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# UNIT 3 ENVIRONMENTAL MOVEMENTS IN INDIA

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## Learning Objectives



At the end of this unit, you will be able to:

- explain the conceptual understanding of environmental anthropology and its development;
- have clarity on different environmental movements in India that took place in different parts of the nation and in different time periods;
- have brief understanding on various regulations and legal framework on environment in India;
- know the impact of environmental movement in India which have influenced the development approaches of the country; and
- know the significance of studying environmental anthropology in day to day life of the people.

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## 3.1 INTRODUCTION

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During the last couple of decades one finds a plethora of materials in social sciences relating to ethno-ecology, ecological anthropology, environmental economics, human ecology, and political ecology. The naming of ecological anthropology came during 1960s by the thinkers like Alfred Kroeber and Julian Steward. The concept of cultural ecology influenced ecological anthropology,

but one finds a shift from the concept of cultural population to the ecological population. The ecological anthropology was influenced by functionalism, systems theory and focus on negative feedback. For anthropologists role of cultural practices and beliefs in enabling human population to optimize their adaptations to their environments and in maintaining un-degraded local and regional ecosystems are important. Rappaport (1971) used the word 'ecological population' as an aggregate of organisms having a common set of distinctive means by which they maintain a common set of material relations within the eco-system in which they participate. The earlier ecological anthropology was based on cultural relativism, while the new ecological or environmental anthropology blends theory and analysis with political awareness and policy concerns. This led to the new field of applied ecological anthropology and political ecology (Greenberg and Park, 1994). Orlove (1980), while reviewing the literature on ecological anthropology, noted the processual ecological anthropology as a stage gradually supplementing neo-functionalist approach. Within the processual ecology human system ecology (Bennett, 1976) emphasised on human ecology as human behavior. Anthropological political ecology established relation with geography and political economy in which concepts such as claims, rights, power and conflicts predominante. Anthropological human ecology established relation with biological sciences and concepts like energy flows, knowledge systems, subsistence and adaptation.

Development of an ecological theory that incorporates natural and cultural dimensions within a single, broad paradigmatic framework seems to be quite urgent. Vayda and Walters (1999) maintain that ecological research should not make prior judgments concerning the causes of environmental change, but must be willing and able to assess all possible factors of biological and social origin. In anthropological and ecological research different kinds of generalisations are obtained from different levels of analysis (Bennett, 1976). In biological terms the distinction is made between 'eco-system people', whose subsistence is tied to particular local level eco-systems, and 'bio-sphere people', who drew their support from resources obtained at a planetary level (Dasmann, 1988). Ecological anthropology faces methodological difficulties to understand geological, biological and cultural temporalities developed over many years.

Changes in ecological anthropology is observed in research focusing on single community or culture perceived as more or less isolated and unique, to recognize the linkages between the people, technology, power and status and the impact of post-modern on local abilities. The earlier concept of ethno-ecology included society's traditional perceptions and cultural model of the environment and its relation to people and society. This has changed due to interconnectedness of the today's market, people, and physical ecology due to migration, commercial expansion and national and international incentives to degrade the environmental and ethno-ecological systems.

The term environment is often used as a synonym for the Nature (i.e., the bio-physical and non-human environment) and includes both cultural and bio-physical elements (Rappaport, 1979). The term environmentalism refers to an explicit active concern with the relationship between the human groups and their environments, while environmentalists refer to political activists. Thus, anthropologists and other social scientists who are involved in environmental research can be considered as representing the environmental wing of their

respective disciplines. The present research in anthropology has two different issues and methodologies. The first one, ecological anthropology, uses ecological methodologies to study the interaction between human groups and their environment and the second, anthropology of environment, uses ethnographic methodologies to study environmentalism as a type of human action (Little, 1999).

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## **3.2 ANTHROPOLOGY OF ENVIRONMENTALISM**

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Last few decades have witnessed environmental governance at local, national, and international levels. Brosius (1999) viewed that the contemporary environmentalism as a new discursive regime is emerging and giving shape to the relationships between and among natures, nations, movements, individuals and institutions. Anthropology contributes to the understanding of human impact on the physical and biotic environment and also in showing how that environment is constructed, represented, claimed, and contested. Of late environmental issues have influenced the local struggles, national and international debates for a diverse vision of the environment and environmental problems. National elites and multinational capital during the last two decades have redefined the concept of environment and environmentalism by displacing moral and political ethics of development. So any attempt to understand the social movement aspect of environmentalism must be addressed within a set up of complex relationship between the historical and contemporary forms of domination, existing or emerging structures or institutions, politics of representations, processes of production, and emerging forms of political agency (Ibid). Anthropological understanding on environment drawn its inspiration from the field of ecology, i.e., the interest in localised adaptations to specific eco-systems, while the anthropology of environmentalism draws its insights from various sources like post-structuralism's social and cultural theory, political economy, and globalisation. Thus, this new area is more concerned with the issue of power and inequality, cultural and historical formations, knowledge production and acceleration of trans-local processes. Anthropologists have come to this field of environmental issues much late; however, scholars like Douglas and Wildavsky (1982) have published considerably in this regard. The increase in environmental scholarship across different disciplines in late 1980s, like science and technology, media studies, geography, political science, history, legal studies, political ecology, led to inter-disciplinary understanding of the issue of environmental problem. The local communities adopted the elements of new transnational environmental discourses (Brosius, 1979a).

