare, within a short span of a decade. The vegetative measures consisted of planting of tree species like khair (*Acacia catechu*) and shisham (*Dalbergia sissoo*), in pits and bhabbar grass (*Eulaliopsis binata*) at mounds of trenches, and also *Agave americana* and *Ipomea cornea*, in critical areas to protect the soil against erosion. However, all these measures for containing the sediment *in situ* did not succeed in the absence of the willing cooperation from the people of Sukhomajri, who depended for their sustenance on the resources available in the catchment area. Hence, to promote agriculture and water availability in the area earthen dams were constructed. This resulted in rainwater harvesting and storage that could be used by the villages for agriculture through out the year. The concept of social fencing gained wide recognition. The society agreed to protect the hilly watersheds from grazing and illicit cutting of vegetation and in turn, were allowed to cut grass to stall feed their cattle and collect dry and dead wood or pruned branches for their domestic fuel consumption. As a result, the forest areas, which had a desolate look in the beginning of the project, were covered with grass and trees within a period of 10 to 15 years. Grass production increased more than double in the same period (from 3.82 t/ha to 7.72 t/ha).

Rain Water Harvesting

At Sukhomajri, four earthen dams have been built between 1976 and 1985. These serve three main purposes; firstly, to check instantly the gully formation in agricultural fields and, thereby, effectively prevent silting through the erosion of soil; secondly, to store surplus rainwater from the catchment's area to be used later for irrigation after the withdrawal of monsoon and thirdly, rehabilitation of the catchments.

With the availability of irrigation water mainly for rabi crops and introduction of improved agro-techniques, there was manifold increase in crop yields both for kharif and rabi.

Change in Cattle Composition

Social compulsions, economic considerations, self restraint and availability of ample quantity of grass and fodder, both, from forest area and agricultural fields, brought about a dramatic change in the cattle composition in the village. Besides, barseem (*Trifolium alexandrinum*) is now being grown over an area of 4 ha with an annual biomass production of 140 tonnes. This has given a fillip to the dairy sector and boosted milk production over the years.

Replicability of Sukhomajri Model

The Departments of Forests, Agriculture and Soil Conservation, the World Bank aided Integrated Watershed Development Project (IWDP), in the North-West Shivalik States, have already implemented hundreds of such projects in this region. To site an example, till 1996 the Forest Department Haryana built approximately 93 rainwater harvesting dams covering 53 villages and Department of Soil Conservation, Punjab, built about 70 such dams. The IWDP (Kandi Project) has adopted this model on a massive scale in the North-West Shivalik States.

Lessons from Sukhomajri

- Peoples' participation must be ensured right from the beginning of any project.
- The needs and the problems of the people must be identified at the outset.
- Unless a project is aimed at meeting their needs, solving their problems and mitigating their hardship, it may not succeed.
- Watershed Management Projects should have short gestation period. The benefits should available in shortest possible period.
- Constitution of a village society (HRMS) must be a pre-requisite before taking up such projects.

- The emphasis should be on sustainability and equity, i.e., all the common property resources must be available to all sections of the society.

Source: S.P. Mittal, Y. Agnihotri & R.K. Aggarwal, Central Soil and Water Conservation Research & Training Institute, Chandigarh.)

SAQ 2

- List the major achievements of participatory irrigation management in India.
 - What is watershed? And what are the major issues in watershed development?
 - List the various steps in participatory irrigation management in watershed area.
 - Describe other success stories of watershed- management.
-

16.10 WETLAND RESOURCES

Wetland is a comprehensive term used for landforms such as swamps, marshes and bogs and saltwater marshes. Wetlands may be defined as the areas that are inundated by water or where the land is saturated to a depth of few centimeters for at least a few days per year. You have also studied the scientific definition of wetland in an earlier unit of MED-006. We have already described wetland sites from India that were recognized as important wetland sites for conservation and are known as Ramsar sites. Their common feature is that they are wet at least part of the year and as a result have a particular type of vegetation and soil. Standing water creates a special soil environment with very little oxygen, so decay takes place very slowly and only plants with specialized roots can survive. You have already read about Ramsar sites in Unit 10 of MED-006.

Three major components used to determine the presence of wetlands are **hydrology** or wetness, **type of vegetation**, and **type of soil**. Hydrology is often the most difficult to define, because some fresh water wetlands may be wet only a few days a year. The duration of inundation or saturation must be sufficient for the development of wetland soils, which are characterized by poor drainage and lack of oxygen, and for growth of specially adapted vegetation (Fig. 16.4).

A programme on conservation of wetland is under implementation by ministry since 1987. A total of 20 wetlands in 13 states are covered under this programme in India.



Fig. 16.4: Rich and diversified wetland forest of India

Although wetlands occupy only a small portion of earth's land area, they play very important part in the biosphere. In the oxygen less soils, bacteria survive that cannot live in high oxygen atmospheres. These bacteria carry out chemical reactions, such as the production of methane and hydrogen sulfide that have important effects in the biosphere. Saltwater marshes are important breeding areas for many oceanic animals and contain many invertebrates. The dominant animals include crabs and shellfish, such as clams. Saltwater marshes are therefore an important economic resource. Over geologic time, wetlands environments produced the vegetation that today is coal. Besides this wetlands perform a variety of natural services for other ecosystems and for people, including the following:

- Freshwater wetlands are natural sponge for water. During high river flow they store water, reducing down stream flooding. After a flood they slowly release the stored water, nourishing low flows;
- Many freshwater wetlands are important as areas of groundwater recharge (water seeps into the ground from a prairie pothole, for instance) or discharge (water seeps out of the ground in a marsh that is fed by springs);
- Wetlands are one of the primary nursery ground for fish, shellfish, aquatic birds and other animals. It has been estimated that as many as 45% of endangered animals and 26% of endangered plants either live in wetlands or depend on them for their continued existence;
- Wetlands are natural filters that help purify water; plants in wetlands trap sediments and toxins;
- Wetlands are often highly productive and are a place where many nutrients and chemicals are naturally cycled;
- Coastal wetlands provide a buffer for inland areas from storms and high waves;
- Wetlands are an important storage site for organic carbon; storage is in living plants, animals and rich organic soils; and
- Wetlands are aesthetically pleasing places for people. (Holloway, 1991).

