

LECTURE-7+8(L7-L8)

ENVIRONMENTAL OBJECTIVES

1. Conservation of Critical Environmental Resources:-

To protect and conserve critical environmental resources and invaluable natural and man-made heritage which are essential for life-supporting livelihoods and welfare of the society.

2. Inter-generational Equity:

To ensure judicious use of environmental resources to meet the needs and aspirations of present and future generations.

3. Efficiency in Environmental Resources Use:

To ensure efficient use of environmental resources in the sense of reduction in their use per unit of economic output and to minimize adverse environmental impacts on society.

4. Environmental Governance in the Management of Resources:

To apply the principles of good governance (i.e. transparency, rationality, accountability, reduction in costs and time, and public participation) to the management of environmental resources.

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5. Enhancement of Resources:

Appropriate technology and traditional knowledge, managerial skills, and social capital will be used for conservation and enhancement of resources.

6. Livelihood Security for the Poor:

To ensure equitable access to environmental resources for poor tribal community, which are most dependent on environmental resources for their livelihood.

7. Integration of Environmental Concerns for Socio-economic Development

To integrate environmental concerns into policies, plans, programmes and projects for socio-economic development.

(B) Strategy for Conservation of Environmental Resources

The following Environmental Resources will have to be conserved

(A) **Land**

The following steps will be taken to reduce land degradation:

(i) Encourage adoption of science based and traditional sustainable land use practices through research and development.

(ii) Pilot scale demonstrations and farmers' training.

(iii) Promote reclamation of wasteland and degraded forest land through formulation and adoption of multi-stakeholder partnerships involving the land owning agency, local communities and investors.

(iv) To reduce desertification through action plans.

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(B) Forests:

The following strategy for conservation of forests will be followed:

(i) To formulate an innovative strategy for increase of forest and tree cover from the present level of 23 percent of the country's land area, to 33 percent through afforestation of degraded forest land, wasteland and tree cover on private or revenue land.

(C) Wildlife:

In respect of wildlife conservation, the following steps would be pursued:

(i) Expanding the Protected Area Network of the country. It must be ensured that the overall area of the network in each biogeographic zone would increase in the process.

(ii) Paralleling multi-stakeholder partnerships for afforestation. Further, formulating and implementing similar partnerships for enhancement of wildlife habit in conservation and community reserves.

(iii) Encouraging eco-tourism at wildlife sites.

(iv) Implementing measures for captive breeding and release into the wild identified endangered species.

(D) Biodiversity:

According to the National Environment Policy, a large- scale exercise has been already completed for providing inputs towards a National Biodiversity Action Plan.

(E) Wetlands:

Wetlands, natural and man-made, freshwater or brackish, provide numerous ecological services. They provide habitat to aquatic flora and fauna.

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(F) **Conservation of Man-made Heritage:**

Man-made heritage reflects the pre-history, ways of living and culture of people. In the case of a country, such heritages are very important assets and need to be conserved. At the same time, considerable economic value, and livelihoods may be derived from conservation of man- made heritage and their sustainable use.

(G) **Environmentally Sensitive Zones:**

Environmentally sensitive zones may be defined as areas with identified environmental resources with incomparable values, which require special attention for their conservation. In order to conserve and enhance these resources, without impeding legitimate socio-economic development of these areas

(H) **Sustainable Mountain Development:**

Mountain ecosystems play a key role in providing forest cover, feeding perennial river systems, conserving genetic diversity and providing an immense resources base for livelihoods through sustainable tourism.

There has been significant adverse impact on mountain ecosystems by way of deforestation, submergence of river valleys, pollution of freshwater resources, despoiling of landscapes, degradation of human habitat, loss of genetic diversity, retreat of glaciers, and pollution.

(I) **Coastal Resources:**

Coastal environmental resources provide habitats for marine species, which in turn comprise the resource base for large numbers of fisher folk, protection from extreme weather events, a resource base for sustainable tourism, agricultural and urban livelihoods.

In recent years, there has been significant degradation of coastal resources, for which the proximate causes include poorly planned human settlements,

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improper location of industries and infrastructure, pollution from industries, and settlements, and over exploitation of living natural resources.

(J) **Freshwater Resources:**

The fresh water resources comprise the river systems, groundwater and wetlands. Each of these has a unique role and characteristic linkage to other environmental entities.

(K) **Groundwater:**

Groundwater is present in underground aquifers in many parts of the country. The water table has been falling rapidly in many areas of the country in recent years. This is largely due to withdrawal for agricultural, industrial and urban use in excess of annual recharge.

