UNIT 1 CHANGING PERSPECTIVES ON ECOLOGY AND DEVELOPMENT

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1 . INTRODUCTION

A century ago, George Perkins Marsh said, "Man has too long forgotten that the earth was given to him for usufruct alone, not for consumption, still less for profligate waste". Environmental degradation with development happened throughout the history. The emergence of ruining soil in Mesopotamia several thousands of years ago due to the establishment of an imgation system which brought the salt up from the saline groundwater to the agricultural field is a well known example to begin with. The level of degradation has reached alarming heights in the developed countries owing to their ever rising efforts to raise their living standards resulted in the exhaustion of the very ecology that it exists in. Now, the Third World countries are trying to improve their economic conditions but they too are contributing to the degradation' of ecology around. The tussle between poverty and extreme starvation forced the Third World countries to remove wood from the forest, extract minerals from the surface of rocks, expanding the agricultural field to the steep slopes and into the areas which receives scanty rainfalls; hence, they extract the ground water randomly and eventually establish various types of industries to contribute to air pollution.

In the Indian context, there has been a phenomenal increase in literature dealing with ecology and development, where ecology was understood to study the relationship between the living organisms with the external world. Hence, it has a natural entry into the realm of natural sciences. The body of knowledge that contains ecology as the central theme has received the concern of nature as basically a non-human world. This very complex layer of defining ecology limits its natural relationship with development which is very much human society-oriented in nature. On the other hand, the concept of development has long been associated with social sciences due to its central concern being merged with ever changing human society. Thus, the web of perspectives of ecology and development has been very ambiguous.

Environment has always been one of the most neglected domains of social research. It is during the seventies that the demand for planned strategies in the developed and underdeveloped countries fuelled the necessity of protecting the environment resulted in looking into the ecological components like air, water, land and the familiar aspects of developmental issues in a more comprehensive manner.

The natural environment has never degraded. It is suffering increasingly from the impact of man's own actions, either productive or consumptive. Ecological components – land, water, forests, atmosphere, habitat and resources have been threatened due to the growing prosperity of human society and its developmental actions. To understand the relationship between the ecology and development, let us make an attempt to look into the historiography of ecology and its components as well as the impact of economic actions of the human society around. This is required to understand how inextricably ecology is related to the development of human society over the years.

Literary texts, foreign accounts, explorations and excavation and spread of coins and inscriptions indicate that the upper and middle Gangetic plains, Malwa, the coastal area of Gujarat, western Deccan, The Krishna-Godavari basin, the Cauvery basin, the coastal belt of Kalinga, and some coastal areas of West Bengal were fairly well settled by inhabitants as early as in third century AD (Sharma, 2011).

Aims and Objectives

This Unit would enable you to understand

- the debate of changing perspective of ecology and development;
- Ecological impact of industrial development; and
- Analyse the relationship between the economic growth, development and ecology.

1.2 NATURAL RESOURCES

Water

> "In the beginning this world was just water… all this world is woven, warp and woof, on water"
>
> (The Thirteen Principal Upanishads)

Water is an essential life-support substance, even more essential than food … (Iyer, 2007). Water is needed for basic requirements like cooking and cleansing as well as for irrigation and for industrial uses. In India, water bodies play very important role and are an inextricable part of Indian culture, society and history (Indus, Ganga, Brahrnaputra, Cauvery, Narmada – to name a few, the rivers which are part of ancient Indian culture and civilization). These river basins not only played the role in the expansion of human settlement but also had deep impact on the formulation of social structures within those settlements. The quality of soil, land grants, formulation of states within these basin areas created the foundation of the Indian culture in a nutshell.

Forest and Land

Thapar (2001) highlighted the relationship between — the vana to ksetra – the relationship of the forest to the settlement. She opined that there is a dichotomy between the vana and grama evolved in early times when the village constituted the settlement. With the emergence of urban centres, and particularly in the early centuries AD, there was also a growing dichotomy between the grama and nagara – the village and the town respectively. At the same time, vana and aranya had ecology different fiom that of the settlement, and would have included the desert and the semiarid regions as well. In early India, the forest was the context for at least three activities: the hunt, the hermitage, and the place for exile. Hunting as the activity of chiefs and kings was looked upon as an enviable expertise. From the perspective of grama, if the forest was seen as the chaotic unknown,

the king had to conquer it and refashion the chaos into the order. The hermitage is set so deep in the forest that it is almost another world, enveloped in a translucent green of sun and trees. This is luminal space, the threshold between the two contrasting ecologies of the vana and the ksetra. The hermitage may have been the vanguard of the encroachment into the forest. But at the same time the choice of the forest and the symbolic act of going to the forest for purpose of asceticism and renunciation has multiple meaning: there is a distancing from civilization, a seeking of knowledge through isolation and meditation; and a search for the meaning of life through experiencing the unknown.

With the advent of the concept of state in the form of mature monarchy with a concentration of political authority vested on a single person, power and authority in the state system became dependent on revenue. Consequently, as different sources of revenue came to be considered, forest became one of them.

Kautilya, the well known economist of the Maurya dynasty, advised to settle sudras on wasteland or land which had been deserted for the purpose of extending agriculture, both in order to bring in larger revenue and to support growing population. It has been found that he also advised granting of tax free, cultivable land to special categories of persons — Brahmanas and professionals working for the state.

The policy of Ashoka regarding forest was quite strict and it took further turn under Guptas. The change in the agrarian economy brought about by grants of land from the Gupta period onwards has been analysed as an innovation in political economy (Thapar, 2001). She concluded that by recognising the dichotomy of the vana and ksetra, their complementarities immediately surface.

1.3 ECOLOGY AND DEVELOPMENT- THE RECENT DEBATE

In the recent past, the rapid developmental activities seem to have lost touch with our ancient tradition and wisdom in protecting the natural ecological balance. The haphazard approach has been adopted in the developmental activities in utilising the locally available natural resources, forestry, agricultural and industrial technology based on outdated models. The pressure of population and the growing demand for resources and the poverty which depend directly on natural resources for their sustenance has also taken a heavy toll of the environment. Environmental conservation and economic development are not contrary to each other but are actually inseparable domains in the regional context.

The natural environment is not rapidly degrading. But it is suffering increasingly from the consequences of man's own action, either productive or consumptive. Harmful discharges into the environment are the cause of the pollution of air, water, and soil. Since the prosperity of human society is continuously growing, so are the emissions of polluting materials due to multifaceted developmental processes.

The age-old practice of eco-friendly agricultural practice farming had changed drastically about three decades ago. The farmers switched over to the massive use of chemical fertilizers and pesticides. Agricultural degradation is caused due to the material erosion from land, impregnation into the soil in inorganic salts and minerals resulting from irrigation, water logging, chemical fertilizers, pesticides etc. So, soil is degraded as a consequence of improper agricultural practices. The whole system of agriculture began to change by cultivating large fields with single highly profitable crop e.g. the wheat or the rice.

Cultivating the same crop and the use of chemical fertilizers year after year, has resulted in the disruption of soil and diminishing of organic matter in the soil. Thus, the steady destruction of natural agro-environment and mismanagement of agricultural resources have started showing a decline in the agricultural productivity.

Each one of the major natural resources has been degraded to an unbelievably low level with an amazing rapidity. Less than 12 percent of the land has no tree-cover worth the name (Forest Policy 1988), though there is a target of 33 percent of the area under the forests. Besides, some of the areas are suffering from scarcity, droughts and floods and removal of forest cover. The erosion process is being induced or accelerated by human activities, such as overgrazing, tree-lopping for fodder, collecting fuel wood and tree felling.

There is ample evidence of all kinds of industrial pollution at micro-regional level. In fact, the natural eco-systems have been seriously affected in the recent years. Industrial wastes contain large quantities of raw materials, final products, co-products and by-products. Air pollution is the result of the discharge into the atmosphere of gases, vapours, droplets and particles, such as C02; suspended particulate matter produced by the burning of fossil fuels create imbalance in the ambient air. Large quantities of NO2 and SO2 are emitted into the air by large and medium scale industries and power plants which get transformed into Nitric and Sulphuric Acid, ultimately getting washed down with rain in the form of acid rain.

The natural resources are a common heritage. They have been shared by the past generations and the future generation will be inheriting these resources. The rapid pace of their exploitation is resulting in the exhaustion of some of the resources. The Indo Gangetic divide and the adjoining area is one of the agriculturally advanced regions of the North-Westem India. The conservation of soil and water is essential for increasing agricultural output. Water is a cyclic resource. Water resource management in the irrigation system thus plays a crucial role.

Ecological Impact of Agricultural Advancement

Agriculture constitutes the backbone of the economy and is the mainstay of the majority of people. The two-crop cycle of rice wheat round the year cultivation marked Green Revolution in the 1960's. The main crops grown in the green revolution belt are mostly irrigated crops like rice and wheat of which the per hectare yield was much higher. The adoption of new agrarian technological and chemical inputs and the proper management of land and water resources resulted in the achievement of required targets of production. However, in contrast to the economic gains of the Green Revolution, the adoption of new agrarian technologies has resulted in a number of agronomic problems e.g. the arable land degradation, increase in soil salinity and alkalinity and water logging etc. Thus the excessive use of some of the fertilizers and pesticides and intensive irrigation not only degrades the land, water and air in general but also causes reduction in the agricultural production, both in terms of quality and quantity by their toxic effects on plants and animals.