Wetland Management is done for Environmental protection (Fig. 16.5) for recreation and aesthetics and for the production of renewal resources. Stearns (1978) lists 12 specific goals of wetland management: that are applicable today:

- i) Maintain water quality;
- ii) Reduce erosion;
- iii) Protect from floods;
- iv) Provide a natural system to process airborne pollutants;
- v) Provide a buffer between urban residential and industrial segments to ameliorate climate and physical impact such as noise;
- vi) Maintain a gene pool of marsh plants and provide examples of complete natural communities;
- vii) Provide aesthetic and psychological support for human beings;
- viii) Produce wildlife;
- ix) Control insect populations;
- x) Provide habitats for fish spawning and other food organisms;
- xi) Produce food, fiber and fodder, for example, timber for fiber; and
- xii) Expedite scientific inquiry.

Strategy principles for Wetland Wise-use

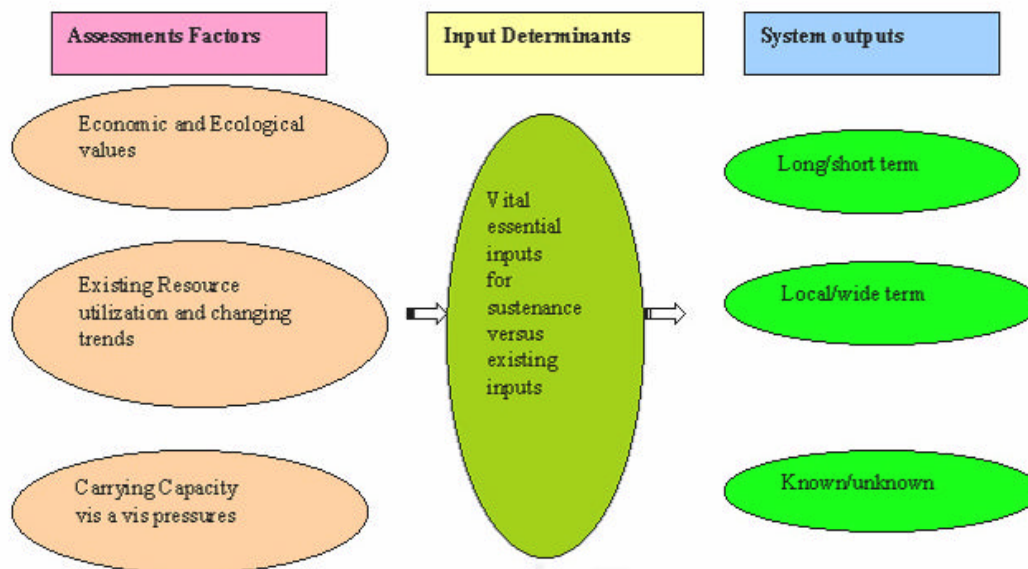


Fig. 16.5: Wetland Conservation Strategies, Policies and Mechanism.
(Source: EMCB -ENVIS Node of Water Resource Management.)

16.10.1 Reasons of Wetland Loss

Almost 70% of the world's population lives on seacoasts, and over much of the world river valleys and lakeshores have been settled since earliest. The communities established in these regions have often been attracted by the wetland system's easy access by land and/or water, level terrain, and high productivity. Exploitation of these features, even when leading the total conversion of wetland, has often brought social benefits, in both the short and long term.

Nevertheless, unacceptably high wetland loss had led to great loss to the biosphere in terms of resource loss and damage to environment. Many of these losses have been deliberate, but others are the result of decision taken in ignorance of the full value of the wetland in their natural state. Some are the result of inefficient management systems and others are unintentional byproducts of other actions.

- **Limited information:** some of the products and services of wetlands are sold; commercial fisheries, meat and skins from grazing herds, crops etc. but many wetland values do not have markets-water purification, storm surge protection for example. Recently when tsunami hit the coastal area, the area which have rich undisturbed mangroves were saved. Because these values are free goods they tend to be ignored in the economic calculations that decide whether wetlands should be conserved or developed. The result is a systematic bias favoring development and hence the degradation of wetlands.
- **Distribution of cost and benefits:** Sufficient information is available on the public benefits of wetlands conservation; even then wetlands are often lost because these benefits are not shared by the individual who owns the property. Private landowners frequently decide to drain their wetlands because they expect to earn more from growing crops and exploiting them than from leaving them in their natural condition.
- **Deficient Planning concept:** Point and nonpoint pollution are a frequent cause of wetland degradation. External factors such as runoff of agricultural chemicals and

soil erosion, together with point source pollution from waste treatment plants, have resulted in the severe degradation of estuaries wetlands.

- **Policy deficiencies:** There is increasing efforts to conserve wetlands, but several are still lost because of competing government priorities. The most common example of this is where, despite an explicit government commitment to wetland conservation, national agricultural policy favors wetland drainage.
- **Institutional weakness:** most countries have institutions responsible for managing wetlands. But only few pursue this mandate effectively. Among the many reasons for this, the most important is poor understanding of the true economic importance of wetlands and misperceptions of the nature of management problems.

16.11 INTEGRATED WETLAND MANAGEMENT

The 3rd Conference of Contracting Parties to the Ramsar Convention recommended in July (see Unit 10 of MED-006) 1987 that each country should develop a national policy for wise use of the country's wetland resources and provided following guidelines for the establishment of the national policies (also see Fig 16.6):

Box 16.1: Guidelines on the establishment of wetland policies.

