

Unit 13

Ecology, Environment and Development

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Learning objectives

This unit introduces you to the environmental and ecological issues of development by highlighting the

- relations among ecology, environment and development;
- consequences of development on ecology and environment; and
- concerns of the ecological movements.

13.1 Introduction

This unit introduces you with the interrelationship between ecology, environment and development. It begins with a discussion on the concepts and their development. It discusses the consequences of development on ecology and environment. The issue of degradation of environment, social pollution and destruction of forests are also discussed here. The major concerns of ecological movements have also been discussed here. The last section of this unit deals with a few development projects that have raised alarm among the environmentalists all over the globe.

13.2 Ecology and Sustainable Development

The term 'sustainable development' gained wide international currency in recent years with the growth of ecological understanding at local, national and international levels not only among the communities and movements but also, among Nation-States and Governments. Ensuring environmental sustainability the 7th Millennium Development Goal requires achieving sustainable development patterns and preserving the productive capacity of natural ecosystems for future generations.

Till the beginning of the 1980s in many countries of the world, ecology was not integrated as an essential element of development planning and therefore it was not seriously considered as a major issue. The economic expansion in the last century and half had alarming consequences for the global environment. Depletion of ozone layer, air pollution, loss of forests and bio-diversity, extinction of plant and animal species, loss of marine life, soil and water pollution have occurred at an alarming rate. On realizing the importance of environmental variations, problems created by them and their impact on human settlement, quality of life, developmental problems and changes in fertility, mortality and morbidity, the concept of ecology acquired prominence during the 1980s. It brought forth the realisation that the ecosystem had to be protected for the betterment of life in general.

Box 13.1: Ecology

“The word Ecology may be used as interchangeable with geographic environment and consequently ecological studies are often limited to the study of the direct effect of environment on the material culture of the people with simple technologies..... Social ecology is likewise concerned not only with direct response to environment where technology is unsophisticated, but also with the distribution and composition of groups necessary for the exploitation of natural resources, the indirect relationships which spring from these groupings and general conceptualisation of the cosmos associated with the specific habitats”.

Source: *Dictionary of Sociology* 1969: 62

The recent period in human history contrasts with the previous in its strikingly high rates of resource utilisation. Ever expanding and intensifying industrial and agricultural production has generated increasing demands on the world's total stock and flow of resources.

Development interventions aimed at commercialisation of natural resources involve a major shift in the manner in which rights to resources are perceived and exercised. The resource demand of development has led to the narrowing of the natural resource base for the survival of the economically poor and powerless, either by direct transfer of resources away from their basic needs or by destruction of the essential ecological process that ensures renewability of the life-supporting natural resources. For development to be sustainable it must take into account the social, cultural, ecological as well as economic factors of the living and non-living resource base, and the long-term as well as short-term advantages and disadvantages.

a) Sustainable Development

The Brundtland Commission, in its report, defined sustainable development as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. It contains within it two key concepts - the concept of “need”, in particular, is the essential needs of the world's poor, to which overriding priority should be given and the idea of limitations imposed by the state of technology and social organisation on the environment ability to meet present and future needs.

Thus the goals of economic and social development must be defined in terms of sustainability in all countries - developed/developing, market-oriented or centrally planned. Interpretation will vary, but must share certain general features and must flow from a consensus on the basic concept of sustainable development and on a broad strategic framework for achieving it.

Development involves a progressive transformation of economy and society. A development path that is sustainable in a physical sense could theoretically be pursued even in a rigid social and political setting. But physical sustainability cannot be secured unless development policies pay attention to such consideration as changes in access to resources and in the distribution of costs and benefits.

b) Colonial Domination over National Resources

For centuries, vital natural resources like land, water and forests had been controlled and used collectively by village communities thus ensuring a sustainable use of these renewable resources. The first radical change in resource control and the emergence of major conflicts over natural resources induced by non-local factors was associated with colonial domination of this part of the world. Colonial domination systematically transformed the common vital resources into commodities for generating profits and growth of revenues. The first industrial revolution was to a large extent supported by this

transformation of commons into commodities, which permitted European industries' access to the resources of South Africa. The transformation of commons into commodities has two implications – First, it deprives the politically weaker groups of their right to survival, which they had through access to commons; second, it robs from nature its right to self-renewal and sustainability by eliminating the social constraints on resource use that are the basis of common property management.