In urban areas, apart from withdrawals for domestic and industrial use, housing and infrastructure such as roads prevent sufficient recharge. In addition, some pollution of groundwater occurs due to leaching of stored hazardous waste and use of agricultural chemicals in particular pesticides.

Legal Framework:

There are already many laws to deal with the problems of environmental pollution in India. These are Environment Protection Act 1986, the Water (Prevention and Control of Pollution) Act 1974, the Water Cess Act 1977 and The Air (Prevention and Control of Pollution) Act 1981. The law in respect of management and conservation of forests and biodiversity is contained in the Indian Forest Act 1927, the Forest (Conservation) Act 1980, the Wild Life (Protection) Act 1972 and the Biodiversity Act 2003.

LECTURE 9(L-9)

Public involvement in EIA

Public involvement is a feature of nearly all EIA systems. The public involvement of stakeholders in EIA is widely recognized as a fundamental element of the process. The range of stakeholders involved in an EIA typically includes the local people, the proponent, government agencies, NGO's and academics, etc.

Local people or groups in the local community will want to know what is proposed; what the likely impacts are; that their values are known, understood and taken into account; and that suggestions they may offer will be carefully considered on their merits. They will want proponents to listen to their concerns and address them. They will also have local knowledge that can be tapped.

Many proponents will share some of the above objectives, and will have others as well. Proponents will wish to shape the proposal to give it the best chance of success. This often involves achieving increased public understanding and acceptance of the proposal through the open provision of information. The design can also often be improved through the use of local knowledge and an understanding of local values.

For administrators and decision-makers, an effective public involvement programme can mean that the project is less likely to become controversial in the later stages of the process.

Comments from NGO's often provide a useful broader public perspective on a proposal. Their views can also be very helpful when there are difficulties

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with involving the local people (although these can never fully replace those solicited from the people themselves).

Other interested groups such as those working in tertiary institutions and experts in particular fields can also make a significant contribution. The advice and knowledge of government agencies and utility service providers should also be sought.

Beyond advocacy of involving the public based on purely philosophical reasons, there are known benefits derived from their involvement in the EIA procedure. In addition to those to be gained specifically by the public through participation, many are reaped by the developer and contribute to strengthening the EIA procedure as a whole by increasing the quality of the decision;

rendering planning more efficient; attaining transparent decisions and a higher level of commitment to the decision; and avoiding public controversy and creating trust in the applicant and his planning.

The broadening of the EIA procedure towards a more “collaborative one in which scientific and technical data are centred on the interests of the different actors” has paralleled the increase in transparency in administrative processes in many countries and debates concerning the active role of the public in democracy and decision-making.

This project is concerned with public involvement in EIA because this has a direct link with the goals of sustainable development i.e. development that meets the needs of present generations without adversely affecting the ability of future generations to meet their own needs.

EIA – being an incremental process which seeks to improve decision-making, stakeholder involvement and the identification of alternative approaches to promote environmentally sustainable development – is transparent, of increased quality, strengthened and so forth when there is public involvement.

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Other aspect of this project is concerned with the problem formulation and with the methodology employed to carry out the study. The part that has to deal with EIA and Public.

The necessity of Public Participation

Our present day governments and associated administrative structure have reached sizes where they are unable to respond to individual needs. The distance between the decision maker and the people affected by the decision is too great. This has the effect of questioning the legitimacy of decisions.

Thus public participation is needed for the resolution of the above problem. Furthermore greater participation is warranted because some members of the public do not like decisions coming from a source, where the decision making process is unclear and not readily accessible

The public would love to participate in the decision-making process.

Thirdly, specialized interest groups such as industry may have their own and economic influence which can hinder government attempts to manage natural resources in the best interests of the public

Theorists in their works have identified two basic rationales for public participation: functional and democratic rationale

They consider the categories as not mutually exclusive, but rather overlap significantly.

The objectives of public participation can be further divided in to;-

DEVELOPING CONFIDENCE AND TRUST
LEGITIMIZING THE AGENCY'S ROLE
PUBLIC RELATIONS

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**INFORMATION
CONFLICT RESOLUTION
DEVELOPMENT OF ALTERNATIVE SOLUTIONS
EVALUATION OF CONSEQUENCES OF ALTERNATIVES
PRODUCTION OF NEW KNOWLEDGE
CONSENSUS SEEKING
DEPOLARIZING INTERESTS
DIAGNOSIS OF COMMUNITY PROBLEMS AND NEEDS**

In identifying publics, considerations to be kept in mind relating to identification are:

- i) Identification needed for each study,
- ii) Identification continues throughout planning process,
- iii) Recognition of Potential for Voluntary Organizations, and
- iv) Recognition of change of Public participation over time

At the onset of planning, a certain segment of the public will have an interest in participating. These are groups that:

- a. Have participated in the past,
- b. Are affected by the problem, and
- c. Will be affected by a possible solution to the problem.