Wise use involves the promotion of wetland policies containing the following elements:

- a. A national inventory of wetlands;
- b. Identification of the benefits and values of these wetlands;
- c. Definition of the priorities for each site in accordance with the needs of, and socio-economic conditions in, each country;
- d. Proper assessment of environmental impact before development projects are approved, continuing evaluation during the execution of projects, and full implementation of environmental conservation measures which take full account of the recommendations of this process of environmental assessment and evaluation;
- e. Use of development funds for projects which permit conservation and sustainable utilization of wetland resources;
- f. Regulated utilization of wild fauna and flora, such that these components of the wetland ecosystem are not over-exploited;

While detailed policies are being established, immediate action should be taken on:

- a. Interchange of experience and information between countries seeking to elaborate national wetland policies;
- b. Training of staff in the discipline which will assist in the elaboration of such policies;
- c. Pursuit of legislation and policies which will stimulate wetland conservation action, including the amendments as appropriate of existing legislation;
- d. Review of traditional techniques of sustainable wetland use, and elaboration of pilot projects, which demonstrate wise use of representative national and regional wetland types.

(Ramsar, 1988)

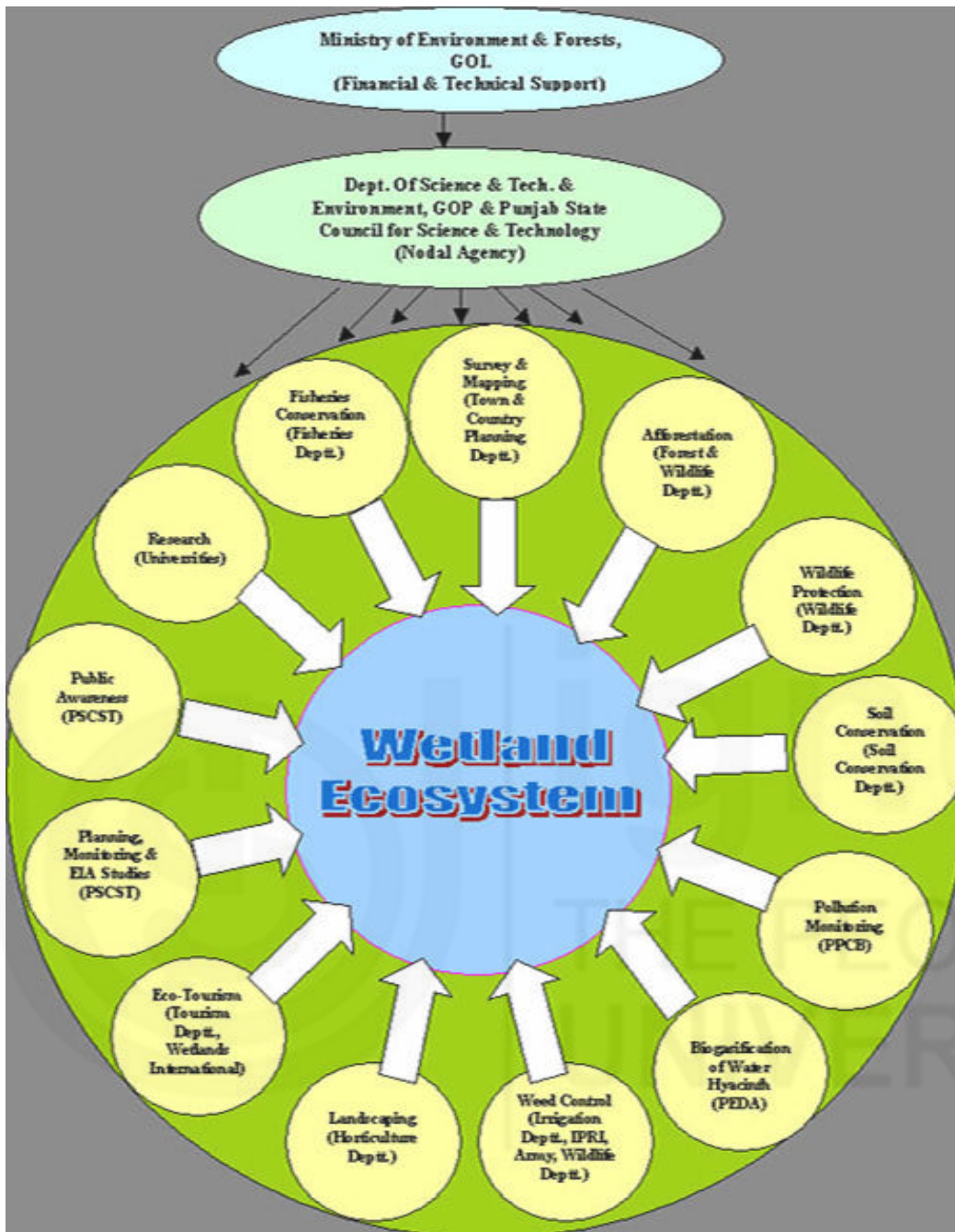


Fig. 16.6: Conservation mechanism of wetlands used in Punjab State Council of science and technology. (Source: EMCB-ENVIS Node of Water Resource Management.)

To manage the wetlands following steps should be taken:

- **Improving information:** people should understand why to conserve wetland ecosystem and species. Unless they are aware of the actions required to do so, the conservation would not take place. The quantity and quality of information on wetlands and their values must be increased and communicated more effectively to the people depended for livelihood on wetlands. A information programme to aware people will consist following four components:
 - i) Assembling of national wetland inventory and classification;
 - ii) Assessing wetland values;
 - iii) Assessing the management potential of wetland systems; and
 - iv) Wetland research

- **Improving awareness:** understandings of wetlands values need to be built at all levels of Society. Three-audience merit particular attention:
 - i) the general public;
 - ii) local communities dependent upon wetland resources and the government departments; and
 - iii) development assistance community, which make decision on investment in wetland conservation and development.
- There should be change in **agriculture policy:** which include agricultural price support to reduce conversion of wetlands into aquiculture land port etc.
- There must be change in **Water Policy:** including reducing impacts of water resources projects on wetlands.
- **Tax policy:** tax laws may provide partial incentive to wetland drainage. Wetlands could be conserved by changing these laws.
- **Wetland conservation policy:** the absence of specific national legislation limiting the use of wetlands outside protected areas has been important factor contributing to wetland loss. In recent years a number of countries have moved to make appropriate legislations.
- **Development Assistance policy:** a great deal of wetland degradation and loss is supported by development assistance funds whether grants or soft loans. To reverse this pattern, development assistance institutions need to pay more attention to the importance of wetlands and pursue policies which promote a more environmentally sensitive approach to wetland management.
- **Enhancing cross-sectional management:** the greatest obstacle to integrated management of wetlands in most countries is division of responsibility for wetland resource among several different agencies. The effectiveness of national wetland management efforts will be enhanced greatly by the establishment and effective operation of cross-sectoral structures. These may include specific ministries or department and interministerial committees and commissions. The success of such efforts will depend upon the capacity of the coordination between the widest possible range of institutions concerned with wetlands and to assist them in wetland conservation.
- **Improving human capacity to manage wetland:** substantial investment in training is required if wetlands are to be managed effectively.