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## **3.3 ENVIRONMENTAL MOVEMENTS IN INDIA**

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The increasing confrontation with the nature in the form of industrial growth, degradation of natural resources, and occurrence of natural calamities, has resulted in the imbalances in the bio-spheric system. The publication of 'The Limit of Growth: A Report for the Club of Rome's Project in the Predicament of Mankind' (Donella H Meadows et al., 1972) and other reports, such as World Commission on 'Environment and Development' (1987), and State of India's Environment: A Citizens Report (1982), have led to the monitoring of the contradiction of growth and the erosion of the environment. The Defence of the Planet and Save the Earth Movement, formation of the Earth's Friends Society reflects the growing concern for the future of mankind. In India also the ecological and environmental

issues have received quite considerable attention from different scholars. Ecological themes have been published by different scholars like Guha (1989), Gadgil and Guha ((1992), etc. All the scholars made an in-depth inquiry of the ecological problems in India and developed an understanding of both the nature, strategy and methods of people's mobilization around environmental issues (Ibid) as well as the consequences of environmental degradation for the society, economy and culture of people (Agarwal, 1986; Agarwal and Narayan, 1998).

The data presented by Guha (1989) and Shiva (1993) on the causes and consequences of the erosion of natural resources reflect the composite ideology of environmental issues in India. Together they reflect the social science perspectives backed by natural sciences. The social and ecological dimension of bio-diversity, environmental management (Shiva, 1993) and Gandhian perspective on resolving the dilemma of development without hurting the ecological balance (Jain, 1988) constitute the themes of continuing debate on the contradictions of ecology and development problems in India.

Environmental movements in India, centering on dams, displacement and resettlement effectively articulated their agenda on the human consequences of tampering with the courses of natural resources, have initiated protest action against the forces and agencies responsible for environmental degradation. Further, the issues raised by the actors of the ecology and environment movement by the "Friends of the Earth" and by the natural and Social Science scholars in defense of the nature and the planet earth, suggests that the ecology movement is not a mere exercise in romanticism nor a movement relating to food, fodder and fuel alone. In India it is also seen that the ethnic practices of worshipping planets, trees, forest, and rivers reflects the natural and social domains and the wisdom of seeing unity in the living and the non-living world in the Indian tradition. The ecological movements in India encapsulate all categories of caste, class, race, religion, nations and also categories of species divisions and the divisions of the organic and inorganic world.

Environmental movements in India have contributed in defining the models of development, shifting from a resource intensive and ecologically unstable state to an ecologically symbiotic state of functioning. A couple of environmental movements experienced in India so far include Chipko Andolan (Barthelemy, 1982), Save the Bhagirathi and stop Tehri project (Manu, 1984), Save the Narmada movement (Narmada Bachhao Andolan) in Madhya Pradesh and Gujrat; Youth organisation and Tribal people in the Gandhamardan Mines against Balco, the opposition of Baliapal Test Range, Bauxite mining in Kashipur and Niyamgiri; the Appiko movement in the Western Ghats; the campaign against the Silent Valley Project; reclaiming wastelands in Bankura district, and the opposition to the Gumti Dam in Tripura, etc., are some examples.

Many local movements centering deforestation, water logging, salinization and desertification in the command areas of major rivers of Kosi, Gandak, and Tungabhadra and in canal irrigated areas of western India, like Punjab and Haryana, have established the efficient use of water as a source of natural commodity. All these movements have reflected the ill-conceived natural resource consumption by the so called development projects, which have resulted in devastations in the natural resource base of the nation. In the following section we describe couple of major environmental movements that have occurred in different parts of India across time.

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## 3.4 ENVIRONMENTAL MOVEMENTS; FEW CASE STUDIES

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### 3.4.1 The Silent Valley Movement, Kerala

The silent valley is located in Palghat district of Kerala. It is surrounded by different hills of the State stretched over a total area of 8950 hectares. The flora and fauna of the valley is natural and very rich in biodiversity. The valley has contributed varieties of genes for pest and disease control of rice. The idea of a dam on river Kunthipuja in this hill system was conceived by the British in 1929, while the technical feasibility survey was carried out in 1958 and the project was sanctioned by the Planning Commission of Government of India in 1973 with a cost estimation of Rs. 25.00 crores, which enhanced to 80 crores in 1980. The project had dual purpose of generating 240 MW of power, to irrigate 10,000 hectares of additional crop land and to create jobs for 2000 to 3000 people during the construction period.