With the collapse of the international colonial structure and the establishment of sovereign countries in the region, this international conflict over natural resources was expected to be reduced and replaced by resource policies guided by comprehensive national interests. However, resource use policies continued along the colonial pattern and, in the recent past, a second drastic change in resource use has been initiated to meet the international requirements and the demands of the elites in the Third World, leading to yet another acute conflict among the diverse interest. The most seriously threatened interest in this conflict appears to be that of the politically weak and socially disorganised group whose resource requirements are minimal and whose survival is primarily dependant directly on the products of nature outside the market system. Recent changes in resource utilisation have almost wholly by-passed the survival needs of these groups. These changes are primarily guided by the requirements of the countries of the North and of the elites of the South.

Reflection and Action 13.1

How do you think the increase in consumption affected the process of development?

c) Expansion of Global Market Fares

Development as an ideology allows the indirect entry of global market domination. It creates the need for international aid and foreign debt, which provide the capital for such development projects that commercialise or privatise resources. Local resources thus increasingly move out of control of local communities and even national governments into the hands of international financial institutions. Forestry projects, dam projects and fisheries projects tie the resources of the remotest village to international investment and aid. Multilateral development agencies such as World Bank give loan for environmentally sensitive areas like agriculture, forestry and irrigation and through these loans give primacy to the market economy, and render nature's economy and the survival economy as indispensable. The condition for the loan determine the mode of utilisation of natural resources, the rates of return on investments in irrigation projects create an imperative for cash crop cultivation and wastage of water, even though it leaves the land water logged or an arid desert. Through internationally financed development projects, conflicts over natural resources pit tribal and peasant communities against international institutions with the state acting as an agent of dispossession of local communities, to clear the way for global plans and ideologies of development. Integration with the global market economy thus marginalises the concern for nature's economy and the survival economy.

The massive involvement of international finance in the economic development of Third World countries changes the natural resource management strategies in drastic ways. Rapid growth of export-oriented resource utilisation has led countries to the debt trap, with its concomitant ecological degradation.

Box 13.1: Chernobyl Catastrophe

On April 26, 1986, in the Kiev region, Ukraine, 12 kms from the Belarusian Border, a Catastrophe occurred – the major breakdown of a power unit at the Chernobyl nuclear power station. By its scale, complexity to long-term consequence, it is the most severe catastrophe in the entire world history of atomic energy use. As a result of the explosion of the failed reactor, huge amounts of radioactive substance were emitted to the atmosphere. The accident has left its radio-active fallout trace on 23% of the territory of Belarus, 3778 settlements with more than 2 million people had resided therein; or 4.8% of the territory of Ukraine; 0.5% territory of Russia.

After the Chernobyl accident Belarus became a zone of ecological disaster. The situation got worse since the newly emerged area of radioactive contamination coincided with the formerly existing area of high chemical pollution. The area of agricultural lands contaminated with radioactive cesium-137 with a very high density constitutes 1600 thousand hectares. 1685 thousand hectares of forest in Belarus are contaminated with radioactive elements. The catastrophe has affected the destinies of millions Belarusians. The radioactivity contamination of the ecosystem will stifle normal agricultural production and forestry for many decades.

Source: www.belarusguide.com

13.3 Environmental Concerns and Contemporary Social Theory

The more recent concern of the causes and consequences of the present ecological crises are significant to modern social theory. The relation between human beings and nature and the deleterious effect of human action upon the latter, a hitherto neglected area, has emerged as a major issue. Another important issue in contemporary theory is the growth of environmental politics/movements which pose a challenge to the modern industrial/ capitalist mode of production and consumption which are essentially environmentally destructive.

Anthony Giddens, in his later works, attributes environmental problems to the modern industrial societies and the industrial sectors in the developing countries. Whatever the origin of the crisis, the modern industry, shaped by the combination of science and technology is responsible for the greatest transformation of the world of nature than ever before (Giddens 1990: 60).