Beside these regional and international cooperation is prerequisite for effective wetland management.

16.12 INTEGRATED WETLAND AND RIVER BASIN MANAGEMENT: A Case Study of Loktak Lake

Loktak Lake (Fig. 16.7) is situated 38 km South of Imphal city, the capital of Manipur State. The lake covers an area of about 286 sq. km at the elevation of 768.5 m located between longitudes 93° 46' and 93° 55' E and latitudes 24° 25' and 24° 42' N. Water level is shallow, the depth of which during dry season ranges between 0.5 m to 1.5 m. The total water spread area of about 490 sq km was recorded in 1966. Main water body of the lake is surrounded by shallow water, which stagnates over a marsh/swamp land.



Fig. 16.7: Loktak lake
(Source: www.bobbymaisnam.com/manipur)

The characteristic feature of the Loktak Lake is the presence of floating islands known as Phumdis. These are heterogenous mass of soil vegetation in organic matter, which occur in all sizes from a few centimeters to about 2.5 m. They occupy about two-third of the surface area of the lake. Free-floating plants, such as water hyacinth and partly decomposed roots and rhizomes contribute greatly to its development. The largest single mass of phumdis (Fig. 16.8) occupying an area of 40 sq km constitutes Keibul Lamjao National Park. The park is the only natural habitat of the most endangered mammal, the brow -antlered deer (*Cervus eldi eldi*)



Fig. 16.8: Loktak Lake with phumdis
(Source: www.flamingotravels.com/images/loktak_big.jpg)

Loktak Lake basin can be considered as a **sub-basin of the Manipur River basin**. It has direct catchment area of 980 sq km and indirect catchment of 7157 sq km. Out of the direct catchment area of 980 sq. km of the Loktak Lake; 430 sq km is under paddy cultivation, 150 sq. km of habitation area and 400 sq km of forest areas to the west and north west of the lake. The direct catchment area in the hills covers 96 hill villages with a total population of 21,334 according to 1991 census. The elevation varies from 780 m at the foothills adjoining the Central Valley to about 2068 m above mean sea level at peak.

A number of streams originate from the hill ranges immediately to the west of the lake and these streams flow directly into Loktak Lake. Of these, streams, a few major streams, Nambul, Nambol, Thongjarok, Awang Khujairok, Awang Kharok, Ningthoukhong, Potsangbam, Oinam, Keinou and Irulok contribute maximum silt load to the lake. The indirect catchment area covers catchments of 5 important rivers i.e. Imphal, Iril, Thoubal, Sekmai and Khuga and is spread over an area of 7157 sq. kms.

Loktak Lake is the largest wetland in the Northeastern region of India and has been referred as the **lifeline of the people of Manipur** due to its importance in the socioeconomic and cultural life. It plays an important role in the ecological and economic security of the region. The Lake has been the source of water for generation of hydroelectric power, irrigation and water supply. A large population living around the lake depends upon the lake resources for their sustenance.

The staple food of Manipur is directly linked to Loktak Lake. The lake is rich in biodiversity and has been designated as a wetland of international importance under Ramsar Convention in 1990. The Keibul Lamjao National Park, in the southern part of the lake, is home to the endangered Manipur Brow Antlered Deer, locally called Sangai. The lake has been also the breeding ground of a number of riverine fishes and continues to be a vital fisheries resource. It supports a significant population of migratory and resident waterfowl.

Manipur River Basin

The Manipur State has two river basins namely the **Barak river basin and the Manipur river basin**. The Barak River originates from the hills of the northern part of the state. It does not enter the Manipur valley. However it flows for some distance towards south and runs northwest and thereafter towards south through the hills of the Tamenglong district. The Manipur River arises in the north at Karong. It flows southwards of Imphal and is known as Imphal River. Along its course through the valley, downstream of Imphal, the riverbed of Manipur River slopes very gently.

The river has been regulated by two barrages for irrigation and hydropower. The Imphal Barrage downstream of Lilong regulates the flow for irrigation purposes while the second barrage at Ithai, diverts the river flow into the Loktak Lake for lift irrigation and hydropower project.

The important feature of the Manipur River from the hydrological point of view is the natural blockage of its flow in its lower reach. About 27 km. downstream of Ithai Barrage, after slopping down to 756.7 m, the riverbed suddenly rises by 8 m within a distance of 800 m and remains above 762.5 m for about 2.5 km. It reduces the capacity of Manipur River to discharge its flow.

The Manipur River system and its tributaries follow the N-S trends. They have a high degree of base level erosion. The Iril is the largest river in Manipur River system. The Iril and Imphal confluence have many swamp areas, which have now dried up.

Loktak Lake is located on the southern side of the river basin (Fig. 16.9). This fresh water lake represents the lowest elevation of the valley. The major rivers did not fall in the Loktak Lake except few rivulets. This indicates the tectonic origin of the valley. All the rivers viz, Imphal, Thoubal, Iril etc. flow in a more or less N-S direction following nearly straight course. They also appeared to be tectonically controlled.



Fig. 16.9: Map of Manipur showing location of Loktak lake.
(Source: www.e-pao.net/epPageSelector.asp?src=fate_of_)

The drainage pattern is controlled by the structure and lithology of the area. Different types of drainage pattern were identified in the area. Sub-dendritic sub-parallel and sub radial drainage patterns were commonly observed in the hilly terrain area. Meandering of river course are usually observed in the valley area such as Imphal, Iril and Thoubal River. The straight river course was suddenly twisted in the hilly terrain, which indicates structural control.