#### *Peoples Response*

Local people lobbied for the project under the erroneous assumption that their prospects would improve as a consequence of a big scheme being located in their area (Darryl, 1985: 19). All political wings of major political parties also favoured the process of development identical with that of industrial development. However, the silent valley issue in Kerala demonstrated all party ignorance of ecological balance (Krishna Iyer, 1992). In subsequent period the Kerala government passed an ordinance in the second half of 1978 to protect the ecological balance in the “Silent Valley Protected Area”. By the time the movement against the project from all corners was raised from all sections of the population, the environmentalists came forward to oppose the project from a wider perspective. The significance of Western Ghats as an important asset in the western Peninsula was raised.

In Stockholm Prime Minister of India made several commitments to the rest of the World regarding the protection of environment. The Task Force report came in 1977 which highlighted the genetic value of an undisturbed rain forest like Silent Valley (Darryl, 1985).

The report viewed that “Forest as a natural reserve can yield wood and water on a renewable and sustainable basis, therefore any form of intervention that adversely affects the generation of such resources on a long term basis cannot be termed as development.” The Task Force report became a platform for the environmentalists to generate large scale disagreement against the project. The International Unions for conservation of Nature and Natural Resources (IUCN) made a resolution in 1978 for the presentation of the silent valley. The Kerala Forest Research Institute also made an on the spot, assessment and recommended the declaration of the silent valley as a bio-sphere reserve.

Kerala Shastra Sahitya Parishad (KSSP) created mass awareness against the project. KSSP based on certain ideology was identified in popularizing Science to the people (Guha, 1988). Later on KSSP formed a registered Society named as the “Protection of Silent Valley” at Calicut (Prasad, 1987) and later with their logical study based on techno-economic feasibility and socio-economic

assessment of the project turned down most of the arguments given by the pro-dam forces. Since KSSP had a close network with people in north Kerala, they were able to convince the people that the project will not be beneficial to them in the long run due to its destructive affects over natural resources. Finally, the Kerala Government made Silent Valley a national Park considering the importance of valuable rich flora and fauna which needs conservation and proper management. It also recognised that this precious reserve of the life forms and the gene pool is the only undisturbed tropical rain forest in true sense in Kerala, which needs to be preserved permanently (Darryl, Ibid)

### *Significance of the Silent Valley Movement*

Like other social movements in India, Silent Valley movement was also spontaneous, natural, initially went through unorganised processes but later on became more organized. In initial phase the local level groups protesting against the project neither could nor tried to contact the larger platforms because of their apprehensions and lack of clarity on the issue. In initial period the movement at local level had the experiment with the outside forces before co-opting them into their fold. The movement also established the fact that civil society reflects or offers the true concept of development. From the experiences one can say that if the philosophy of the movement gets supports by the higher level platform then it became easy to establish the facts of the concept of people's development as a part of the development process. This movement contributed certain path ways to the other movements in India. It also established the fact that development should not bring destitution to the people and destruction to the natural resources base. Proper awareness is required among people on ecology and environment, for making a movement of this magnitude successful. In later period this movement forced the State to go for small hydro-power projects which became more environment friendly, less destructive to the natural base of the State (Khosoo, 1988).

### **3.4.2 Chipko Movement, Uttar Pradesh**

Chipko Movement started in April, 24 1973 at Mandal of Chamoli district of Gharwal division of Utter Pradesh. The Organiser of the movement had a belief on the ideology of non-violence as propagated by Mahatma Gandhi and Vinoba Bhave. The movement was raised out of ecological destabilization in the hills. The fall in the productivity in forest produces forced the hill dwellers to depend on the market which became a central concern for the inhabitants. The continuous natural distress like flood, and land slide due to Alakananda (1970) river and other catashophes like Tawaghat tragedy (1977) and Bhagirathi blockade (1978) Branch Rivers of river Ganga caused massive flood in the Gangetic plains. These floods brought a marked change in the ecological history of the region. A look into the forest policies and forest resources exploitation data show that due to over mining of forest resources in different time periods such natural calamities have occurred.

In 1973 the State Forest Department gave a lease of forest trees to Simon Company, a manufacturer of sporting goods from far off Allahabad (Mishra and Tripathy, 1975) The relationship between the erosion and floods on the one hand, and mass scale falling of trees on the other was recognized. On March 27 decision was taken to 'Chipko' that is 'to hug' the trees that were threatened by axe and thus the chipko andolan (movement) was born. This movement has multifaceted

conflicts over forest resources, at the scientific, technical, economic, and, especially, the ecological levels (Shiva, 1986). Major demands of the Chipko movement were not merely to protect timber, fuel, fodder and small slumber but the preservation of soil and water.

Public meetings were held in the region and the felling of trees by the Company was postponed. In initial days villagers were lured by the Company from the forest for other entertainment but later on failed to attract them. In 1974 Sunderlal Bahuguna the “Chipko Messenger” visited the entire region taking the Chipko message from village to village. In subsequent period the local people did not allow any one from cutting trees even for home industries. Thus, one finds a change in the Chipko movement, from economic to ecological. The Chipko movement has been successful in forcing a fifteen year ban on commercial green felling in the hills of Uttar Pradesh and generated pressure for a national forest policy that is ecologically more sensitive. Women were very active and came out of their homes to take lead in the Chipko movement.