Ecological Impact of Pastoral Practices

Livestock animals form the economic base of the marginal and small farmers because of the small size of their landholdings. The rapidly increasing human and livestock populations are both competing for limited land resource exploitation; because of the livestock

population, pressure is one of the important biological engines of desertification and indiscriminate exploiter of the natural ecological system in one way or the other in the fragile semi-arid belt of this country. Therefore, the over exploitation of the natural resources, such as the natural vegetation by way of overgrazing and removal of tree species for fuel, fodder and cultivation of marginal land like sand-dunes etc. led to a series of ecological changes in the semiarid regions, sometimes eventually leading to desertification.

Ecology of Forest and Human Adaptation

The fuel wood consumption differs very significantly, particularly in the spatial context. The fuel wood consumption is generally higher in the hilly region because of variability in temperature and high density of population, requiring more wood not only for cooking , but for water and space heating also. A high proportion of fuel-wood requirement is met from the forest. The cooking and heating requirements of a household differ significantly according to the family size and climatic conditions. The availability of fuel wood in the nearby areas also tends to influence the consumption pattern. When the wood is freely available in the nearby areas, the tendency is to use it liberally. There are many agro-ecological problems that have recently emerged due to the extensive human interference with the forests. The delicate ecological system in that the arable land is not only severely affected but is gradually deteriorating to an irretrievable condition by the soil erosion and deposition. Thus both these problems need proper and adequate measures not only to check deposition process on cultivable land but also to protect the level and terraced fertile agricultural land against the deposition and spreading of coarse sand materials.

To counter such situation, the afforestation would usher in many ecological benefits, apart from providing fuel, fodder and other biomass to the settlements in semiarid regions. A strategy is needed to bring in marginal lands and wasteland under permanent tree cover, anti to better manage the demand for fuel wood and small timber. Thus, the priority should be given to those forestry programmes which cause minimum agricultural land loss anti encourage the local villagers as participants.

1.4 ECOLOGICAL, IMPACT OF INDUSTRIAL DEVELOPMENT

Industrial development plays a crucial role in the economic development strategy, particularly with regard to self-reliance. On the other hand, pollution due to industrial activities is an effect caused due to an excessive presence of an undesirable substance in the air, water or soil in the surrounding areas of the large and medium and small scale industries. Many of these units do not have effluent treatment plants and even those which have such treatment plants are not utilising them properly. Hence, people living near industrial sites often complain of skin and other disorders. The industrial wastes are dumped into the drains, canals, rivers and sea in a raw form creating health hazards for the people and also, in the process, destroying the flora and fauna of local ecosystem.

The chemical industries create air and water pollution. The textile industries generate a huge amount of waste water per day. It also produces dyes and alkalies which have adverse effect on human population as well as livestock. The metal based industries constitute hot and cold processes. The hot process produces imperceptible noise pollution. Cold process produces acidic waste. The forest-based, building materials-based and animal husbandry-based industries create the pollution of environment with the disposal

of their liquid, solid and gaseous effluents. The poor disposal techniques including inadequate supervision of dumping grounds have led to gross contamination of the agricultural land in the immediate vicinity of these units. Although the leather industry fetches lot of foreign exchange, it does pollute the air and ground and surface water level.

1.5 SUMMARY

We have seen fiom the above discussion that historically in the primitive society, the basic requirements of human beings were easily obtainable from the immediate surroundings. Rather the number of persons on the land and their aspirations were so limited that there existed a perfect ecological harmony. Thereafter, with the increase in population and with the advent of industrial revolution, the society experienced a dramatic increase in demand for various goods, commodities and services, thereby leading to over-exploitation of the natural resources and in several cases, complete exhaustion. In view of the increasing pressure of population on natural endowments, disparities in economic development and technological and scientific advancement gave immense power to man to make indiscriminate use of the natural resources.

Pachauri (1983), while analysing the concept of resources and classification of resources in order to explain resource adequacy in relation to population and culture, concluded that with the discussion of basic principles essential for resource planning, there occur changes in resource concept and classification. The functional theory of resources affirms time and again that the resources result from the interaction between man and nature. With rapid progress in industrial civilisation, new interrelationship has built up between resources, man and his culture and technology. It is suggested that the resource planning should be based on scientific evaluation of resources along with their multiple uses and substitutes which harmonise human needs with resource endowments at regional and local levels.

The ecosystem, at any cost, should not be altered; neither nature's self building process nor the natural cycle should be disrupted by human activities. Ecology is an inextricable part of human society. Hence, it has a direct equation with development of human being, rather to say well-being.

1.6 TERMINAL QUESTIONS

1. Describe the historical view of complementarities of ecology and development in India.
2. Analyse the importance of natural resources and their careful usage.
3. What is the impact of the industrial development on the ecology?
4. Discuss at length the recent debates relating to ecology and development.

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UNIT 2 DEEP ECOLOGY: RESPECT AND VENERATION FOR NATURE

Structure

2.1 Introduction
Aims and Objectives

2.2 Deep Ecology: Concept and Meaning

2.3 Principles of Deep Ecology

2.4 Environmental Values: Religious Sources

2.5 Respect Towards Environment

2.6 summary

2.7 Terminal Questions

Suggested Readings

2.1 INTRODUCTION

The last few decades have witnessed serious concerns at all levels- local, -regional, national and international- regarding the environmental degradation and its cruel impact on both the human and non-human habitat. The sustainability factor of the planet earth has become a point of debate and there has been a reiteration of reviving the local cultures and customs that are eco-friendly. Numerous debates have been on the rise about the environmental values, duties and rights. These debates are crucial in the background of fast eroding natural resources and the possible debilitating impact on the ecology. As has been mentioned in the previous Unit, there existed once an indelible harmony between the human beings and the nature or environment. Today this relation has taken a strenuous turn, thus leading to pollutions of all kinds- air, water, soil, land etc. Further, there has been an increasing level of consciousness towards environmental protection and scaring about the planet earth. Several conventions, conferences, debates etc., are being held to discuss issues related to pollution, environmental degradation, soil erosion, deforestation and so on. Almost all the sections of society like the environmental groups, academics and policy makers are now taking active interest in restoring the natural habitat.

Aims and Objectives

This Unit would enable you to understand

- The importance of deep ecology and its survival
- The concept of veneration of nature
- The different religious sources and Environmental values
- The changes that need to be brought in our lifestyles.

2.2 DEEP ECOLOGY: CONCEPT AND MEANING

Before we dwell upon the aspects relating to respect and veneration for nature, it is necessary to understand as to what is deep ecology, its importance and impact on our

livelihoods. In this Unit, the terms ecology, environment and nature are being used synonymously so as to accommodate the important views and expressions as spelt out through various sources. The learner may keep this mind so as to avoid any confusion. Coming to the explanation of the concept of deep ecology, it may be noted that according to the Wikipedia, 'deep ecology is a contemporary ecological philosophy that recognizes an inherent worth of other beings, aside from their utility. The philosophy emphasizes the interdependent nature of human and non-human life as well as the importance of the ecosystem and natural processes. It provides a foundation for the environmental, ecology and green movements and has fostered a new system of environmental ethics' (http://en.wikipedia.org/wiki/Deep_ecology). It also states that unlike other branches of sciences that view ecology more as a biological science, 'deep ecology seeks a more holistic view of the world humans live in and seeks to apply to life the understanding that separate parts of the ecosystem (including humans) function as a whole' (Ibid).

The term 'deep ecology' was coined by the Norwegian philosopher Arne Naess, who did not'believe in the relative ranking of the beings, such as humans having more claims than other beings in their existence. To him, all have an equal right to life, a right that is universal in nature. No single being or species can claim specific rights to live, while depriving or denying it to others.

Similar views have been propounded by Bill Devall and George Sessions in their work on Deep ***Ecology*** (1985). Holding the view that everything is connected to everything else, they observe the changing trends of emerging deep ecological consciousness that goes beyond anthropocentrism.

To say in precise terms, deep ecology contends the view that the self should identify with all living beings as everything and every being is created by the creator of the universe, the Supreme Being. It is a process of self-realisation and re-connecting with the plant, animal and ecosystem all together. The Indian culture and civilisation has been very much in harmony with this concept if we understand the real meaning of deep ecology. Our ancestors believed in the harmonious co-existence of nature and human beings and had better realisation as to what the ill-effects of the disharmony, when it arises.

2.3 PRINCIPLES OF DEEP ECOLOGY

Devall and Sessions elucidated the principles of deep ecology in their mentioned work (p.70). They forward the views of the proponents of deep ecology who believe that the world is not freely available to the human beings to indulge in over-exploitation of resources. The eight-tier platform, as they call it, is given as under:

1. The well-being and flourishing of human and nonhuman life on earth have value in themselves (synonyms: intrinsic value, inherent value). These values are independent of the usefulness of the nonhuman world for human purposes.