Land use

The total catchment area of Manipur River basin is 6,97,124.5 ha. Many different land cover identified are dense forest, medium dense forest, degraded forest, agriculture, jhum areas, water bodies, swamps and settlements. Degraded forest constitutes 31.1% of the total land area followed by dense forest (27.7%) and medium dense forest (14.8%). Agricultural land occupies 15.1% of the area.

Water Resources and Hydrological Regimes

There are several lakes, ponds and reservoirs in the Manipur River basin, which provide water for irrigation, domestic supply, power generation etc. The total area under water bodies is estimated a 14,875 ha which comprises 2.1% of the entire Manipur River basin. At present, there are seven river valley projects out of which three (Singda Dam Project, Thoubal Dam Project and Khuga Dam Project) are multipurpose, one (Loktak Lift Irrigation Project) is major and the remaining three (Khoupam Dam Project, Imphal Barrage Project and Sekmai Barrage Project) are medium irrigation projects. Manipur River Basin in 1996 has indicated the average runoff of Manipur River as 0.5192 million ha. m. against a total catchment area of 6,97,124.5 ha. Potential ground water is estimated around 44 million cu. m. per annum i.e. around 0.0044 million ha.m. (Department of Earth science Manipur university, 1996).

Developmental activities

In the basin, 50% of the domestic produce is generated from the agricultural sector. Water supply for irrigation is, therefore, of utmost importance in the basin. Command Area Development Programs has been carried out in the basin in the selected command areas of Loktak Lift Irrigation Project and Sekmai Barrage having cultivable command area of 24,000 ha and 5,000 ha respectively. Command Area Development Authority (CADA) was establish in 1982-83. The main objective of CADA program is to ensure irrigation water to every field in the selected command

area for the benefit of the farmers and for increasing agricultural production. The area under settlements has been estimated at 24,312.5 ha which represents 3.4% of the river basin. Out of this 5.3% is urbanized while the rest is rural.

Demographic features and socio-economic status

Manipur River basin has a total population of 13,94,398. The population is mostly confined to central Manipur valley.

The main crop is paddy followed by maize. As per the 1991 census the basin produces 225,550 tonnes of rice (82% of the entire state) and 6,020 tonnes of maize (52.8% of the state). The State Government of Manipur has several programmes to promote production of commercial crops like cotton, tea, coffee, rubber and sugarcane etc. Emphasis is also given on growing of crops such as pulse and oilseed using improved scientific methods.

Issues

Impact of human activities in the Manipur River Basin

Human activities often induce changes or accelerate the process of change. Developmental activities like construction of dams, barrage, etc., deforestation, shifting cultivation, uncontrolled use of fertilizers, etc. have degraded the river basin to a great extent.

The Loktak multipurpose project has caused both gains and losses in different aspects of the Manipur River Basin. Some of the salient impacts of the project are as follows:

- The impoundment of water by the Ithai barrage has inundated 80,000 ha of agricultural land besides some settlements in the southern Manipur valley;
- The populations of resident and migratory waterfowl, several fishes and macrophytes have sharply declined;
- The siltation in the Loktak Lake as well as in the valley has increased as the outflow of the silt-laden water has been checked; and
- The permanent water has caused thinning of the phumdi in the Keibul Lamjao area, the habitat of Sangai.

Siltation is another major problem the river basin is facing. The most important cause of soil loss from the catchment's area is the shifting cultivation. The landslides and the construction of roads in the hilly catchments also contribute to the soil loss. It is estimated that 6,72,650 tonnes of soil is lost every year from the basin.

Deterioration in the ecological health of the river occurs subtly and steadily. Further complications have been added due to variations in the water level of the flow, human pressure on land for agriculture and settlement and increase in landscape modification. Though there is only negligible inflow of industrial effluents, the organo chlorine pesticides from the surrounding paddy fields are another source of pollution in the river. Besides these, additional nutrients enter the river with the domestic sewage from the settlements especially the urbanized area of Imphal city.

Identification of threats and their impacts

Based on the analysis, the root-cause problems of the Loktak Lake are the loss of forest cover in the catchment area and the construction of Ithai Barrage. The degradation of the catchment area has led to the problems of siltation and increased flow of nutrients while the construction of Ithai Barrage have led to:

- changes in hydrological regimes thereby affecting ecological processes and functions of the wetland;
- inundation of agricultural lands and displacement of people from flooded lands;

- loss of fish population and diversity; and
- decrease in the thickness of phumdis in the Keibul Lamjao National Park thereby threatening the survival of Sangai deer .

The above root-cause problems have led to the following:

Siltation - Jhum cultivation, extensive deforestation and unscientific land use practices in the catchment area are responsible for deposition of approximately 336,325 tons of silt annually in the Lake.

Weed Infestation - The proliferation of phumdis (Fig. 16.10) and aquatic weeds have led to the reduced water holding capacity, deterioration of water quality, interference in navigation, and overall aesthetic value of the Lake.

Decrease in Power Generation - The decrease in water holding capacity due to siltation, weed infestation and proliferation of phumdis has reduced power generation capacity of the Lake.

Loss of Biodiversity - The populations of migratory and resident waterfowl has declined during the last few decades due to poaching and changes in ecological character. The habitat of Sangai deer in Keibul Lamjao National Park (KLNP) is also threatened due to thinning of phumdis and poaching. 35 species (5 mammals, 3 birds, 9 reptiles, 3 amphibians, 12 fishes, 2 molluscs and 1 annelid) that were reported to be abundant in the past have declined and are now disappearing gradually.

Decrease in Fisheries Production - Over-exploitation, indiscriminate methods of fishing, extensive growth of phumdis and weeds are responsible for decrease in fisheries' production. Construction of Ithai Barrage across Manipur River has interfered with the migration of fishes from Chindwin-Irrawady River system of Myanmar and consequently brought changes in the species composition.