### *Lessons learned*

The Chipko movement experimented and established certain original approaches, like marginality, action research and social investigation. Few social workers integrated the Chipko movement for preservation of forest in the sub-Himalayan region of Gharwal. The movement made people conscious of the value of forest, its preservation and the need for maintaining ecological balance. The movement has established the importance of need oriented programmes, indigenous strategies, self-reliance, ecological balance and structural changes that resulted in high degree of peoples participation with the help of appropriate small scale technologies. It was experienced that the Western model of development reflected in the form of large scale infrastructure which have marginalised the women to the level of labour delivering products, the Chipko movement proved that women who produce all subsistence goods can maintain the status quo by retaining the traditional eco-system. They saw that conservation of forest seems to be their only source of living and survival. Chipko movement offered women a platform to realise command over Public power and authority. New ecological concepts were built through this movement that made women to realise these issues which were earlier controlled by their male counterparts. This has resulted in various changes in the gender relations in rural Gharwal region in performing the household and social responsibility. The top down approach long adopted by the State in development of women could not bring much change in the power structure of the rural people. The new concept of ecological challenges became more concerned for the women (Jain, 1984). The experiment could make people believe that participation of women in the development process can be achieved by a mere ideological commitment and a few organisational devices (ibid). Belief in non-violence, cooperation and self-help are the basic axioms of the Sarvodaya Philosophy helped the Chipko movement moving forward. Further, it was a fact that women who were away from the intricacies of public power and political activities genuinely believed in the ideas of cooperation and self-help. The principle like non-violence as a natural and more effective weapon imposed on people as a moral pressure helped considerably to make the Chipko movement a grand success.

The ecological crisis in the Himalayas is not an isolated event. It has its roots in the modern materialistic civilisation which makes men the butcher of Earth

(Bahuguna, 1980). Other arguments that forest officials and commercial forestry are merely agents of a development process biased in favour of the urban industrial complex and against local needs. The framings of development schemes by urban centred technocrats have little relevance to the realities of rural India (Bhatt, 1984). Another perspective of the Chipko movement is based on Marxian ideology. It viewed that human nature relationship must not be viewed in isolation from existing relationship of humans.

Chipko still survives and the philosophies of the movement has spread beyond Uttarakhand hills and linked to social activists, humanitarian scientists and people in need in Jammu & Kashmir, Rajsthan, Himachal Pradesh and West Medinipur district of West Bengal, while in Karnataka Chipko has reformulated as Appiko (Hedge, 1994 and Alvares, 1984). The Chipko movement became a psyche of India and the World.

### **3.4.3 Narmada Banchao Andolan Gujarat**

Narmada is one of the major rivers of Indian Peninsula. The scope of the Sardar Sarovar project a terminal reservoir on Narmada in Gujarat in fact is the main issue in the Narmada Water dispute. The Narmada basin covers 94,500 sq. kilometres between the Bindhya and Stapura ranges in Central India. The 1300 kilometres long Narmada valley contains large alluvial plains in Madhya Pradesh. Narmada River on the west is sacred to the Hindus, widening into a 25 kilometres long estuary as it flows into the Gulf of Cambay. It is one of the World's largest multipurpose water projects. The Narmada River Development Project involves the construction of 30 large Dams and many small ones on the river and its 51 main tributaries. The project basically aims to increase food production and hydro-power generations in Gujarat, Madhya Pradesh and Maharashtra.

The construction of dams and reservoirs will displace estimated one million people and will submerge 350,000 hectares of forest land and 200,000 hectares of agricultural land (India Today, 1992). The Sardar Sarovar Dam in Gujarat is being strongly opposed by the tribal people due to the fact that it will submerge almost 40,000 hectares of land and 250 villages. Similarly, the reservoir behind Narmada Sarovar Dam will be the largest manmade lake in India submerging 91,348 hectares and displacing 120,000 people from 255 villages, which includes 13 forest villages (Shiva, 1991). Of the total affected persons by submergence of around 80% are agriculturists (Doria, 1990). Around 30% amongst to be submerged belongs to SCs and STs and about 75% are marginal farmers or labourers. Over 90 per cent are illiterate and vulnerable to exploitation.

With respect to the funding of the project, the World Bank supported with an approved loans in 1985. For various reasons the Central and State Government could not meet the resettlement and rehabilitation guidelines and social and environmental issues went unaddressed (Kothari and Singh, 1988). Finally, in 1997 the World Bank decided to cease funding the project but the Indian Government pledged to complete it (Miller and Karunar, 1993).

The Narmada Basin extends over an area of 98796 sq. km and is divided into five well defined physiographical zones. The area has a tropical climate with high variations in rainfall, temperature, and humidity. The average annual rainfall in the catchment area is 12.89. The total cultivable command area of the Narmada Sagar Project is 174967 ha. The cropping pattern to be benefited out of the project

includes Khariff, Rabi and summer crops. In addition, the project also aims to generate 212 MW power in the initial stage and 147 MW in final stage. The Narmada basin is one of the richest areas of the country for valuable forests and variety of wildlife. The Narmada basin has two world famous national parks like Kanha and Satpura; and five Sanctuaries, Kheoni, Panchamukhi, Bori, Ratapani and Sidhore. Narmada basin also falls on route to several migratory birds flying to South from North.