Ulrich Beck distinguishes the modern society from the earlier ones as the risk society, characterised by its catastrophic potential resulting from environmental deterioration. In the pre-industrial societies, risks resulting from natural hazards occurred and by their very character could not be attributed to voluntary decision-making. The nature of risk changed in the industrial societies. Industrial risks and accidents at work sites, or dangers of unemployment resulting from the changes in the economic cycles, could no longer be attributed to nature. These societies also developed institutions and methods to cope with the dangers and risks, in the form of insurance, compensation, safety, etc. The risk societies are characterised by increasing environmental degradation and environmental hazards. "At the center lie the risks and consequences of modernisation which are revealed as irresistible threats to the life of plants animals and human beings. Unlike the factory related or occupational hazards of the 19th and first half of the 20th century, these can no longer be limited to certain localities or groups, but rather exhibit a tendency to globalisation" (Beck 1992: 13).

In the face of environmental risks and hazards of a qualitatively different kind, both real and potential, earlier modes of coping with them also break down. Yet when large-scale disasters like “Chernobyl” occur (see Box 13.1), protests do break out which challenge the legitimacy of the state and other institutions that appear powerless to manage the problems.

Giddens offers two explanations for the emergence of environmental politics—as a response to the ecological threats and thus “a politics mobilized by ideal values and moral imperatives”. Ecological movements, he observes compel us to confront those dimensions of modernity, which have been hitherto neglected. Furthermore, they sensitise us of subtleties in the relation between nature and human beings that would otherwise remain unexplored (Giddens 1987: 49).

Habermas sees the ecology movements as a response of the life-world to its colonisation. Since they are an expression of the reification of the communicative order of the life-world, further economic development or technical improvements in the administrative apparatus of government cannot alleviate these tensions. For Habermas, capitalism is the primary cause of environmental degradation.

All these social theorists emphasise the need for democratization of state power and civil society. Giddens (1990: 170) suggests that not just the impact, but the very logic of unchecked scientific and technological development would have to be confronted if further harm is to be avoided. He argues that since the most consequential ecological issues are global, forms of intervention would necessarily have a global basis. New forms of local, national and international democracy may emerge and form an essential component of any politics that seeks to transcend the threats of modernity. Habermas, while recognising the limitations of modern state power, argues for the creation and defence of a public sphere where rational democratic discourse can occur. Beck argues for an ecological democracy as the central political response to the dangers of the risk society. Research agendas, development plans and introduction of new technologies must be made open for discussion and at the same time legal and institutional controls on them must be made more effective. All the above scholars point to the limitations of the pre-dominantly representative rather than participatory character of liberal democracy being an essential pre-condition for creating environmental sustainability.

A sociological/social science perspective in the analysis of environmental issues is still emerging. Responding to the demands of social reality, sociologists are just beginning to explore the many dimensions of the environmental problems of our times.

The ecological/environmental perspective opens up the unexplored dimension of some of the important areas of sociological concern.

As powerful critique of the modernisation/development agenda, this perspective brings out the unsustainability of the project. The industrial capitalist mode of production and consumption destroys the very resource base necessary for its existence, but even more, threatens human life itself.

With the growth of ecological politics and movements, a new area of sociological enquiry has opened up, which transcends the conventional dichotomy of the right and left politics, that cuts across class divisions and even national boundaries and creates spaces for activism within the civil society using the popular initiative. In a fundamental sense, it calls for a redefinition of the relation between human beings and their natural environment and a reconsideration of the effect of human action upon nature.

13.4 Consequences of Development on Ecology and Environment

The tremendous impact of human ecology is well manifested in the life-support systems including air, water, land and energy. As the human population grows, there appear imbalance of food production and crisis of space leading to environmental pollution which unfavorably alter our surroundings. Survival in such circumstances calls for an expansion or movement to a different place and destruction of the natural forest for human existence and comfort. These human activities in due course lead to all sorts of unfavourable alteration of our environment (pollution), which is now a worldwide concern. These human activities are discussed here.

a) Water Pollution

The major sources of water pollution are:

- i) **Industrial effluents** (wastes) or toxic by-products.
- ii) **Sewage wastes**: This contains decomposable organic matter and pathogenic agents directly discharged into rivers, streams, lakes, etc.
- iii) **Agricultural pollutants**: there are excessive agricultural nutrients such as fertilizers, disease controlling chemicals (pesticides, herbicides, insecticides and fungicides).