Flooding - The construction of Ithai Barrage and decrease in absorption capacity of the Lake has resulted in inundation of the peripheral, agricultural and settlement areas.



Fig. 16.10: Weed infestation in Loktak lake, lots of phumdis can be seen.
(Source: www.tribuneindia.com/2002/20020215/nation.htm)

Pollution - Inflow of organo-chlorine pesticides and chemical fertilizers used in the agricultural practices around the Lake, municipal wastes brought by Nambul river that runs through Imphal, soil nutrients from the denuded catchment area and domestic sewage from settlements in and around the Lake are responsible for deterioration of water quality.

Several other issues of concern are:

- Lack of community involvement in the conservation and development programmes;
- Encroachment pressures on lands created from dredged and excavated material; and fish pond encroachments into the Lake (related to decline in fisheries);
- Absence of policy and regulatory mechanisms at the government level for conservation of the Lake and its resources ;
- Emphasis on engineering measures rather than integrated approach involving social, economic and ecological aspects;
- Inadequate technical and managerial skills and coordination among different agencies concerned with Loktak Lake management resulting in the emphasis on sectoral approaches leading to conflicting interests;
- Lack of awareness about the importance of the wetland in the local, national and international context;
- Absence of baseline data on hydrology, siltation, ecology, socio-economic aspects, catchments area, flora, fauna, etc. and their interrelationships ; and
- Ineffectiveness of implementing agencies at different levels and lack of appropriate strategies and ineffective implementation of developmental programmes.

The Approach

Several measures have been taken by the Government of Manipur to check deterioration of the lake and to bring about improvement in the areas of power generation, fisheries, agriculture, and tourism and siltation control. All these measures are focused at the site-specific level without understanding its linkages with the overall processes and development within the river basin, which directly or indirectly has bearing on the lake ecosystem. Wetlands International-South Asia (WISA) in collaboration with the Loktak Development Authority (LDA), an agency of the Government of Manipur is implementing a project on Sustainable Development and Water Resources Management of Loktak Lake under India - Canada Environment Facility (ICEF).

Organizational and Policy framework

Loktak Lake is managed by various agencies within the State Government i.e. Departments of Environment, Forests, Wildlife, Irrigation, Agriculture etc. The Loktak Lake Development Authority (LDA) though responsible for coordinated approach interacting with several departments is working within the limited area of Loktak Lake. As such, a single unified agency with multidisciplinary and multi-sectoral approach has to be established to ensure sustainable development of the entire river basin. Wetlands International South Asia (WISA) and LDA are currently undertaking a project to develop and apply technical know-how for conservation and wise use of Loktak Lake involving local communities, NGOs, Government agencies, and research academic institutions. The main aim is to promote integrated management approach and to build up technical and managerial capabilities in LDA and other concerned agencies to address the issues of water management and sustainable development of Loktak Lake within Manipur River basin. All the tributaries directly or indirectly connected with River Imphal basin and contributing to quality and quantity of water in Loktak Lake will be thoroughly assessed for water management in the Lake.

The specific objectives and strategies of the project are:

- Control of soil erosion through afforestation, fuelwood and fodder plantation, regeneration of degraded forests, control or improve-shifting cultivation, engineering measures;
- Optimize water level in the lake through hydrologic modeling and interventions to

realize multiple values and functions of the wetland (power, wildlife, fisheries, flooding, water quality);

- Enhance water-holding capacity by hydrologic interventions at critical zones and improve flow and capacity;
- Improve water quality through control of nutrient input and pollutants from point and non-point sources ;
- Sustainable fisheries development with emphasis on enhancing fish yield and diversity by developing mechanisms for fish migration and restocking
- Conserve the endangered Sangai deer through habitat improvement of Keibul Lamjao National Park;
- Mitigate flood by rehabilitation of wetland processes and engineering measures ; and
- Participation and development of local communities by their involvement in various components of the project and through alternative/additional income generation demonstration projects.

The strategies to be adopted highlight community involvement at all stages, from addressing the problems at the river-basin level; shifting the focus of the present approach of LDA from curative to preventive measures; and integration of social, economic and ecological aspects. This involves assessment of all stakeholder groups, current resource pattern, pressures and developing joint community-based demonstration projects to ensure participatory approach.

The first component of the project is data collection and capacity building involves through active participatory techniques and will lead to the establishment of accurate baseline data. A comprehensive information database is essential to support the other activities of the project.

Currently the data that is available on Loktak Lake in relation to various parameters including water management, socio-economic aspects and resource utilization pattern is sparse. The project envisages collection of data under all components including water management, sustainable fisheries development, catchment area treatment and community development.

LDA staff will undergo training for various aspects i.e. catchment's area treatment, water management and sustainable resource utilization. Human resources development activity especially within LDA, environmental agencies, NGOs and woman's organizations is important to ensure sustainable development and management of Loktak Lake in the future.

Water Management

Water Management Plan endorsed by the stakeholders which addresses multiple values of Loktak Lake e.g. for power generation, agriculture, wildlife and fisheries will be prepared. The main objectives of the plan include optimizing water level of the lake and the holding capacity, improving water quality and flood mitigation and developing mechanisms for implementation of strategies based on specific studies. It will also include plan of activities for water resource use, water availability, water allocation, flood control and operational mechanisms for implementation.

Specific Studies

The hydrology of Loktak Lake is complex and there are several issues, which need to be investigated thoroughly for formulating sound strategies for water management. While on the one side phumdis are proliferating resulting in choking of the Lake, on the other side decrease in thickness of phumdis in Keibul Lamjao National Park is threatening the survival of Sangai deer. Without adequate baseline data, the cause of degradation of the Lake ecosystem cannot be determined.

The role of phumdis in the hydrological functioning particularly, water-holding capacity, water balance, maintaining the desired thickness in the park and their proliferation in the Lake has to be precisely determined through scientific studies with concerned agencies.