It was conceived that the massive deforestation due to the project will affect the feeding and breeding of the wild life. The compensatory forestry will not be able to compensate the eco system to the normal situation. Ecological pressure and micro climatic changes caused by deforestation will inevitably threaten the wild life.

Save the Narmada movement began in the 1980s as a struggle for just resettlement and rehabilitation of people being displaced by the Sardar Sarovar Dam, but subsequently the focus was shifted to preserve the environmental integrity and natural eco systems of the valley. The withdrawal of World Bank funding was a moral victory for the movement. Anti-project movement was very high among the residents of basin area in Madhya Pradesh, while in Gujurat dissatisfaction was observed among people whose lands have been encroached without adequate compensation and inequitable compensation by the Government (Appa and Sridharan, 1992). By linking the problems of environmental changes and degradation of the Valley with issues of economic equity and social justice, the movement forced the bank to withdraw from the project (Estana and Prakash, 1992).

Narmada Movement justifies the fact that an environmental movement can go beyond social and cultural cleavages since it touched the human survival. Therefore, this platform unites people above age, sex, religious, ethnicity, caste and class identities. Women became the prominent leaders and participants. The encroachment of rights of people in case of Narmada project was strongly protested by the people who protected their age old livelihood resources.

### **3.5 ENVIRONMENTAL MOVEMENTS IN ODISHA**

The state of Odisha, particularly the southern belt, i.e., undivided Koraput, Bolangir and Kalahandi districts, is endowed with 1733 million tonnes (70%) of the total bauxite resources of the country. In the post-liberalisation period this mineral resource has attracted foreign investment, which brought the State into the international arena. Since 1986 several attempts have been made in western Odisha to explore bauxite ore (Government of Odisha, 2000). The major companies which have tried to explore bauxite mining in Odisha at different times include BALCO Ltd., Utkal Alumina, INDAL, TATA, Hydro (Norway), ALCAN (Canada) and HINDALCO. Any such mining projects will have an adverse impact on the life and livelihood of the local and the environment of the region. Therefore, in the local organisation of the agitations women's groups took an active part through picketing, processions and public hearings. The emergence of an indigenous leadership made all these movements more widespread. In fact, in this process of micro movements, the forest-dependent communities are trying to re-establish the functional importance of their indigenous institutions in the environmental protection and to determine the forest based regional needs of the people.

### 3.5.1 Gandhamardan Environment Protection in Odisha

#### *The People and the Area*

Gandhamardan, one of the bauxite rich hill ranges, is situated in Sambalpur and Bolangir region of western Odisha. This region is regarded by tribals and peasants as their mother who provides them with food, firewood, fodder and also water for cultivation and drinking purposes. Gandhamardan hill carries 22 streams and 150 perennial springs. The stream water and plants are the integral part of the local ecological pattern. In the ethnic composition of the region tribal communities like *Gonds*, *Binjhals*, *Kandhas* are the majority one, while *Kulta* a caste group are the numerical preponderant. The socio-cultural life processes of the local people are inter-twined with the Gandhamardan hill and Nrusingha Nath and Hari Shankar temples. Gandhamardan hill is a cultural territory for the locals of the region (Panigrahi, 1985).

#### *BALCO Intervention*

Gandhamardan hills carry an estimated bauxite deposit of 213 million tons covering an area of 9.6 sq.km. BALCO had a plan for mining the Gandhamardan hills with an original investment of Rs. 31.20 crores and creation of an estimated employment of 500 persons on regular basis and 3000 persons as contract labourers. In addition, BALCO had also promised 25 kms railway line, hospital, schools for the local people, plantation under social forestry and a royalty of one crore to the State. The first blasting of BALCO in July 1985 damaged the much revered Nrusingha Nath, the 800 years old temple, which developed physical cracks in the temple and its Garuda Stambha. In the initial days BALCO butchered around 60,000 trees for the construction of road and ropeway. The tribal people of the region had preserved the forest plants as divine symbols and preserved them as totem of their clans. The destruction of trees by BALCO, therefore, is considered as a threat to their culture and society.

The adverse effects of BALCO on the local agriculture have contributed towards the environmental consciousness of the people. The Durgei stream irrigating 200 acres of land in Manabhanga village was affected due to the construction of a minor irrigation project on the stream to supply drinking water to BALCO Township. In addition, the irrigation project sub-merged a big Mango orchard and private irrigated plots. The blasting of hills brought cracks in Khandei Jharan canal and silted the agriculture land that made the land very hard to plough. Gradually the villagers became conscious about the environment and feared that their agro-forestry based livelihood will be jeopardised with the BALCO project. As a result of which, local leadership started with the tribals and peasants and it went from the religion base to a secular base. The costs to maintain the agitation by the locals was collected in the form of rice, and mobilised people to different places of agitation and spread the anti-BALCO message in the region. Gandhamardan Surakhya Parishads (GSYP) were formed in villages, Gram Panchayat and region level which facilitated the grass root movement by involving all sections, both at micro level and macro level. The villagers realised that BALCO management has not merely betrayed the local inhabitants' faith in the modernization process, but also planned to take away the natural resources of their Gandhamardan hills.