These pollutants damage not only human beings but plants and animals alike. However compared to the other two, industrial effluents cause much greater pollution.

b) Air Pollution and Noise

The sources are:

- i) **Industrial manufacturing processes**: steel, chemical plants, oil refineries, fertilizer factories, etc.
- ii) **Combustion**: Industrial and domestic combustion of coal, oil, forest fires, etc; through smoke, dust, carbon dioxide, sulphur dioxide, etc.
- iii) **Automobiles**: These emit carbon monoxide, nitrogen oxide, suspended particulate matter.
- iv) **Miscellaneous**: Agricultural activities such as crop spraying for pest control, nuclear energy programmes, etc.
- v) **Radiation pollution**: For example the one happened in Chernobyl or Gas tragedy in Bhopal

Here too, the omission of gases from industries, manufacturing and in radiation cause the greatest pollution.

c) Soil Pollution

- i) Solid fallout from explosion of nuclear devices.
- ii) Agricultural activities – over application of inorganic manure and different chemical-based pesticides.

d) Destruction of Forest

Large-scale deforestation leads to flood, soil erosion, silting of rivers, contraction of agricultural areas and desertification. We see more deforestation through forest contractors than from local villagers who use the wood as fuel.

All these types of pollution affect human health directly or indirectly through environment, other flora and fauna, recreational amenities and productivity.

Reflection and Action 13.2

Half of the world's population already lives in cities and the pace of urbanisation continues to accelerate. Most of the world's mega-cities with over 8 million inhabitants are in the developing world. How do we make urbanisation more sustainable? Can we avoid problems such as air and water pollution, loss of farmlands and isolation from nature? What are the major ecological challenges human society are facing today?

13.5 Ecology Movements and Survival

The contemporary period is characterised by the emergence of ecology movements in all parts of the world which are attempting to redesign the pattern and extent of natural resource utilisation to ensure social equality and ecological sustainability. Ecology movements emerging from conflicts over natural resources and the people's right to survival are spreading in regions like the Indian sub-continent where most natural resources are already being utilised to fulfill the basic survival needs of a large majority of people. The introduction of resource and energy-intensive production technologies under such conditions lead to economic growth for a small minority while at the same time undermines the material basis for the survival of the large majority. In this way, ecology movements have questioned the validity of the dominant concepts and indicators of development.

Third World ecology movements, which resist the destruction caused by State managed market development, are challenging the concepts of politics and economies as defined within the narrow confines of the market. They reveal that there is a notion of democracy, which is wider and deeper than the market democracy. This is the ecological concept of democracy of all life based on the recognition of the right to life of non-human nature and all segments of human society, including those large numbers which do not and cannot produce and consume within the market, and who are treated as dispensable in the logic of the market. The Third World ecology movements highlight the way in which issues of ecology and equity, sustainability and justice are intimately linked to one another.

The intensity and range of ecology movements in independent India have continuously widened as predatory exploitation of natural resources to feed the process of development had increased in extent and intensity. This process has been characterised by the massive expansion of energy and resource-intensive industrial activity and major development projects like large dams, forest exploitation, mining and energy intensive agriculture.

Among the various ecology movements in India, the "*Chipko* Movement" (embrace the trees to oppose fellings) is the most well known. It began as a movement of the hill people in the State of U.P. to save the forest resources from exploitation by contractors from outside. It later evolved into an ecological movement that was aimed at the maintenance of the ecological stability of the major upland watersheds in India. A spontaneous people's response to save vital forest resources was seen in Jharkhand area, the one in Bihar-Orissa border region as well as in *Bastar* areas of Madhya Pradesh where there were attempts to convert the mixed natural forests into plantations of commercial tree species, to the complete detriment of the tribal people. Inspired by the *Chipko* Movement, the "*Appiko* movement" in the Himalayas is actively involved in stopping illegal over-felling of forests and in replanting forest lands with multipurpose broad leaved tree species. In the Aravalli Hills of Rajasthan there has been a massive programme of tree planting to give employment to those hands which were hitherto engaged in felling of trees.

The exploitation of mineral resources, in particular, the open-cast mining in the sensitive watersheds of the Himalayas, the Western Ghats and Central India have also resulted in a great deal of environmental damage. As a consequence, environmental movements have come up in these regions to oppose the reckless mining operations. Most successful among them is the movement against limestone quarrying in the Doon Valley.