Water Use and Allocation

The water management plan will clearly indicate the quantity of water to be allocated after analysis of water use and water availability. The project will;

- estimate water available in the Lake based on water balance and water holding capacity;
- identify stakeholder groups relating to water use by PRA exercises ;
- determine water use by different stakeholder groups in qualitative and quantitative terms;
- identification of regulatory measures/legal obligations with respect to allocation of water; and
- estimate quantity of water for different uses like power generation, wildlife conservation, sustainable fisheries development and maintaining flora and fauna particularly endangered species .

Flood Control

The Ithai Barrage controls water levels in Loktak Lake during the dry season. Other barrages, such as the Imphal and Sekmai barrages, are used to control tributary water levels for irrigation. In general, flood protection is a downstream benefit with impoundment resulting in upstream flooding, as is the case for the Loktak lake area. The main activities within this component will be to identify every area, which are exposed to flooding; the operating regime for water control structures, flooding induced by the Ithai barrage and rehabilitation of wetland processes and engineering measures.

Monitoring

The plan will identify key factors, which should be monitored during and after the implementation of the plan. This is to ensure that the objectives of the water management plan are being achieved.

Catchment Area Treatment

The hill areas of Manipur, which constitute the catchment areas of important rivers, including Loktak Lake, are under pressure mainly due to deforestation, prolonged practice of Jhum cultivation and overall exploitation of resources. These factors have mainly contributed to the rapid siltation of the Lake and consequently have reduced its carrying capacity. One of the main objectives is to ensure people's participation at all stages in catchment development programmes through various mechanisms intended to ensure equitable distribution of intermediate and final forest products.

A preliminary survey was undertaken to identify the critical areas, which contribute to soil erosion leading to sedimentation of the Lake. Based on this survey, five sub-catchments have been identified which constitute the catchments for the major river systems entering the Lake. Two broad land use categories i.e. fallow land (upland with or without scrub having crown density less than 10%) and degraded forests (crown density 10-20%) have been delineated for soil and water conservation treatment purposes. Treatment for these areas has to be addressed separately with specific modifications at the different locations.

Biodiversity Conservation

The Loktak Lake covers a variety of habitats with rich biological diversity. Aquatic macrophytes comprising 233 species of emergent, submergent, free-floating and floating leaf types have been reported in the lake.

Studies carried on the lake reveal occurrence of 32 species of phytoplankton and 55 species of zooplankton. The macrofauna include a number of vertebrate and invertebrate species, which inhabits the water body, Keibul Lamjao National Park, phumdis, islands and other habitats. A total of 425 species of animals (249 vertebrates and 176 invertebrates) have been identified from the lake. The vertebrate fauna includes 6 species of amphibia, 106 species of birds and 32 species of mammals. The total fauna diversity is likely to be much higher as many species have not been properly identified.

Of these, 34 species (five mammals, three birds, nine reptiles, three amphibians, twelve fishes, two molluscs and one annelid), which were reported to be abundant in the past, have declined and are now disappearing gradually. The fauna include some rare (e.g. the reptile *Python molurus*) and endangered species (e.g. *Muntiacus muntjak* and *Cervus eldi eldi*). At least one species of bird is reported to have completely disappeared. Brow -antlered deer (*Cervus eldi eldi*) is the most seriously endangered species, which inhabits the Keibul Lamjao National Park - its only natural habitat in the world. Keibul Lamjao National Park is the natural habitat of the most endangered mammal, the brow -antlered deer (*Cervus eldi eldi*) that is represented by about hundred individuals (WWF, 1994). Locally known as Sangai, this sub-species of deer was reported to be completely extinct in 1951, but a survey conducted under the auspices of IUCN revealed that only a few animals are inhabiting the park. Sangai are specially adapted to this characteristic -floating habitat, with their characteristic hooves unlike other deer species that help the animal walk conveniently over the floating islands.

Loktak Lake also provides refuge to thousands of birds, which belong to at least 116 species. Of these 21 species of waterfowl are migratory, most migrating from different parts of the northern hemisphere beyond the Himalayas. These migratory birds spend their winter (October to March) in and around the lake. In recent years it is believed that the waterfowl population, especially that of the migratory birds has gradually declined.

The fish fauna of Loktak Lake comprises 64 species. Two of these species are restricted in their distribution to the Yunan state of China, Myanmar and Manipur only. Loktak Lake serves as the breeding ground for several species of migratory fishes such as *Labeo dero*, *L. angra*, *L. bata*, *Cirrhinus rebd* and *Osteobrama belangeri*. These riverine species migrate from the Chindwin-Irrwaddy river system in Burma to the upstream areas of Manipur River and breed in various shallow lakes in the valley (Tombi Singh, 1991 a and 1993). In the past they accounted for about 40% of the natural fishery resources of the Manipur State. However, these fishes have disappeared from the lake since the construction of Ithai Barrage, which has blocked their migratory route.

Sustainable Fisheries Development

The fishery (Fig. 16.11) in Loktak Lake has traditionally been open water capture fishery, which accounted for 60% of the total fish production of the state. Migratory fishes from the Chindwin-Irrawady system of Burma (Myanmar) used to contribute about 40% of the capture fishery of the lake. The commissioning of the Loktak hydroelectric project, however, brought about changes in the fish and fisheries of Loktak. Migratory fishes have, since then, disappeared, while the State Fishery Department has been trying to compensate the loss by introducing millions of fingerlings of Indian and exotic major carps. Long before plans for the Loktak Hydroelectric Project were made in the 1970s, an area of 500 ha in the Takmu sub-basin was taken over by the State Government for intensive fish culture. At present, apart from the Takmu beel fishery, the lake is open to the public for natural capture fishery without the requirement of any lease or license.



Fig. 16.11: Traditional fisheries capturing in Loktak Lake.
(Source: cicmanipur.nic.in/html/places.asp)

Aquaculture activities can be found in the peripheral areas of the lake, particularly along the inhabited islands such as Thangs and Karang, where local fishing communities have constructed fishponds (20 -30 m wide and 30 -50 m long). Several fish species including the major Indian and exotic carps are cultured in these ponds. The fishermen are provided with loans and subsidies from agencies such as Council for Advancement of People's Action and Rural Technology (CAPART) and National Association of Fishermen.