### *Inference*

We have learned that the modernisation process launched by BALCO could not build faith among the local. It could not even establish a dialogue process with the common people centring to the benefits of BALCO mining activities to their economy and ecology. As a result, the interests of the common people were ignored and hoodwinked by the interest groups.

On the other hand, the Gandhamardan mining made people believe on their abilities and made them conscious of the environmental issues. The potentiality of the youths and the women have been reflected and recognised in building construction activities. The movement has shown the path that people if united can build and rebuilt environment friendly development through their collective endeavour.

### **3.5.2 Environmental Movement Against Bauxite Mining in Kashipur**

Kashipur is one of the tribal-dominated blocks of Rayagada district. There are 412 villages distributed over 20 Gram Panchayats, accommodating a total population of 101,995. The Poraja and the Kondhs are the two major tribal communities of the region. Of the total geographical area of 15,059 square miles the block has forest coverage of 59,000 acres and reserve forests of 33,000 acres. Around 36.3% of villages are electrified and only 19% of the total population is literate (Census of India, 2001). The total labour force in the block is 43.12% of which agriculture labour comprises of 24.95% while household industry accounts for 0.99%. The agro-products of the region include ragi, paddy, millet, grams (chickpeas), maize and Niger seed. Hill broom is the most important forest product of the region. The block was once full of natural forests and perennial springs. The tribal people living therein terraced the land and made the region habitable. They maintain a symbiotic relationship with nature and natural resources. They enjoy natural rights over the resources surrounding them. Intervention in the region started with various state laws basically designed to exploit the natural resources available in the region. The influx of non-tribal people suppressed the tribals. This has been reflected in the form of massive land alienation, resulting landlessness and severe impoverishment. People's poverty has become chronic as a result of money lending, bonded labour practices, the geographical inaccessibility of the region, exploitation by middlemen, contractors and petty traders, and the low bargaining power and lack of organisation of the people.

The systematic exploitation of the forest resources was started, in the name of national development, by J. K. Paper Mill of Rayagada, which destroyed the ecological balance of the region and the people. Utkal Aluminium International Ltd UAIL and other companies have entered the region to mine its hills in the guise of developing the area. This has led the people from the situation of food security to food scarcity. Deaths from starvation in Kashipur in 1987 were brought to the attention of the then Prime Minister Rajiv Gandhi. After reviewing the situation, he evolved a new vision of development, following which IFAD funding worth Rs 400 million was invested in this region.

In 1993 the State proposed a bauxite alumina plant owned by Utkal Aluminium International Ltd (UAIL), a joint venture of Hindal, Tata, Hydro Alumina (a

Norwegian company) and Alcan (A Canadian Company), with technical support from Aluisse, a Swiss company. UAIL is a 100% export-oriented project, costing around Rs 24 billion, to source bauxite and transport it along a 25-km ropeway. People also learned of a second alumina project at the beginning of 1995, under a joint venture of L&T and Alcoa (a US company) with a 100% export-oriented project at a cost of Rs15 billion.

The plant at Kashipur (Doraguda) was to directly affect 2500 people in 24 villages of Kucheipadar, Hadiguda and Tikiri Gram Panchayat (required for the plant site, red mud and ash pond). However, the company claimed that only 147 families from three villages would be affected. In addition, 42 villages in Chandragiri, Maikanch and Kodipari panchayat would be directly affected by open cast mining at Baphlimali, while the company claimed that not a single village would be affected. The UAIL project required 2865 acres of land in Kashipur block in 1995, which includes 1000 hectares of land which has been in use for years for cultivation, forestry and shifting cultivation.

As a form of protest against the mining, 18 tribal people met the Chief Minister of Odisha, the late Biju Patnaik, for the first time in 1993 and demanded cancellation of the project. In 1994 the villagers of Kuchipadar snatched away the survey team's instruments and set fire to their camps. In 1995 the protest took a violent turn, destroying the survey team's camp, and as a result 15 tribal people were arrested. In 1996 the local organisation, PSSP was formed. In 1997 Utkal Alumina created an NGO - Utkal Rural Development Society (URDS) - to try to win people undertaking socioeconomic development works. PSSP opposed URDS and destroyed the company's resettlement colony. In 1998 local people built a barricade at Kucheipadar to stop the entry of project personnel. The police injured nearly 50 people. In 2000 police gunned down three tribal people and injured eight others. In 2001 a protest against the shootings in Maikanch was organised and around 10,000 people participated. Demands were made for mobile health services and irrigation facilities. Since 2002 the people of Kashipur region have been demanding the cancellation of all bauxite projects in KBK districts. On 29 December each of six Gram Sabhas in all the project villages rejected the proposal and suggested scrapping the treaty for the proposed mining.