2. Richness and diversity of life forms contribute to the realization of these values and are also values in themselves.

3. Humans have no right to reduce this richness and diversity except to satisfy vital human needs.

4. The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease.

5. Present human interference with the nonhuman world is excessive, and the situation is rapidly worsening.

6. Policies must therefore be changed. These policies affect basic economic, technological, and ideological structures. The resulting state of affairs will be deeply different from the present.

7. The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent value) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great.

8. Those who subscribe to the foregoing points have an obligation directly or indirectly to try to implement the necessary changes.

(Source: http://en.wikipedia.org/wiki/Deep_ecology).

2.4 ENVIRONMENTAL VALUES: RELIGIOUS SOURCES

While much has been debated and discussed on the role of governmental, non-governmental, judicial and other agencies, inadequate attention has been paid to the role and responsibility of the citizens towards environmental values and behaviour. Some of the environmental threats include excessive emission levels, heavy usage of the energy consuming gadgets, littering one's surroundings, unsustainable consumption levels, increased domestic waste including e-waste, dumping of harmful and hazardous medical waste. The materialistic consumption is now being calculated as the measuring standard of human development, leaving behind the basic issues of health care, sanitation, and hygiene, which are much more crucial to human health. Most importantly, the environmental values are being inadequately inculcated in the present times and generation.

Environmental ethics and values are closely related to our behaviour towards the conservation of our nature or natural environment. Values, as Bharucha notes, lead to a process of decision making which leads to action. For value education in relation to the environment, this process is learned through an understanding and appreciation of nature's oneness and the importance of its conservation (Bharucha, 2005, p.230). It is an intellectual code of behaviout that regulates man's relationship with nature. It cannot be imposed by law but has to be articulated, systematized, codified and brought to the doorsteps of each and every individual (RP Misra, 1995). In this regard, the individual responsibility towards the environmental protection has been rather dismal. This stems partially from the lack of social awareness and partly from the lack of environment ethics, values and education. James Speth identifies two factors that are central to the environrnental ethics- 'the protection of their (people's) own sake of the living communities that evolved here with us and our trusteeship of the earth's natural wealth and beauty for generations to come' (Speth, 2004, p.192). He also contends that 'to realise such a future, societies will have to free themselves from a variety of pernicious habits of thought, including enchantment of limitless material expansion and what John Kenneth Galbraith has said 'the highly contrived consumption of an infinite variety of goods and services' (Speth, 2004, p.192).

India has had a distinct civilisation and culture that was very much in consonance with natural habitat. Nature (prakriti) was revered with utmost devotion and the civilisation was known for its cultural and spiritual heritage in protecting its environment. These factors constituted an important element in sustaining the natural wealth but have been constantly neglected by the mankind. The western concept/ perception that nature and

environment exist for the service of humanity have slowly crept into our society, promoting the values of unsustainable consumption and acquisitive materialism. Dwivedi rightly observes that 'culture and religions of the world can provide a solid foundation for changing people's attitudes on the preservation and conservation of the environment. World religions and cultures, particularly Oriental belief systems, do not inherently subscribe to the abuse and exploitation of Nature for material and selfish gain' Unfortunately, 'culture and no part of the world has remained immune from mankind's irreverence towards nature, an irreverence that has brought in its wake the destruction of our own habitat, our progeny and ourselves' (Dwivedi, in preface, pp.vi-vii). He also identifies that ethical values emanating from the world religions and cultures are some of the basic determinants of our behaviour towards nature.

Almost all the religions of the world have, in a direct or indirect manner, referred to the protection of environment as a fundamental duty of the mankind. For example, cultivating the earth and planting trees is considered as an act of spiritual upliftment in Zoroastrian faith. As Dwivedi mentions, 'one of the important duties of a Zoroastrian is to look after the seven creations of the skies, waters, earth, plants, cattle, man and fire. Purity and cleanliness are forms of caring for these creations for 'whosoever has learned the care of all these seven, acts and pleases well, his soul never comes into the possession of Ahriman and the demons'. Thus, caring for the creations is basic ecology for Zoroastrians, and hence nothing impure should contaminate the seven creations' (Dwivedi, p. 42). Further, they are said to have special and precise prayers that are recited so as to retain the sanctity of the creation. The words of the prayer are as follows: 'I invoke the holy world made by Mazda Ahura (the Supreme God of Zoroastrians), I invoke the earth made by Ahura, the water made by Ahura, and the holy trees. I invoke the sea, I invoke the beautiful heaven (sky), I invoke the endless and sovereign light'.

Judaism speaks of care and concern for other living beings on the earth: under its tradition, though it clearly states that the world is for human benefit, it does not undermine the importance of God's creation. All the human beings are required to respect and revere nature and not squander it as nature is a precious creation of God. Their Biblical laws reiterate the importance of showing concern for the rest of the creation and especially espouse showing compassion and care for non-human species. The injured animals may be taken care of, and the commands include showing mercy, humility and care for all.

Hinduism believes in the existence of the divine in all its living forms and severely condemns any violence against the natural habitat. Similarly, the cultural moorings have also a positive impact on our environmental behaviour. For example, some of the communities like Bishnois have a high regard for nature and animals and do not tolerate inflicting of harm on the living species. For people living in the hilly terrains, nature is an inseparable part of their life and do not subscribe to exploiting it for material gains and comforts. The philosophy and way of life, especially in the ancient India, was 'living in tandem with nature'. The sacred texts like Vedas and Upanishads laid emphasis on this aspect and were followed reverently by the sages and great philosophers. The guidelines were based on the Hindu philosophy that enshrined the principles of worshipping nature (other religions were unknown during the ancient times) including rivers, forests, earth, sky, air, water, plants and animals. The cutting of trees, air, water and land pollution were considered as sinful acts and the natural calamities like floods, droughts, and earthquakes were considered as violent forms of anger manifested by the gods and goddesses. While worshipping of trees and plants was regarded as bestowing of prosperity and purity of word, thought

and action, respect to animals and birds was considered as a sacred duty for these were taken as the mounts of gods and goddesses. Violence was also forbidden to animals and other creatures emphasising the principle of equality of all living creatures. Consequently, these acts have taken religious connotations but carried the undertones of utility and medicinal values apart from creating a sense of spirituality.

In Christianity, both the Old and New Testaments underline the importance of nature and God alone is considered as the sole owner of the nature. Psalm, 24:1 says, 'the earth is the Lord's, and everything in it, the world, and all who live in it'. It also advocates a harmonious relationship between the humanity and the environment. All beings, including humans, are dependent on God as He is the sole creator and preserver of nature and thus makes no division between the concepts of nature and humanity as separate entities. The earth is in no way a lifeless entity and failure to venerate nature is said to bring in alienation of man from God. Neither'do the human beings have a right to destroy nature, which they cannot create. The concept of divine love for all thus enriches the harmonious relation between man and other creatures.

As in other religions, Islam too acknowledges God's creation as the foundation of life on this earth. The harmony and balance need to be maintained not only between individuals but also with other creatures. Man is only a guardian of nature, which is God's creation; he is definitely not the owner. Any alteration to God's creation is unacceptable in this religion and is considered as sinful. Such acts are made accountable before God after one's death and invites punishment for any violation of harmonious relation with nature. Since man is endowed with the wisdom of distinguishing between right and wrong, he/she should desist from doing wrong deeds towards other creatures. Nature is not created simply for man's use; in this context, the concept of *tawheed* (unity of God) is significant as it is said that 'Allah (God) is Unity, and His Unity is reflected in the unity of mankind and nature. Further, His trustees have been made responsible to maintain the unity of His creation, the integrity of earth including its flora, fauna, wildlife and the natural environment. And this unity ought to be maintained by balance and harmony' (Dwivedi, p.52). Environment is considered as a gift of God to all for all ages and not just for the present. The earth is considered as an utmost important place because it is a place for worship of God and is thus a source of purity.

The core principles of Buddhism revolve around compassion and love for all beings. Human beings are part of nature and not separate from it; therefore disregarding nature is strictly forbidden. The other species have an equal right to life and survival. Since the tenets of this religion are based on non-violence, harming any of the species is considered as malicious. The nature cannot also be used indiscriminately. For example, cutting of the trees is forbidden: firstly, it is akin to cutting off one's child's arms and secondly, they are venerated as sources of peace, enlightenment and meditation. Since all life is interconnected, there is an imminent need to practise ethics to protect the nature at all costs.

Similarly, Jainism too thoroughly underlines the need for non-violence and strictly denounces harm to any creature. Since peace can be achieved only through peace, violence or injury to any being is deemed as sinful. Even digging grounds for no reason, cutting trees, plucking plants and flowers, sprinkling water etc., are also a sort of source of violence and should be avoided under all circumstances. As in Buddhism, Jainism also places special emphasis on the protection of trees as they are irrevocably linked to spirituality and compassion. Since ahimsa is the core principle of this religion, the humans should

show compassion to other living beings and discard the sense of superiority, for all have the same destination or goal to achieve, and that is peace and harmony.

Sikhism is no different when it comes to achieving peace and harmony of mankind. As in other faiths, here too God is the Supreme Being and has not bestowed any special privileges to the human beings to conquer nature. Infact human beings are only part of the holistic creation, including nature. Since God has created this universe, only He has the right to destroy it. It teaches the mankind to behold the beauty of nature, the marvelous creation of God, elements of nature like air, water and earth. Any interference with nature by human beings would wreak nothing but destruction. Therefore, the Gurus of this religion have attached much importance to all beings and elements.