Large river valley projects, which are coming up in India at a very rapid pace, is another group of development projects against which people have organised ecology movements.

The large scale submersion of forest and agricultural lands, a prerequisite for the large river valley projects, always takes a heavy toll of dense forest and the best food growing lands. These have usually been the material basis for survival of a large number of people in India, especially tribal people. The ecological movement against the Tehri high dam in the UP Himalaya exposes the possible threat to people living both above and below the dam site through large-scale destabilisation of land by seepage and strong seismic movements that could be induced by impoundment.

13.6 Development Projects as Ecological Concerns

In this section we shall present a few projects that have been widely discussed in recent years as threat to ecology and environment in India.

a) Tehri Hydroelectric Project

The controversial Tehri dam is a classic example of the wanton destruction of the Himalayan geosystem and ecology wrought by the demands of development. The idea of setting up a high dam in the lesser Himalayas to harness its power and water potential was conceived way back in 1949 and a site chosen on river Bhagirathi, 1.5 km downstream from the 1000 year old holy town of Tehri, 1550 m above sea level. Serious doubts were raised about the viability and location of Tehri dam.

Tehri dam is located in the central Himalayan Seismic Gap where the Indian plate is crashing into the Asian mainland at a speed of 2 cm per year. The geological disturbances being created by the construction of the dam may hasten and intensify the earthquake. The rocks lining the walls of Bhagirathi gorge are prone to seepage and the accumulating water may exert immense pressure on the hill slopes. This along with the constantly eroding shale of the river bed will weaken the dam's foundation which is said to be lying on a fault.

Further, the Tehri dam will obstruct the natural flow of the massive volumes of sediments raising the river beds upstream and endangering the populous settlements. It will inundate several villages and displace its inhabitants who have been living there for generations.

More precious land in this already denuded land had to be cleared for those ousted, compelling them to surrender their fertile fields in return for barren patches. The rehabilitation scheme ignored the village as the unit for relocation and settled them as individual families thus taking away their collective bargaining power and destroying community culture.

People in the Garhwal Himalaya have been against the project and their opposition coalesced into a movement. A fresh review of the project and closer scrutiny of the dam construction is being done.

b) Narmada River Valley Project

The Narmada river valley project, the largest in the country, envisages construction of 30 major dams — 10 on Narmada and 20 on its tributaries — as

well as 135 medium and 3000 minor dams. Of these the two mega-dams are the Sardar Sarovar and Narmada Sagar. Some 21 million people dwell in this enormous basin covering 98,796 km sq. Around 80% of the population, with a sizeable number of tribals, live in villages and are dependent on agriculture and forests.

The Narmada Sagar and Sardar Sarovar dams were to be built in tandem, but the former estimated to submerge 90,000, was and thus never got underway being enmeshed in controversy from its inception. Construction of the latter, however, was taken up with zeal at the instance of the Gujarat government.

People affected adversely from the project are numerous and ever increasing. Hundreds of villages need to be evicted for the project resulting in the villagers and tribals being displaced and dispossessed.

Their traditional sources of livelihood are lost and rehabilitation does not necessarily recreate the same. The farmers of Nimar thrive on horticulture and when moved out of fertile plains, where will they grow their flowers?

It has been contended widely that there will be serious ecological consequences as a result of the building of these dams. Massive water logging and increased salinity of the soil would compound the problem.

Activists such as Medha Patkar and several other have drawn attention to these negative impacts on the environment. Protests in the form of strikes and indefinite fasts have emerged. Construction of the Sardar Sarovar dam has been stalled due to several anomalies which have been found in the project report of the government.

c) Bhopal Gas Leak

The Bhopal gas disaster, unparalleled in Indian history, reveals the mindless exploitation of developing countries by the multinationals for profit.

Union Carbide Plant set up for pesticide formulations expanded despite posing environmental hazard. The Plants' safety system was not up to the mark which caused the lethal leak and deadly chemicals were released in the atmosphere. The mushroom cloud which dissipated over an area of 40 km sq in Bhopal city, shed its toxins over the people, the poor being affected largely. Hundreds died while others suffer from chronic diseases, a result of the toxics, even today.