### **3.5.3 Ecological and Bio-Diversity Protection Movement in Niyamgiri Hills of Odisha**

Niyamgiri, a range of hills stretched over 250 sq. km, is popularly known as Dongaria Kondha land. Socio-culturally Niyamgiri hills are a single hill country, but from administrative point of view this land is divided under three districts of Kalahandi, Rayagada and Koraput. Anthropologists consider Niyamgiri as the original abode of the Dongaria kandhas, which is one of the original sub-groups of the Kandhas, who consider themselves as the descendants of Niyam Raja (Patnaik and Das Patnaik, 1982). The Dongarias have a distinguished heritage, dress style, mode of living, indigenous skills, cultural pattern, and social system interlinked with nature. The major river systems having origin in the hills include Vansadhara, Nagavali, and 36 streams which are culturally and ecologically very rich and maintain their identities till today. Niyamgiri carries most pristine forests of Odisha, vulnerable wildlife species, and proposed south Odisha Elephant Reserve and Wild life sanctuary of the State.

Niyamgiri, a part of the Eastern Ghats, is the natural reserve of metallurgical grade bauxite which rose to very high commercial importance in the era of globalisation. Vedanta Alumina Limited of M/s Sterilite Industries (India) Limited jointly with Odisha Mining Corporation (OMC) has signed agreement on 4<sup>th</sup> June, 2004 to set up an Alumina Complex of 1.0 MTPA Alumina Refinery Plant, 3.0 MTPA of bauxite mining for a period of 23 years and 75 MW Captive Power Plant at Lanjigarh in Kalahandi with an approximate investment of Rs.4000/- crore. These projects will affect a total forest area of 672.018 hectares out of which 660.749 hectares (98.32%) will be diverted for mining and other ancillary activities of the project. The proposed area is situated in Niyamgiri Reserve Forest of Kalahandi (South) Forest Division, and Niyamgiri PRF (Proposed Reserve Forest) of Kalahandi (South) Forest Division, and Niyamgiri PRF (Proposed Reserve Forest) and Jungle Block (Protected Forest) of Rayagada FD. In addition, another 755.5 acres of land consists of village forests from six villages leased by Orissa Industrial Infrastructure Development Corporation Ltd to lease to Vedanta Alumina Ltd for setting up of an Alumina Refinery Plant at Lanjigarh.

Taxonomists who assessed the flora of Niyamgiri hills viewed that the flora of the hill range exhibits a very rich and varied assemblage of plant species owing to its diversified topography with High Mountain peaks and enumerable deep valleys and gorges, abundant springs and diverse vegetation resources. The hill also includes around 50 species of important medicinal plants, 20 species of wild ornamental plants and more than 10 species of crop plants. The secondary data identifies a variety of faunal species under categories like endangered and vulnerable as per the zoological survey of India's Red Data Book.

Dongaria Kandhas fought against Vedanta Company establishing the linkages between the natural environment and their rights. When one looks from the perspective of rights given by the Indian Constitution one finds the violation of natural rights and livelihood of the Dongaria people by the State. Through struggle, the local communities and the like minded forces appealed to the Supreme Court of India to restore the rights of the tribal people and to preserve the forest resources of Niyamgiri Hills. Again Fifth Schedule of the Indian Constitution provides protection to the adivasi people living in the area. It is provisioned that no land in this area can be transferred to non-tribals (CEC Report, 2005). However, the local people in order to protect their own rights are determined to stop the mining in Niyamgiri Hills.

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## 3.6 ENVIRONMENTAL LEGISLATION

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### *Environmental Provisions in Indian Constitution*

Provisions relating to environment were incorporated into Indian constitution through 42<sup>nd</sup> Amendment in 1976. For the first time "Environmental Protection" got importance.

As per the Directive Principles of State Policy, Article 48 (A), "the State shall endeavour to protect and improve the natural environment and safeguard the forest and wild life in the country.

According to Article 51 A (g), "it shall be the duty of every citizen of India to protect and improve the natural environment, including forests, lakes, rivers and wild life and to have compassion for living creatures". Besides this, the entire

dealing with forests and wildlife were dropped from the State list and inserted in “Concurrent List”.

### ***Distribution of Environmental Legislation***

The Central Government under Central List has the power to legislate on industry, mines and minerals, oil fields, fishing, inter-state rivers and river-villages. In addition, the Central Government is authorized to make social planning under concurrent list of schedule VII of the Indian Constitution. Since India is a federal system of Government, the State Government can also legislate on industry, mines and minerals, fisheries, which is objected to as per the provision of the Central Government,

Some of the major areas of Central enactments formulated by the Central Government include water, air, radiation, pesticides, and forest and wildlife. Some of the specific environment related legislations passed by Central Government in different time periods in different sectors are as follows (Meheta, 1994, Trivedi et al 1995):