Keeping in view the sacred veneration and respect attached to nature by all religions, it can be understood that the Indian civilisation did have an irrevocable bond with the nature and has been highly venerated as the creation of God. Therefore, the sacred principles were followed with much faith and sincerity for many ages. Regrettably these values are now being corroded owing to the external cultural influences. The traditional environmental ethos is being replaced by the current trends of western materialism and consumerism. The concept of what is morally right or wrong has been changing from time to time, thereby resulting in an automatic change in our behaviour patterns towards our natural environment. There is also an ensuing change in the value systems that affect the holistic perspective; a similar change is now being witnessed in our perception of the nature and environment. Nature, once valued and revered, is at the receiving end of the changing human behaviour patterns, now attuned to the materialistic culture. As discussed earlier, we are all bound by the creation of God and need to view other beings with equanimity and compassion. At the same time, we are also under obligation to fulfill certain prime duties to ensure the same and live in harmony with nature.

2.5 RESPECT TOWARDS ENVIRONMENT

Science and Technology have changed the course of our lives in an unprecedented manner. While it is perceived as the cause of the current state of environmental degradation, it is also viewed as an effective way to combat the environmental degradation through environmental-friendly technology. It needs to be noted that we cannot formulate solutions through technological means alone. There is a need for a change in the way 'individuals think about and interact with their environment…if respect for environment is to be achieved and an ecological crisis averted' (Dwivedi, p.28). It has to be remembered that:

1. Development does not connote material culture and its enjoyment;
2. Human beings do not have the right to harm other forms of life; and
3. I-Iuman beings cannot conquer nature for individual gains

Our rights need to conform to our duties. All the religions of the world stress upon the individual's responsible behaviour towards the environment; therefore we have an obligation to sustain our natural resources and ensure their judicious usage. An ethical strategy for environmental conservation has been effectively spelt out in the first draft of the report on the World Conservation Strategy for the 1990s (IUCN, 1989, pp.3-4):

(a) People should respect nature, like all creatures we are an integral part of nature as well as users and consumers of nature;

(b) Every life form is unique and warrants respect regardless of its worth to people;

(c) All persons should take responsibility for their impacts on nature;

(d) People should ensure the means of survival of all other life forms; and should not knowingly cause the extinction of another species;

(e) People should treat all creatures humanely, and protect them from cruelty and avoidable suffering.

As rational human beings, we have specific duties towards our humanity and God's creation. As Dwivedi explains, these are categorized as ***manava dharma*** and ***global dharma*** (Here the term ***dharma*** refers to one's sense of duty and conformity to the moral law and not religion as is usually referred to). While the concept of rights of all specifically connotes the former, the latter is extended to our compassion for all living beings on this earth. From here emanates the concept of ***vasudhaiva*** *kutumbakam*, encompassing ***an*** expanded vision of our co-existence with all living beings as part of one family. Our moral duty, therefore, obligates us to view and treat all with compassion; this, in essence, is our ***manava*** dharma. As Mahatma Gandhi once said, our consumption should be need-based and not greed based. His saying thoroughly conforms with the ***manava*** dharma dimension; he forewarned us to voluntarily reduce our wants so that there is less consumption of resources in individual terms. Our sense of duty enables us to gain mastery over our basic human characteristics of greed and exploitation and also enables us to discipline our inner thoughts. This, in turn, reinforces our values and ethics that are necessary to create an ecologically sound and sustainable order (Dwivedi, p.129). We need to strongly inculcate in ourselves and our society to follow an ethical code of conduct towards protecting our environment. Some of the features include our determination to (1) work towards protection of nature; (2) judiciously use the natural resources; (3) protect the sanctity of nature; (4) morally commit to sustainable consumption; (5) responsibly behave towards environmental management.

On a note of individual responsibility, we can promote an effective transition to sustainable society by educating ourselves and others, by fulfilling the societal obligations to use resources with care and most importantly by recognising the fact that the future generations too are entitled to the resources, which we are depleting at an alarming rate. On a concluding note, we need to remember a crucial aspect as spelt out in ***The Earth Charter Preamble.***

"…we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature".

2.6 SUMMARY

In this Unit, we have learnt about the concept of deep ecology and how it is an imminent part of our life. We need to protect our nature so that we and the future generations could lead a harmonious life on this planet earth. The meaning and concept of deep ecology has been developed incessantly over the last few decades. When we reflect

upon our ancient traditions and wisdom, we can definitely conclude that the Indian way of life and day to day practices have been in conformity with nature. What we call deep ecology now and try to extend the discussions and debates at various fora have been in practice in our civilisation since ages. But the concept of deep ecology connects very much to our values and traditions and there is an imminent need to dwell deeper into the subject to know it in its entirety and meaningfulness. It is the responsibility of the present and future generations to view nature as an intricate part of our life and inculcate the spirit of veneration if we aspire for a peaceful future.

2.7 TERMINAL QUESTIONS

1. What is meant by deep ecology? Explain its meaning and significance.
2. What are the principles associated with deep ecology? What significance do they hold in this globalised era?
3. 'Veneration of nature is akin to achieving peace'. Justify the statement in your own words.
4. What are the different religious sources that enumerate the environmental values? Discuss at length.

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UNIT 3 CRITIQUE OF CONTEMPORARY DEVELOPMENT

Structure

3.1 Introduction
Aims and Objectives
3.2 The Environment: Two Views
3.3 Environment and Development: Three Approaches
3.4 Sustainable Development in Practice
3.5 Summary
3.6 Terminal Questions
Suggested Readings

3.1 INTRODUCTION

In a general manner of speaking development is considered to be about widening people's choices in life in as democratic and participatory manner as possible such that people are able to realise their fullest potential. At the same time development is considered as the means of promoting the economic growth and self-reliance of a nation with as much concern for equity as possible. Definitions of development are contextual and dependent on the epistemological and methodological orientation of the theorists. Accordingly, there is evident a multiplicity of labels associated with development, namely 'reconstruction and development', 'economic development', 'modernisation', 'redistribution with growth', 'dependent development', 'interdependent development', 'meeting basic needs'; 'top-down development', 'bottom-up development', 'another development', 'empowerment', 'post-development', and 'post-modem development'. The most general source of confusion in these definitions of development is that of means and ends. Development appears as both means and the end; the end is often assumed to be present at the onset of the process of development itself. If, for instance, development is considered about increasing the choices of people, it has to be assumed that the desire and capacity to choose and knowledge of various options are available. However these elements of the process of choosing are assumed to be as much preconditions for the development process as the ends in which the process results. This contradiction is evident even in the notion of "instrumental freedoms" in Amartya Sen's theory of development as freedom.

However, amidst the plethora of contested and negotiated understandings of development, two ideas have stood the test of time, namely 'progress' and 'modernisation'. If one traces the lineage of 'development' back to Thomas Malthus, August Comte and J.H. Newman, one comes across the ideas of progress, intent to develop and stewardship. The idea of progress referred to the linear unfolding of the universal potential for human empowerment which need not be recurrent, finite or reversible. It was initially believed that the revelation of God through an increasingly scientific understanding of Nature made a potentially limitless progress possible. In its more secular and somewhat later versions, the idea of progress spelt out the possibility of directing the potentially unlimited capacity for improvement through the human effort of labour.

The idea of modernisation and its contemporary incarnation as neo-liberalism has enjoyed long-standing dominance. This is because it remains consistent with the ideology of neoclassical economics which is the dominant paradigm of development in the West, it is a very simplistic and universalistic formulation, it has had strong institutional advocates, and it has had the luck arising from the failure of alternative interventionist strategies in the 1960s and 1970s. Modernisation theory is now to be seen in new forms such as late modernity, advanced modernity, radical or reworked modemity, neo-modemisation theory or new modernity. New modernity includes the notion of risk society meaning that all developed and developing societies are exposed to the globalised ecological and other risks.

However, by the mid-1980s, there was an impasse in mainstream understanding of development mainly because of failures of development projects around the globe, the dismantling of socialist systems as alternatives, growing economic diversities in developing nations, the crying need for environmental sustainability, the increasing assertiveness of voices 'from below', and the rise of post-modernism to universalising theories. There have been sustained critiques – ranging from .'dependency theory' to 'post-modem development' - of the ideas of progress and modernisation which have focused on the unrequited dominance of a particular ideology, exclusion of certain groups from the development project, and on the processes and procedures of development. Development is rejected because variously it means the new religion of the West, it is the imposition of science as power, it does not work, it means cultural Westernisation and homogenisation, and it brings environmental destruction. Mainstream development economics is reductionist in nature and therefore has to be rejected not only in terms of its results but also in terms of its world-view, intentions and mindset.

Some of this criticism has coagulated into alternative thinking, although in the long run many strands of these alternatives have been co-opted by mainstream development understanding so much so that today it is difficult to distinguish very clearly mainstream and alternative development approaches. Nonetheless many of these criticisms have highlighted the need for greater self-consciousness, reflexivity and encouragement of heterogeneity and difference. Many of the traditional or indigenous traditions, histories and 'knowledges', which were subjugated or excluded by colonial and modernist developmental regimes as being primitive or irrelevant, have been highlighted to contrast them with the arrogance of models from the West.