The Bhopal genocide is only a link in the chain of lethal pesticides and chemicals being developed by big industries and multinationals in their search for profit. It is the Third World countries where they dump hazardous products and experiment with deadly chemicals. Cities and towns especially the congested localities inhabited by the poor are the potential powder kegs, ready to ignite at the drop of a match. International dealers in pesticides, agrochemicals and petrochemicals, batteries, synthetic flares are swarming in, which without safety precautions and mindless exploitation poses a threat to the environment.

d) Chilika Shrimp Farm

Chilika, situated in Orissa, is the largest brackish water lake in India. It is a protected bird sanctuary, provides sustenance to thousands of farmers and fisher folk and has innumerable species of fish and marine life. Aquatic plants thrive in this unique ecosystem, making it an ideal spawning ground for shrimps.

Its natural propensity to breed prawns makes its blue waters irresistible to big business houses. Integrated Shrimp Farming Project (ISFP) in the backwaters of Chilika has been conceived by some corporate giants. When the project gets underway, a part of Chilika will be enclosed by a 13 km embankment to form an artificial lake. It will then be parceled into small ponds which will be filled up with seawater or freshwater as and when required.

To breed 250-300g shrimps in 30-40 days as proposed in the project, protein-rich feed, chemical fertilizers and pesticides will be pumped into the waters. The poisonous effluents will be dumped into the creek joining Chilika with the sea.

The natural ebb and flow of Chilka is set to lose its rhythm with the ISFP embankment which will dislocate the fish route. Chemicals and pesticides will destroy the spawning grounds and the pumps will scare away the birds. Cattle will not be able to graze on the new grass on the islands springing up in the arid seasons. There will be water logging, salinity and consequently ecological balance will be disturbed.

Reflection and Action 13.3

Discuss the dilemma of development. What kind of development would be equitable and sustainable?

13.7 Internationalisation of Environmental Concerns

With the increased internationalisation of environmental concerns, Lynton Caldwell (1990) notes that the "doctrines and dogmas of inalienable national sovereignty are being modified de facto to accommodate the imperatives of international environmental cooperation." In his opinion, "nations need not lose their cultural identity and integrity by cooperating with other nations in matters of common necessity. Indeed, international environmental policy has been directed to protecting and restoring the cultural and ecological distinctiveness of nations (Ibid)." The question is not merely the linkage between international environmental cooperation and national identity and sovereignty. One perceives an increasing tendency of contentions and debates on ecological issues at the global level on significant matters of sustainable development.

The deliberations on sustainable development in various international fora and conferences recently were compelled to deal with questions of the North-South divide and hierarchy. Wide-ranging differences persist due to a variety of issues like causes for global environmental degradation to the mechanisms of arresting ecological crises. While some perceive underdevelopment of Third World countries itself as a major cause of environmental damage, many advocates from these countries argue that the very process of development along the lines of industrial progress has been instrumental in unleashing a global ecological crisis. Third World spokespersons in international environmental negotiations demand that industrialised countries of the North should subsidise efforts of replacing environmentally polluting industries of the South. Responsibilities for global environmental crises like ozone layer depletion, green house effect, etc. are still contentious issues between the North and the South.

A critical international ecological perspective demands not only an urge to create newer and wider international environmental regimes to tackle specific problems but also a commitment to transformatory politics which addresses global unequal power relation.

The challenges to the nation-state system emanating from various quarters provide an ambivalent realm of perspectives from an ecological angle. Environmental activists and theoreticians conventionally argued that since the State is an embodiment of coercive power and an instrument of accumulation of resources, it has to be replaced by local self-governing entities and ecologically sustainable communities. The accelerated onslaught of globalisation forces on local and national lives of people and their environment pose new challenges to the development of a contemporary critical ecological perspective.

In the changing global context, local communities find it extremely difficult to stop the plundering of their natural resource endowments by transnational corporations and agencies. Ecology movements, while realising their own weakness due to their dissipated nature and the changing character of the nation-state are faced with the task of critically rethinking the linkage between micro-politics of movements and macro-politics of the nation-state and international affairs. Reinventing civil society and the state in new democratic ways is being proposed as the inevitable alternative route.