#### ***Water Pollution***

The River Boards Act, 1956

The Merchant Shipping (Amendment) Act, 1970

The Water (Prevention and Control of Pollution) Cess Act, 1974 and 1977

#### ***Air Pollution***

The Indian Boilers Act, 1923

The Factories Act, 1948

The Mines and Minerals (Regulation and Development) Act , 1947

The Industries (Development and Regulation) Act, 1961

The Air (Preservation and Control of) Pollution Act, 1981

#### ***Radiation***

The Atomic Energy Act, 1962

Radiation Protection Rules, 1971

#### ***Pesticides***

The poison Act, 1919

The Factories Act, 1948

The Insecticides Act, 1968

#### ***Forest & Wild life***

The Indian Fisheries Act, 1897

The Indian Forest Act, 1927

The Prevention of Food Adulteration Act, 1954

The Ancient Monuments and Archaeological sites and Remains Act, 1958

The Wildlife (Protection) Act, 1972

The Urban Land Ceiling and Regulation Act, 1976

The Forest Conservation Act, 1980

The Prevention of Cruelty to Animals Act

### ***General***

The Indian Penal Code, 1860

The Environment (Protection) Act, 1986

In addition to these, there are many state enactments passed with respect to water pollution, smoke control, pest control, land utilization and land improvement by different states in different time periods (Meheta, *ibid*)

### ***The Recommendations of Tiwari Committee 1980***

Based on the Tiwari Committee 1980 a separate Department of Environment, Forest and Wildlife were created in 1985. Subsequently the material National Wasteland Development Board (NWDB) and the Central Ganga authority (CGA) were created to manage specific environmental problems. In spite of the measures, there was a significant fall in the quality and management of environmental problem (Koli, 2005) One such is the Bhopal Gas Tragedy which killed 2700 persons and injured around 20,000 people which forced the National Government to go for a new Act called the Environment (Protection) Act, 1986, passed in response to the resolution passed in 1972 at Stockholm at the World Conference in Human Environment. Environment Assessment of both physical and social aspects of any development project is made compulsory before any project starts. The establishments of Eco-mark scheme, Zoo Authority of India and Central and State Pollution Control Boards ensured the implementation of the Water Act 1974. The Water Cess Act, 1977, The Air Act, 1990 and the Environment Protection Act, 1986. The Pollution control authorities are ill-equipped to monitor and regulate the small and medium industries. As a result, many of the impactions are far from the reality.

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## **3.7 IMPACT OF THE ENVIRONMENTAL MOVEMENTS**

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We have observed that in India the environmental movements could go beyond the social and cultural cleavages. They could unite people belonging to different caste, ethnic and economic categories, political ideologies, gender and age groups. In many such movements, women who are normally considered as the weaker sections of the society took the lead, both as leader and the participants, in these movements. Like independence movement of India, people of all status groups, viz., children, youth, adults, old and students, all sacrificed ambitions of their life and took part in taking ahead the concepts and the processes of these movements. It was commonly observed that in all the movements the people adopted the Gandhian Concept of non-violence and Satyagraha. These movements have established the fact that common property regimes of the people plays crucial roles in the daily subsistence activities of poor peasants in India. All these issue are being debated at local, national and international levels, where social scientists are playing central role in debates at various levels, including national and international levels.

Couple of new methods have been developed and used in data collection by different anthropologists while studying ecological anthropology. Satellite

imagery data, both synchronically and diachronically, are used to identify ecological hot spots, and studied by multi-disciplinary teams (Green and Sussman, 1990; Kottak et al 1994). Secondly, the Geographical Information System (GIS) studies micro situations relating to human and environmental features. Survey data across space and time may be used along with the ethnographic studies to study the environmental situations. The distinct anthropological perspective must be adopted to study the local specificity with respect to the ecological and cultural diversities.

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### 3.8 SUMMARY

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We have observed that environmental movements have been a productive zone of inquiry. Environmental movements in India have established the fact that these are the series of transformative discourses. In some cases the environmental debates have reflected the rights of the people over their natural resource basket, the source of livelihood for them. The denial of traditional structure of control over these natural resources has been questioned by the communities, the major participants of such environmental movements. Often they have questioned the exploitation methods and development models of the State. In anthropology the combination of ecological and ethnographic approaches has expanded the scope of environmental research. This has brought in a paradigm shift in the content and focus of ecological anthropology from applied perspective. When we map out the new approaches in the study of environmentalism we find the cases of resistance from people across space and time. The Subaltern voices crop up through such environmental movements has been established and anthropologists have taken such voices for ethnographic analysis. When we look at the social structure, degradation of natural resources and related environmental changes, one finds the complimentary and symbiotic relationship between society and environment, which is difficult to ignore.

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## Sample Questions

- 1) What is environmental anthropology? Describe its growth and development in India.
- 2) Describe how globalisation has impacted the environment and human life and the living conditions of rural people in India.
- 3) What is environmental movement? Do you think that socio-cultural factors play crucial role in the movement processes which are taking place in rural India?
- 4) Do you think globalisation has contributed in changing the nature of environmental movement in India? Explain with the help of few cases of environmental movement from Eastern India.
- 5) What is environmental movement? Do you think that India has enough laws to protect the natural environment of the country?