Aims and Objectives

This Unit enables you to understand

- The concept of development and its critique from varied perspectives
- Development as related to environment
- The sustainable development that is in practice.

3.2 THE ENVIRONMENT: TWO VIEWS

One of the major critiques of development has come from the environmental and ecological movement, The influence of environmental concerns on development policy was recognised for the first time'by the United Nations Commission on Environment and Development – the Brundtland Commission – and at the Earth Summit at Rio de Janeiro in 1992.

These Reports produced an international consensus to apply environmental criteria to the development projects in order to attain sustainable development which was defined by the Brundtland Commission as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." However many environmental agenda are not concerned with developmental goals. This is because there are two different meanings to the term 'environment'. One meaning identifies the environment with the natural world whilst another regards it as all human and non-human activities and entities which are external to a particular sphere of decision making and action such as a development project.

When we look at the environment as nature, we find that the boundary between humanity and nature runs like a perpetual theme in human consciousness, much influenced by the degree and nature of domination and subjugation of the forces of nature. In contrast to early human visions of nature as being imbibed with supernatural force and grace, the European Enlightenment proclaimed the conquest of nature as an essential ingredient in the human quest to overcome constraints in the path of greater fulfilment of its desires. In this imperialist vision, the role of nature was utilitarian, to be used for the achievement of happiness by humanity. However the development of industrial society, first in Europe and later in the rest of the world, prompted a questioning of the extent and nature of the human understanding of the changes it had effected over nature. This often took the form of an escape by the rich from the squalor of the newly-developing cities to the pristine splendour of rural areas. This gradually formulated itself into a position of the romantic rejection of the industrialists' utilitarian approach to nature. As a matter of fact it was thought that the real force of nature was to be experienced in the rural and mountainous regions. Between these two views of nature as a romantic idyll and nature as an exploitable resource was a third view which perceived human beings as being superior to nature but at the same time being responsible for its efficient management. This view gradually became popular with the growth of the conservation movement in Europe and America which called for huge areas of untouched nature to be kept aside and protected from human activity.

However environmental regulation in the Western industrial societies (and now in other parts of the world too) has been led by a broader meaning of the term 'environment'. According to this understanding there is an uneven distribution amongst people of the costs and benefits of industrial action on the environment. Usually, whilst the industrialists and developers gather most of the benefits the cost tabs are left to be picked up by the working class and other less powerful social groups. These external costs include unsafe working conditions, unhealthy and polluted living conditions, and a diminished scope for recreation and for aesthetic pursuits. Although this was the scenario in the nineteenth century, by the mid-twentieth century it became more and more of an untenable proposition because of greater political consciousness. There was a greater demand to make the polluter pay through public health and environmental legislation. This approach was institutionalised with the establishment in 1969 of the Environmental Protection Agency in the U.S., which was concerned with environmental impact assessment of all government works. Environmental Impact Assessment (EIA) has become the norm in both the public and private sectors across the world today. In this perspective, the environment includes not only nature but also those parts of human society which are external to a development project or activity. In this sense the term environment addresses the conflicts of interest posed by the unequal distribution of costs and benefits – the externalities – of development.

Therefore the environment as nature is focused on conservation and protection of vast

swathes of land from human interference whilst the externality view on the environment includes the impact of human activity on nature but is predominantly applied from the utilitarian perspective of who owns, uses or manages the natural resources concerned. The overlap between the two views explains the ability of the environmental'agenda to unite a broad range of views although there may be several bristling issues in the implementation of the programme of sustainable development.

3.3 ENVIRONMENT AND DEVELOPMENT: THREE APPROACHES

According to the modernisation perspective – whether of the capitalist or socialist brands – natural resources do not constitute a limit to economic growth. Technological triumphalism ruled the roost and this got manifested by grand projects to harness nature and construct infrastructure projects. The costs of such massive infrastructure projects nature was to be conserved by demarcating certain' pristine areas and prohibiting economic and other human activity, leading to a separation of nature from development. However, realisation soon dawned that this path makes mankind vulnerable to the destructive power of industry over nature. The risks of nuclear technology and pesticide accumulation in food-chains highlighted these issues. There was also the concern that limited and finite resources would pose a potential brake on economic growth, on unlimited production and consumption. The proverbial last straw was the discovery of a hole in the ozone layer over Antarctica which highlighted the issue of chlorofluorocarbons arising from refrigeration gases and aerosol propellants. This discovery confirmed the worst fears that the danger is world-wide and that our scientific knowledge of the atmosphere was severely limited. Henceforth it became impossible to bank on technological triumphalism and stressed the need for global regulation of industrialisation. This gave a boost to the environmental movements for sustainable development.

By the 1980s, however, modernisation gave way to neo-liberalism. This effected a change in the approach to the environment. Neo-classical environmental economics is the bedfellow of neo-liberalism which converts the goods of environment into commodities governed by market price mechanisms. The goods of nature such as air and water, landscape, etc. are considered as services provided by nature which are further taken to be a form of natural capital which can be augmented or depleted, leading to the further development of physical or financial capital. Environmental economics stresses that because the scarcity of natural resources is not reflected in adequate pricing mechanisms, they are overused. This conversion of environmental goods in monetary terms played a major role in the absorption of environmental concerns into mainstream development thinking. However, environmental economics deals with aggregate demand and the distribution of the demand only in terms of purchasing power. The unequal distribution of purchasing power between countries and within countries highlights the need for proper distribution of ownership of natural capital. Environmental economics would therefore work only if property rights and institutional access to and use of natural resources are fairly addressed.

Interestingly, the environment has proved to be the rallying ground for much of the opposition to the neo-liberal project of development today. This has often taken the form of alternative thinking on the environment. One of the perspectives is the communitarian one which stresses on the knowledge, social support and cohesion of local communities. Some of the themes stressed are the effectiveness of local institutions in regulating use of natural resource, facilitating role of women as users and managers of resources, and

advantages of small-scale owner-operated systems of production. By arguing that the poorest should benefit most from sustainable development, this perspective is able to place the poor at the centre of the development debate. Local ownership and rights of disadvantaged sections over local resources have been stressed based on the entitlement theory of rights. It is claimed that such an approach actually goes a long way in conserving common resources globally. This perspective is bulwarked by a movement for rights of indigenous peoples and those living in rain-forest areas. Anthological and development field-studies have now provided widely circulated knowledge of how local communities are experts in preserving commons and other natural resources such as land, water, forests, grazing lands, etc. Local communities also have extensive knowledge of diversity of species and are therefore crucial in biodiversity conservation. Significantly, the management strategies of people living in the 'wilds' have challenged the Eurocentric notion of separating nature from development under the modernisation perspective: examples abound of how humans, human activity and nature can sustainably co-exist. This strengthens post-modern analyses of universalistic solutions in favour of socially constructed multiple realities. It also strengthens the thesis that indigenous criteria and perception of resource conservation should be considered as valid as those arising from scientific study. Political economy analyses have been used to argue for greater economic and political rights over the use of natural resources by people who have been pushed to the margins by mainstream development.

One of the advantages of the people-centred alternatives is that they rigorously examine power relations in the domain of resource use – power relations between local communities and the external agencies of the state and market are thoroughly scrutinised. This conglomerate of approaches stresses on rights-based advocacy and pose the greatest counter-challenge to the dominant neo-liberal model of development and environment. The environmental agenda of sustainable development thus provide a broader canvas for many of these groups to achieve their aims.

3.4 SUSTAINABLE DEVELOPMENT IN PRACTICE

Whilst it is true that sustainable development has become the rallying cry as well as victory point of many environmental and ecological protest groups and counter-perspectives, the battle is by no means over as the very meaning of sustainable development is being debated by the neo-liberals and their opponents in the development domain. Agenda 21 reflects a tension between the neo-liberal emphasis on allocation of natural resources through market mechanisms and the local and participatory emphasis of the alternative schools. In practice, there is a lot of negotiation which has taken place between these two perspectives in the internationally ratified treaties on biodiversity, climate change and desertification.

For instance, the discovery of a hole in the ozone layer led to the Montreal protocol of 1987 which agreed to limit the use of CFCs. In fact it was decided soon after that the manufacture of CFCs should cease by 2000. This international agreement was the model for a more wide-ranging agreement required to tackle the issue of greenhouse gases which were contributing to the rise of the earth's temperature. A decade of hectic scientific and governmental effort to take a look at the phenomenon of climate change followed the 1979 World Climate Conference, resulting in the 1988 Intergovernmental Panel on Climatic Change (IPCC) by the World Meteorological Office and the United Nations Environment Programme. In 1990, the IPCC recommended a reduction of green house

gases to 60 per cent of the 1990 level and in 1992, at the Rio Summit, a framework document for. a convention on climate change recognised the need to protect climate change. What was new was the emphasis on equity such that different countries had different responsibilities and capabilities. This meant that developed countries took the lead of reducing greenhouse gases to the 1990 levels by 2000. Inventories of greenhouse gas emissions and sinks by the signatories were to be monitored by the newly-instituted Global Environmental Facility at the World Bank. The Kyoto Protocol of 1997 committed industrialised countries to reduce their collective emission of greenhouse gases to an average of 5.2 per cent below the 1990 .levels by 2012. However the U.S. was successfbl in inserting some mechanisms which would enable the industrialised countries to reduce their gas emissions through activities taken 'abroad rather than at home.