Lack of policies and regulatory mechanisms are the main causes of decline in fish production. More than 100,000 people on and around the lake depend for their livelihood to a great extent on the lake fishery, which is now a mixture of capture and culture systems.

ICEF has identified sustainable fisheries development as one major component of the project. The objectives will be to reduce impacts of different fishing methods and practices and develop mechanisms for fish migration, enhance fish yield and diversity and regulatory mechanisms to ensure sustainable development of fisheries in the lake.

Community Participation and Development

The communities living around the Loktak Lake can be broadly classified into three groups viz. (i) shore dwellers living in the periphery of the lake; (ii) hutment dwellers living in the lake on phumdis; and (iii) hillside dwellers living in the hills.

There are 55 rural and urban settlements around the Lake with a total population of about 100,000 people. The natural levees of Manipur River and its tributaries are densely inhabited. A large population of fishermen lives on some 688 floating huts of which many have been converted into permanent dwellings. It has been estimated that about 4000 people live in these floating huts for fishing activities. Apart from the people living in the close vicinity of the Lake, it has been estimated that about 1,21,000 people live in 546 hill villages. These people are largely under the control of tribal chieftains and practice shifting cultivation. The implementation of the project would help socio-economic uplift of the people by enhancing the Lake resources and overall environmental quality of the Lake.

The participation of local communities is crucial in planning and management of Loktak Lake on long-term basis. Ensuring participation of all stakeholders requires understanding of their needs and sharing of authority and responsibility for resource management according to arrangements, agreed by all parties. The process is lengthy and requires long-term commitment from all concerned stakeholder groups. In view of this, community participation and development has been identified as an important component in ICEF project.

The ultimate objective of co-management is empowerment of impoverished majority, promoting equity in the access to and control of resources, greater involvement of women, sustainability and system orientation.

Survey and Assessment

Participatory techniques were used to compile information on community structure, resources, demands, skills and indigenous potential, including seasonal changes and other relevant factors. Socioeconomic survey of the community living in and around the valley and the Lake was undertaken. In addition a baseline survey within Lake and its catchment area provide information on present resource utilization patterns and community development needs.

Capacity Building, Training and Networking

Capacity building of community based organizations and NGOs to develop skills for management of resources specifically related to the project was one of the major components of the project. Mechanisms for institutional development and communication networking were developed and training of local communities in nursery raising, hatchery management, restocking techniques, data collection, hydrology and minimization of wastes was to be undertaken. Awareness generating activities such as publication of newsletters and posters, organizing workshops and seminars is underway.

Joint Community based Demonstration Projects

Several joint community based demonstration projects have been planned under the ICEF project. They involve the establishment of hatchery, introduction of proper fish harvesting techniques, waste treatment and sanitary improvement, utilization of Phumdis, cottage industry involving local handicrafts, integrated farm management and plant nurseries.

Pilot projects to encourage the local community to resort to alternate sources of employment such as working in rice and oil mills would also be explored. Such programmes would greatly help reduce pressure on the Lake.

Lessons Learned

In the past all development activities i.e. within the Manipur River Basin was focussed to contribute to major needs of the Manipur District community. However, this needs to change i.e. to also consider the ecological needs of the Manipur basin and the Loktak Lake.

The major cause of ecological problems in Loktak Lake is due to improper planning and lack of integrated approach when developing projects. Efforts taken by the Government of Manipur to identify issues which lead to deterioration of Loktak Lake is a major step to increase the awareness on the ecological deterioration of the lake. Establishment of a Lake Development Authority as a single management body is a major step towards promoting holistic management of the lake. The project highlighted the importance of involving community at all stages of development, which is an important aspect within integrated management of river basin.

SAQ 3

- i) Describe the importance of wetland in maintaining a particular type of flora and fauna.
 - ii) What are the major components of wet lands?
 - iii) How can people contribute towards conservation of wetlands?
 - iv) Define wetland and list various resources we derive from them.
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16.13 SUMMARY

Let us summarize what we have studied so far:

- Water is essential for life of human being and other organisms.
- Water exists in substantial quantities on earth but human activities are continuously affecting water resource both quantitatively and qualitatively. Effective use of water and associated resources is essential.
- Around 40% of the world's food crops are produced by irrigated agriculture. The performance of irrigation and drainage is critical to the food supply and to farmers' incomes, as well as to the environment.
- The ultimate goals in managing irrigation water are efficiency, equity and sustainability.
- Efficiency has been achieved if every drop of water has been properly allocated and used, without any waste.
- The goal of equity means that water is fairly distributed among users. Some farmers may have an advantage over others. Those at the head of a canal have an advantage over those living downstream, as they have first access to water.
- In some cases, ideals of efficiency and equity may be in conflict. The goal of sustainability means that the users of today should maintain the quality and quantity of water resources for the use of future generations.
- South Asian countries are agricultural countries where agricultural land is predominantly irrigated. Irrigation management requires efficiency, equity and sustainability, which is only possible by participation of community in the development of irrigation plans. PIM in India, has post colonial history.
- Wetlands are destroyed and converted to agricultural land due to lack of information for immediate benefits. The wetland conservation should include information and awareness raising programme for public and decision maker, change in agricultural, tax and water policy, enhancing institutional effectiveness and community participation.
- Study of Loktak lake in India highlights the importance of involvements of people at every stage for sustainable development.

16.14 TERMINAL QUESTIONS

1. How participatory irrigation management does helps the poor farmers and the government?
2. Management of irrigation system in India by the farmers will be more fruitful. Discuss.
3. Discuss various problems associated with participatory irrigation management.
4. Discuss the role of women in participatory irrigation management.
5. List at least ten important wetlands from India and try to locate them on the map.
6. Describe the natural services the wetland does for other ecosystem.
7. List the specific goals of wetland management.
8. Describe the various reasons for the wetland loss.
9. What are the advantages of participatory management of water?
10. What values should guide the choice of a management model for water resources in a country or in a community?
11. What do you think happens when private sector manages water in the developing World?

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