LECTURE--10 (L10)

Strategic options in water resources

1. Shifting focus from ‘water resource development’ to ‘water resource management’ by:

- a) Integrated Water Resource Management - coordinated and conjunctive use of all water, by location or by use (involves large scale planning and implementation)
- b) Ensuring that there is sufficient water in the entire system to support all the various uses of water and also that it is distributed equitably across space and users – technically complex
- c) Restructuring and strengthening existing institutions for better service delivery and resource sustainability
- d) Make the planning of big water resources projects interdisciplinary with all environmental, ecological and human concerns internalized
- e) Assessing the impact of such projects backed by concrete steps.
- f) Developing set of laws, policies, capacities and organizations for water management by government.
- g) Involving service providers in the overall water resources management authority – sustainability of local governance

2. Public Private Partnership by :

- a) Considering the financial constraints and managerial limitations of governments, private sector involvement should be encouraged in water resources development and management projects.

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b) Characterizing service sector by contracts between providers (public and private) and users with the description of the rights and responsibilities of both parties

c) Mix of public and private financing for the provision of services based on the type of infrastructure – a partnership mode of relationship between public and private sector

3. Demand management and increasing resource use efficiency; rejuvenating tanks by:-

a) Storing water in reservoirs to transfer it from the season/region of abundance to that of scarcity

b) Minimizing the need for supply-side solutions through demand-management (restraining demand within availability) and using water resources efficiently

c) Fostering consciousness of scarcity and promoting conservation and minimizing waste

d) Modernizing the systems for allocating and monitoring surface and groundwater resources.

e) Efficiently managing water resources by implementing water entitlements, water pricing, accountable institutions and effective regulations.

f) Shifting government focus from traditional areas (of constructing and operating water supply infrastructure) and encouraging investments in environmental quality.

g) Tank rehabilitation and restoration to conserve both surface and groundwater

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h) Ensuring access to safe drinking water to all – providing water for all

4. Encouraging market for services. by:-

a) Encouraging private sector to compete for the right to supply water and irrigation services (service can be privatized but not the resource)

b) Unbundling distribution functions in large irrigation systems and then providing distribution services to farmers through cooperatives and private sector

c) Advocacy of privatization of water services (competition in provision of public services could improve efficiency)

5. Empowering users and Human Resource Development by:-

a) Empowering users groups and gram panchayats

b) Establishing formal water entitlement system and clarifying that water is publicly owned and water entitlement is usufructory, i.e, it is a right to use not a right to own water

c) Encouraging community and local government to plan, implement, operate and manage water service schemes

d) Interdisciplinary team work in water sector - investment in improving the quality and diversity of professionals engaged

6. Groundwater governance by :-

(a) Holistic concept which is multi-level, multi-actor and multi-instrumental

b) Participation of state, people and even markets depending on the nature of the problem

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- c) Energization of pumps and administration of its distribution and setting tariff for energy consumption
- d) Constitution of Central Groundwater Authority to monitor and regulate groundwater withdrawals
- e) Regulatory approaches viz., regulating withdrawals through licensing, credit or electricity restrictions, spacing norms

7. Taxes and user charges by

- (a) Pricing of water services by introducing taxes or water user charges to bring tariffs into balance with costs
- b) Accompanying increased charges by improvement in services and provision of these services in an efficient and accountable manner
- c) Rationalizing irrigation water rates or prices
- d) Ensuring budget support (taxpayers' money) for irrigation
- e) Generation of funds for annual maintenance and rehabilitation of the sector and also providing services to those who do not have them
- g) Improvements in the quality of service provided so as to avoid resistance against the increased charges

7. River Basin Organizations by :-

- (a) Preparation of basin level and regional plans for optimum water usage
- b) Maintenance of allocation and distribution of water supplies for different uses
- c) Promoting integrated water resources management and building multi-level stakeholder platforms

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- d) Controlling flood, soil erosion
- e) Socio-economic development of people living in the valley

8. Transparency in rule and local Beneficiaries involvement by:-

- a) Making relevant water sector related information (hydrological, performance, planning) publicly available
- b) Encouraging accountability, participation and demand for better data
- c) Giving primacy to the affected people, involving them in the planning and decision making process and giving them first rights over the benefits of the project
- d) Working out important issues of responsibility between project developers and state governments
- e) Considering the economic and social development of local communities to be as important as the technical aspects of the project