In this entire effort, manoeuvres, negotiations and shifting alliances, although the levels of environmental concerns vary between European Union member states it is strong and growing in many countries. Strong emission reductions have been effected in Germany and the U.K. The internal allocation of emissions within the EU has enabled the least industrialised countries within it to increase their emissions whilst the overall EU levels are likely to match the targets set by the Kyoto Protocol. On the other hand, the position of the U.S. has not been so straight-forward. Home to some 25 per cent of the worldwide emissions there has been hostility amongst U.S. consumers, corporations and labour unions. The industries in the U.S. were very keen at Kyoto that they be not made subject to emission reductions from which other countries were exempt. Hence the U.S. acceptance of targets was conditional that there would not be change in the use of domestic energy. Through transfers under the Kyoto Protocol's joint implementation mechanism, the U.S. could reduce its commitments because of the reduction in emissions of the erstwhile Soviet-bloc countries. The other OECD countries allied with the U.S. because of high political costs of energy reduction or high marginal costs of emission reduction in already efficient energy sectors. The erstwhile Soviet-bloc countries joined the U.S. alliance because they could exchange the 'surplus' emission reductions in their countries with the U.S. for higher U.S. or Japanese investments in their countries. By contrast, many developing nations were vulnerable to rise in sea levels because of climate change and they vociferously advocated the strongest measures for emission reduction. On the other hand India, China and some Latin American countries - all of which were rapidly industrialising – were for economic development as their priority and for national sovereignty in decisions regarding emissions. They were successful in blocking the imposition of emission-reducing targets but failed to block the flexibility mechanisms of the U.S. and other countries.

Increasingly the resistance of U.S. industrialists is reducing because it is becoming clear that 'carbon trading' by building wind, solar and other clean energy facilities in non-industrialised countries and selling carbon credits so acquired to industrialised countries was a golden opportunity. However, the general trade and market in emission credits were to have several limitations. The Kyoto protocol is likely to have only a modest effect on global warming as it would only bring about a change in the culture of energy use and a search for technological alternatives to fossil fbels. Secondly, from the economic standpoint, "evolving market-based mechanisms for implementing the protocol through a proliferation of projects to generate emission reductions via flexibility mechanisms – action aboard, rather than domestic reform of energy use – risked an inflationary effect on the value of the (fixed) amount of emissions to which the industrialized countries had committed themselves under the protocol, undermining any incentive for technological innovation.

Thirdly, form the political standpoint, failure to demonstrate domestic reform would undermine the 'moral leadership' of the industrialized countries on emission reduction, and with it any hope of extending future reductions to developing countries" (Woodhouse, 2002).

3.5 SUMMARY

There are different ideas of development depending on the theoretical perspective of the purveyor. Two ideas, however, which have stood the test of time, have been that of progress and modernisation. Development has been conceptualised as an unlimited linear growth of human potential or as the spread of Western utilitarian modernity throughout the globe. However a number of alternative perspectives, ranging from dependency theory to post-modern development, have seriously challenged the ideas of progress and modernisation as development, resulting in a greater emphasis on reflexivity and on indigenous cultures and ideas of development. One of the startling phenomena has been the absorption of many of these alternatives in mainstream development agenda.

Two views on the environment have subtendedthe development debate. One sees the environment or nature as separated from nature which has to be subjugated for utilitarian purposes, or separated in swathes to be conserved, or to be used but under a strict programme of stewardship. The other view takes notice of the fact that costs and benefits of the use and exploitation of nature have differential impact on people depending on which side of ownership they stand and therefore call for environmental impact assessments in all developmental projects.

The first view of modernisation has given rise to technological triumphalism through which the massive infrastructure projects on nature were constructed. However, it was soon realised that there are limits to growth based on infinite exploitation of natural resources and this created an atmosphere of sustainable development. However, by the 1980s, neo-liberalism became the ruling ideology and it focused on the contention that unless environmental goods are priced to match their scarcity, there would be overuse of natural resources. Both modernisation and neo-classical environmental economics have been challenged today by a plethora of environmental movements and perspectives which have focused on the gender, local and participative nature of far more sustainable projects. Focusing on the communitarian nature of many sustainable measures of the environment the world over, these perspectives pose the greatest challenge to mainstream environmental thinking.

In practice there is a continuing conflict between mainstream and alternative perspectives on development and the environment; nowhere is this more reflected than in the negotiations and parleys between different countries when it comes to the framing of international arrangements for control of CFCs, greenhouses gases and climate change in particular. The call for stricter adherence to emission controls by the developing nations has clashed with the drive for a market for carbon trading by the developed nations. The Kyoto protocol is witness to this continuing struggle.

3.6 TERMINAL QUESTIONS

1. Discuss the different approaches to development according to their main ideological bases.

2. Critically examine the three types of relationship between the environment and development.
3. Discuss the main critiques of mainstream development.
4. Study the critiques and counter-critiques of development in the major international agreements on the environment and climate change.

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UNIT 4 GANDHIAN APPROACH TO DEVELOPMENT

Structure

4.1 Introduction
Aims and Objectives

4.2 Dominant Ways of life

4.3 Alternatives Ways of Life

4.4 Gandhian Approach

4.5 Establishment of a Non- exploitative Economy

4.6 Decentralisation

4.7 Integrated Rural Development

4.8 Summary

4.9 Terminal Questions

Suggested Readings

4.1 INTRODUCTION

The science of economics is in crisis and it has begun to question its own philosophical assumptions and methods. The century old reign of positivist economics, which included famous models and their numerous versions such as Neo Classical, Keynesian and Marxian, has lost track of its philosophical assumptions. Communism has become out of date. It has been virtually disowned by its own promoters. To speak for it, is fighting a lost battle. Capitalism has developed serious contradictions- both economic and socio-cultural.

Various models of the world order are being suggested for the future but almost all of them are extensions of a set of analytical theories and ideologies based on a single paradigm, be it capitalist, socialist or any other, and aim at the survival of the existing world order which is of marginal significance for the welfare of the majority of the people. For the Third World all of them are only of academic interest. These models conceal the real interests of the dominant groups who are pitted against others living in poverty, illiteracy and squalor. Most of the people are sinking into misery while a few are enjoying a life of luxury.

With equal urgency, theoretical assessment of what is wrong with our ways of life has to be accompanied by actions to change or preserve crucial features of our world. And we find here, too, divergences over the implications of the present period of crisis for such action. Many people believe that more economic growth is required as the necessary basis for restoring falling employment levels and satisfactory welfare services. But most of the people argue that economic growth atleast of the variety we have experienced in recent decades, is itself part of crisis. Simply rejuvenating past patterns of production and consumption is not enough. The economic crisis provides an opportunity for a wider public to be altered to the complex of problems characterising ways of life. With choices

posed more starkly than ever, alternative directions for our societies may be soon as not only desirable but realistic, and as capable of being realised.

Aims and Objectives

After studying this Unit, you would be able to understand

- Gandhi's Approach to Development
- Shortcomings in our dominant ways of life and how they can be removed through Gandhian model.

4.2 DOMINANT WAYS OF LIFE

Two concepts underpin two corresponding approaches. The first concept is that of Dominant Ways of Life (DML). This refers to the patterning of our relationships with each other and with nature. Within a society these relationships are given a structure which means that social and environmental interactions typically vary systematically across class, sex and age group, and that their main features are reproduced with few drastic changes. This brief definition should be sufficient to indicate that by calling attention to ways of life we are doing more than considering the life styles of particular groups. We also want to go beyond thinking of ways of life as the accidental outcome of millions of isolated individual choices to understand how our choices are channelled within political, economic and cultural institutions, and how this social structuring of choices and opportunities affects our quality of life and our possible futures.

4.3 ALTERNATIVE WAYS OF LIFE

The second concept which is used extensively is that of Alternative Ways of Life (AWL). Agreeing that all is not well with our dominant ways of life, all right thinking persons are concerned with what alternatives might promote more satisfactory human and environmental relationships within countries, and a more just and peaceful international order. In part, this is done by considering what alternatives to our ways of life already exist within our societies, and in part by taking up questions of the strategies which can effect different sorts of change. At this point, it should be made clear that all aspects of our social life are not deteriorating, nor that every ominous trend necessarily signifies worsening conditions in dominating ways of life. Even over recent decades, many facets of life have improved. Much difficult and unpleasant work has been abolished; many lives have been saved that would once have been lost; we know more about conditions in other parts of the world; and so on. The problem that we seek to confront is that of explaining how such benefits can be produced along side new levels of disillusion, despair and destruction; and of determining how we can preserve such benefits while removing the causes of our social ills.