The International perspective on ecology and sustainable development envisages transformatory politics challenging the existing processes of accumulation and hierarchies of power from local to global realms. This politics of transformation envisions sustainability of nature and resources through the development of struggles to challenge forces, which exploit humans and nature. Such a perspective looks for meaningful and organic democratic local-global linkages with a bottom-up approach.

13.8 Participatory Approach for the Management of Natural Resources

Different conceptions and debates on environment-development connections by conservationists, developmentalists, women activists, tribals and other marginalized groups reveals that each one has a different position or emphasis on issues such as conservation, subsistence needs of the poor, particularly women; economic growth models and sustainability of critical resources, threats to eco-systems and issues of equity and distribution of costs and benefits in the management of natural resources. The focus on the environment-development connection has reframed the issues of control and management of natural resources as it reflects the demands of the global economy which are pitted against the peoples' claim to traditional rights and their livelihood. As political and economic battles intensify, livelihood interests and commercial interests are locked in never ending contradictions and may not be easily reconciled.

Over the years, various approaches for natural resource management have been outlined – both formal and informal arrangements – to support participatory processes on the grounds of efficiency, involving local people and building a partnership between the state and the community through appropriate institutional arrangements. Within the agenda of decentralised management of natural resources, one can identify several institutional arrangements such as self-initiated user groups, formal community groups established through government initiatives (Joint Forest Management or Watershed Management) and institutions of Local Self-Government (Panchayati Raj institutions). These local institutional arrangements shape the choices, priorities and bargaining systems to change state-community dynamics.

Community management of local resources or a decentralised strategy has assumed importance as it is expected to protect livelihoods and lead to a more sustainable management of resources. Another argument often made in defence of community management of natural resources relates to the indigenous/women's knowledge systems, which are embedded in a particular community or context. Shiva argues "Third World women tribal and peasants act as intellectual gene pools of ecological categories of thought and action" (Shiva 1988).

Women's responses to environmental issues are mediated by their livelihood systems, division of labour and unequal access to productive resources, and knowledge and information. Local NGO's have tried to build alternatives for the management of the local resource base and link issues of gender equity to issues of social justice, poverty and indigenous people's rights. The

arguments for social justice and local people's rights are based on the premise that local communities have a greater stake in the sustainable use of resources and are better positioned to respond and adapt to specific social and ecological conditions and incorporate local interest and preference. They are also conversant with the local ecological practices and processes and can manage the resources through traditional forms of access and management.

During the last two decades, natural resource management and bio-diversity conservation have emerged as major priorities within countries and among donor agencies. People-oriented rhetoric and community-based natural resource management have become part of a strategy for bringing nations into line with global resource management initiatives (Neumann 2005).

Reflection and Action 13.4

Drastic changes in lifestyles and attitudes are essential for a sustainable tomorrow. Discuss.

13.9 Conclusion

The boundaries of environmental concerns are fast disappearing. Local-global linkages in ecological perspectives and movements are becoming more pronounced. While different sections of people and communities all over are raising issues of environment and survival through movements, nation-states are engaged in international deliberations and conferences for developing international protocols and creating international environmental regimes. A meaningful attempt at grasping ecological politics of our times has to understand and respond to the emerging conflictual and consensual dynamics within and between the local-global parameters. "Sustainable development" is a conceptual and policy arena where contestations on a variety of local-global factors occur. There is a need to decipher proper ecological perspectives in more concrete terms.

This unit delineates the inter-relationship between ecology, environment and development. It analyses how the question of ecology and environment are addressed in social theory. We understood most responses to the 'environmental crisis' will remain at best superficial and palliative unless there is a universal recognition that our species is an integral part of nature, that we must recognize the latter's limits. This understanding (as well as a lack of it) has profound implications for the kind of future society and polity that needs to be established. It also has profound implications for arenas as diverse as the content and direction of ideology, development, technological choices, and consumer freedom. The unit also makes an attempt to look into the mammoth proportions of the environmental crisis caused by the development practices presently adopted. And we understood the urgency of the need to find solutions to this crisis pose tremendous challenges to develop coherent, rational and ecological perspectives. Finally, an alternative paradigm for the management of resources also have been explored in this unit.

13.10 Further Reading

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