But still the point that something has gone wrong somewhere, is abundantly substantiated by general mass poverty among abundance,(India is a rich country inhabited by the poor), unemployment, widening gap between rich and poor, alienation, exploitation, etc. and there is a need for an alternative. These alternatives are possible, we have no doubt. The problem lies in realising them in going from the desire to overcome problems to concrete strategies for achieving change.

4.4 GANDHIAN APPROACH

Mulling over these points time and again, one becomes progressively convinced that the present global crisis, in which every thing in human system seems to be out of balance with particularly everything else, is a direct consequence of man's inability to rise to the level of understanding and responsibility demanded by his new power role in world. The problem is within man, not outside him, and so is any possible solution. And this is precisely what Mahatma Gandhi preached. To quote his words, "The world will live in peace only when the individuals composing it make up their mind to do so." It means that the individual should attain a state 'when mind, body and speech are in proper co ordination' (Young India, 1.10.1931). It can be summed up in the axiom that the most important factor on which human destiny depends is human quality not only the quality of certain elite but plainly the average quality of the billions of inhabitant of the planet.

4.5 ESTABLISHMENT OF A NON-EXPLOITATIVE ECONOMY

The first focal point of this Gandhian order is the establishment of a non exploitative economy. His approach to development is through the avenue of truth and nonviolence. Its goal is not pure material benefit but the advancement of humanity on its road to progress by strengthening the character and the individual development of personality of every single person engaged in such activity. No one's gain should be anybody's loss financial, physical, moral or spiritual. If there is to be a choice, the preference should fall on the eternal constituents of man rather than on the material. It is the first brick upon which the edifice of his entire economic philosophy stands. He denounced the concept of 'Economic Man' and because the mind of the industrial robot suffers an almost complete black out when it comes to freedom and responsibilities of a human person and it will not easily be quickened into a realisation of what has happened to it.

The problem is how to develop in a manner that is compatible with non violence. The problem gains real urgency, from the strenuous attempt all over the world to develop the under developed countries. This development is generally conceived along Western lines. Yet it is easy to see that the Western way of life cannot be permanent and will be incompatible with peace if it spreads to all mankind. It is based on non renewable resources and rejects any idea of voluntary self limitation.

The western way of life, even in a much more modest form than its American model, requires the annual use of several tons of 'fossil' fuel per person. But the world's resources of fossil fuels, obtainable at a reasonable cost, are strictly limited. It follows that a civilisation based on fossil fuels can be only an episode in the history of man and when measured against the life of nations a very short episode. By using coal and oil, we live on capital instead of income. This is quite legitimate under certain conditions. Many a young men has his education financed out of capital funds, but if he is wise he does two things: (a) he voluntarily limits his annual drafts on capital so that it will last atleast until he no longer needs it, and (b) he never loses sight of the fact that he must quickly learn to subsist an income, without further substantial drafts on capital. His principal task is to find a way of life that is self supporting. And that precisely is also the major task of modern man.

A way of life that even more rapidly depletes the power of earth to sustain it and piles

up ever more insoluble problems for each succeeding generation can only be called violent. It is not a way of life that one would like to see exported to countries not yet committed to it. Man's urgent task is to follow a non violent way in his economic life. It is a concept that needs to be widened out, to combat not merely the violence of man against man, but also the violence of man in his dealings with living nature around him and with the limited and finite resources of the earth. Let us take the agricultural research the world over which still goes into method, of violence insecticides, herbicides, fungicides, artificial fertilizers, etc. so that modern agriculture has become a gigantic battle with nature instead of a careful devoted striving to gear in with her unbelievably gentle and efficient methods. If man should emerge as victor from this battle with nature, he would undoubtedly find himself on the losing side. Similarly, a civilisation ruled almost exclusively by town dwellers is always in danger of forgetting this basic truth, until the emergence of famine reminds it of its utter dependence on the health of country side.

As in agriculture, this is so in industry and in every walk of life. We need to give our attention to the development and perfection of non violent methods, so that answers will be found to the three fold crisis of this modern world the crisis of resources exhaustion, the ecological crisis, and the crisis of man's alienation and disorientation. All this requires work with a new orientation.

Gandhi did not undermine the importance of economic aspect of life; rather he gave it, its due importance. All men have material needs. It is neither wrong nor unworthy to devote thought and care to the satisfaction of those needs to the economic aspect of life. In view of the universality of the economic aspect it is not surprising that a systematic body of thought, should have grown up, commonly called Economics. But one thing is surprising that the science of Economics is based on one particular outlook on life, the outlook of the materialist. Every concept of Economics is rooted in this outlook. Even where Economics admits that man does not live by bread alone, it counts as cost any activity that fails to cater for material needs. Economics distinguishes between productive and unproductive activities, and only those are called productive which cater for material wants. Not that Economics had failed to concern itself with welfare. But even welfare is a term completely rooted in materialism.

Development as taught today throughout the world recognises no limit of any kind. It is therefore, the Economics of materialism and nothing else. There is implicit in it a purely materialist view of life, and it is inseparable from this view of life. When, then, shall we get a system of thought that could be called non violent economics? When will people realise and understand that the economics of materialism is not of universal validity, that any ordering of life in accordance with its preccepts will be utterly incompatible with, and inimical to, the non violent way of life? When will the teachers of Economics begin to be least objective enough to tell their students that the economics of present day teaching is the purest form of materialism and has no meaning for the hungry and semi starved people outside? When will they take cognizance and admit that other systems of economics are possible and necessary and are even already available in rudimentary form?

Laying down the foundation of his non violent order, Mahatma Gandhi said about Swadeshi: 'In your village you are bound to support your village barber to the exclusion of the finished barber who may come to you from Madras. If you find it necessary that your village barber should reach the attainments of barber from Madras you may train him to that. Send him to Madras by all means, if you wish, in order that he may learn his calling. Until you do that you are not justified in going to another barber. That is Swadeshi. So

when we find that there are many things that we can not get in India we must be without them. We may have to do without many things... It has been urged that India can not adopt Swadeshi in the economic life. Those who advance this objection do not look upon Swadeshi as a rule of life. With them it is a more patriotic effort, not to be made if it involved any self denial. But Swadeshi, as defined here, is a religious principle to be undergone in utter disregard of physical discomfort caused to individuals. Much of the deep poverty of India is due to the departure from Swadeshi in the economic life. If not a single article of commerce had been brought from outside India she would be today a land flowing with milk and honey' (The Collected Works of Mahatma Gandhi, XIII, p.231).

But he made it clear that under this plan of life, in seeing to serve India to the exclusion of ever)! other country, 'I do not harm any other country. My patriotism is both exclusive and inclusive. It is exclusive in the sense that, in all humility, I confine my attention to the land of my birth, but is inclusive in the sense that my service is not of a competitive or antagonistic nature. ***Sic utere ut alienum non laedas is*** not merely a legal maxim, but it is grand doctrine of life. It is the key to a proper practice of non violent economy" (Young India, 21.10.1926).

Drawing his picture of the ideal economy, he wrote in ***Young India,*** "According to me the economic constitution of India and for the matter of that, the world should be such that no one under it should suffer from the want of food and clothing. In other words, every body should be able to get sufficient work to enable him to make the two ends meet. And this ideal can be universally realized only if the means of production of the elementary necessaries of life remain in the control of masses. These should be freely available to all as God's air and water are or ought to be; they should not be made a vehicle of traffic for the exploitation of others. This monopolization by any country, nation or group of persons would be unjust. The neglect of this principle is the cause of destitution that we witness today not only in this unhappy land but in other parts of the world too" (ibid, 15.11.1929).

4.6 DECENTRALISATION

This takes us to the second focal point of his approach to development. The very idea of non exploitative economy paves the way for decentralisation. A non violent system such as he wished to be established in India was to him an impossibility so long as there was a wide gulf between the rich and poor. As a humanitarian, it was the conditions of poverty prevailing in the country and the moral and material degradation that they spelt which claimed his attention when, from beyond India's shores, he preached the gospel of self sufficiency. It was the same humanitarian instincts which first prompted Gandhi, on his settling down in India, to turn to the production of cloth solely with the aid of the hands to provide employment for millions and thus to rid the country of its poverty. That poverty persisted despite the richness of the country's resources in men and material. Gandhi gave a new interpretation to the gospel of Swadeshi to redress the imbalance between agriculture and industries. The Swadeshi mentality, he averred, should denote a determination to find all the necessities of life in India. This was possible, he believed, with the aid of labour and intellect of the villagers. He had no doubt that if the proper atmosphere was created all our wants could be supplied from our villages.

Under the conditions of centralised production, economic power tended to be concentrated in fewer and fewer hands. This had intensified existing inequalities, to widen the gulf

between the rich and the poor and to breed conflict between labour and capital. The adoption of decentralised methods of production would, he urged, ensure conditions of social justice, make it possible for producers to control their means of production and to enjoy in full measure the benefits accruing from their productive efforts.

But the protagonists of industrialisation of the type that has developed, particularly in the developed countries, have urged that the intensification and diversification of that form of industrialisation is the only means of enabling us to raise the standard of living of the people and of reducing unemployment. However, in such industries, the level of employment, instead of going up, has gone down. While labour engaged in some of the industries and in certain of the occupations in these industries may have received remuneration higher than what was available through cottage production, when the cost of living in towns and cities is taken into consideration, it is doubtful if everywhere the artisan who becomes a factory worker in a corresponding industry is better off. Besides when account is taken of the large numbers who, in the process of industrialisation are thrown out of work or whose work has become intermittent, we find that the aggregate remuneration for a given number of individuals instead of rising has fallen. Even in terms of averages, the per capita income inspite of the tremendous contribution of industrial production of the national income has remained practically stationary since industrialisation of the centralised variety, increasingly dependent as it is on the use of steam, electricity or similar non human power has the direct consequence of throwing out of employment the human beings who supplied the power. The corresponding non mechanised industries find it more and more difficult to face competition of their well organised large-scale rivals and gradually languish. A few lose all chances of affording remunerative employment. Translated into economic terms, their enforced idleness must depress the per capita income and drag down the standard of living of the toilers by hand. What is more important to note is that large-scale mechanised industries cannot by any stretch of imagination, provide the additional employment needed to satisfy the demand for productive work by millions of our fellow citizens. Thus for employment generation, the pattern of our economic organisation must undergo a change, particularly in the matter of production of consumers goods which the people in the countryside did in the past and can even now produce to meet their own requirements. Today, in several of these crafts and industries there is enormous idle capacity available, which can be put to productive use to add to the wealth of the nation and to supplement the pittance which the underemployed agricultural labourers and the small peasants or the artisans or cottage workers are able to earn. Our planners usually speak of the unused installed capacity of industrial plants. If we conduct a census of unutilised installed capacity of the modest appliances tools and implements of our artisans and other cottage workers, we would find that in the aggregate the latter represent a greater economic waste. The tools and appliances are simple, the processes are easy to learn, often the traditional skills and aptitudes are present and, besides, the pursuit of these crafts and industries can be fitted into the pattern of rural life. No centralised industries located in towns and cities and not even those established in rural surroundings can quite meet the requirements of a population large portions of which must work in the countryside for some hours almost throughout the year and occasionally during particular seasons. It is only the decentralised form of industrial organisation that can meet this peculiar need.

Small-scale and cottage industries can also avoid the evils of industrialism. The heart of social reform today is to make the world acknowledge the central place in it of every man's work. In this mechanised age, most of us become merely cogs in a wheel. The

environment provided by factory employment is not good enough to develop the basic qualities of manhood. It is for this reason that, if these evils of industrialism are to be avoided, wherever possible we should follow the road of decentralisation. It is only then that it will be possible for us in India still to preserve the dexterity, the skill and the art that our craftsmen engaged in various industrial pursuits possessed and still have not ever make anything like the lost. There is no prospect that machine work will ever make anything like the demand or character from the ordinary workers that the old crafts used to make and some skilled work in some callings makes today, the craftsman who knows something of what beauty is because his own hands bring it into being, all get more from their work as well as giving more to it than the modern factory worker even can.

There is yet another aspect which should induce us as to prefer the decentralised form of industrial production wherever it is feasible. Planners should ensure that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment and that the ownership and control of the material resources of the community are so distributed as best to subserve the common good. The decentralised method of production has this to recommend it. But with mass production and mass distribution go mass financing and these always conspire to expropriate ever increasing numbers of small owners of land and productive equipment, thus reducing the sum of freedom among the majority and increasing the economic power of minority to exercise a coercive control over the lives of their fellows. Hence, we have to eschew methods of economic organisation which lead to concentration of economic power in a few hands.

A few other considerations must also claim attention. All these justify concentration of efforts on cottage and small-scale industries. The availability of raw materials, tools and implement, skill and markets are factors that have to be taken into account. The raw material needed for essential consumer goods are ordinarily available in the rural areas. The tools and implements are already there or were there until recent times or they are such as can be easily manufactured locally by skilled carpenters and blacksmiths. For most of the individual operations no great skill is needed; but undoubtedly, what little is required can be acquired without much difficulty. Providing for simple instruction in these crafts will not present much of a problem. In fact, the case with which the skill can be acquired is, itself, an argument in their favour. An additional advantage is that both men and women can ply these crafts and that the bulk of them can be carried on in their homes by the humblest of villagers. For most of the commodities the market they cater to will be the local ones. Transport should not add to the costs beyond what are incurred on the products of the cer¹ralised industries. Further warehousing, handling, trading and other operations, instead of being centralised in growing trade centres and in metropolitan cities, will tend to get dispersed. That should count an additional advantage.

But the most important question that has to be answered is how decentralisation is to operate in practice. We have to seek for increase in production and the provision of additional employment in the traditional rural industries and crafts. These were parts of our economy in the past and met the local requirements of various consumers' goods with the surplus production passing on the towns and cities either for consumption or for export. It is mainly these industries and crafts that have to be reorganised. Reorganisation connotes effort for securing raw materials, supplying tools and implements, providing credit and arranging where necessary, for exchange of goods or marketing. Under the old economy, these operations were conducted in a particular manner. It may be that in the changed conditions of our economy the pattern of the operation may not be the same.

This is particularly true of the occupations or crafts which during the past half of century went out of vogue and where the revival calls for some outside stimulus to be applied and for some facilities to be granted. Where new occupations are to be introduced in an area, similar organised efforts will be necessary.

It is also likely that the unit of operation may not continue to be an individual or his family as in the past. A number of families may group themselves on trusteeship basis. The trust, according to the needs of the situation, may either be a village multipurpose agency or an institution for a specialised craft covering, if that is found necessary, an area larger than a village.

4.7 INTEGRATED RURAL DEVELOPMENT

Integrated rural development is the next focal point of Gandhi's approach to development. This is closely related with the preceding one. Gandhi had sought to build India from the bottom, that is from the poorest and weakest and have followed the centrality of village. He was deeply pained to see the disintegration and ruin of the villages. "Our cities are not India. India lives in her seven and half lacs of villages. The city people are brokers and commission agents for the big houses of Europe, America and Japan" (ibid, 13.10.1921). In the words reminiscent of Dadabhai Naoroji's concept of drain, the Mahatma referred to the suffering and exploitation of Indian villages as 'the bleeding process that has gone on for the past two hundred years'. His heart bled to see the misery of the Indian villagers and he formulated his famous Constructive Programme, a considerable number of whose categories are relevant to them.

Gandhi felt that a strengthened and economically sound rural economy would revitalise Indian economy. He preached, hence the 'gospel of rural mindedness'. A rural economy of self contained villages alone could be the basis of a non violent economy. He stated, "You have therefore, to be rural minded before you can be non violent and to be rural minded you have to faith in the spinning wheel" (Harijan, 1.11.1939). He felt that the small communities moulding their lives on the basis of voluntary co operation would be the best environment for the extinction of exploitation. The regeneration of India, he felt, would be impossible without village reconstruction. Hence he gave a slogan 'Back to villages'. He gave a call to everybody to go and work in villages, develop rural economy, rural industry and rural skill. In small self sufficient villages producing mostly for their consumption, a peaceful life devoted to the pursuit of democratic values was possible. Big urban concentrations, on the other hand, result in the monopolisation and accumulation of wealth by a minority. Economic concentration is bound to lead to political centralisation. Centralisation in turn, supports violence. He was of the definite view that non violence could be realised not on the basis of a factory civilisation but only on that of self contained villages.

Pt. Jawahar Lal Nehru, expressed his doubt over this model and wrote: "The whole question is how to achieve this (non violent) society and what its contents should be. I do not understand why a village should necessarily embody truth and non violence. A village, normally speaking, is backward intellectually and culturally and no progress can be made from a backward environment. Narrow mined people are much more likely to be untruthful and violent" (Pyarelal, 1965, p.545). Gandhi himself acknowledged the obnoxious essential realities of Indian village. 'Instead of having graceful hamlets dotting the land, we have dung heaps. The approach to many villages is not a refreshing experience. Often one would like to shut one's eyes and stuff one's nose; such is the

surrounding dirt and offending smell'. However, he was not willing to accept this state of affairs as ***fait accompli,*** as an irredeemable situation. He was confident that the prevailing situation would be transformed by the villagers themselves provided proper help and guidance are extended to them. But ever since we started planning our economic life most of our planners, conceive of national plans mainly in terms of industrialisation. We have the slogan dinned into our ears, "industrialise or perish" and many of us have come to believe that industrialisation is the panacea for all our ills. What we need, essentially, is however, a better balanced economy under which the growing pressure of population on the land is reduced and those who are on the land are enabled to produce and earn more. The backwardness of the economy, or the unproductive employment of an increasing population or the non utilisation of material resources locally cannot be remedied by intensification of the process of industrialisation. Besides, the feasible rate of industrialisation is governed not merely by the problems associated with the erection of factories; it is a function of an organic type of growth in which the essential feature is the mutual dependence of the various sections involved. In any development arena these sectors must keep in pace.

Referring to the economic conditions of India, in a paper on 'The Human Dimension of Economic Growth: Challenge of Stagnation in Under Developed Countries' presented by him at Asia Assembly in New Delhi in 1973, Professor Gunnar Myrdal said:

"Gandhi was certainly a planner, and a rationalistic planner but his planning was all embracing and laid main stress on sanitation and health, the raising of nutritional levels by mere intensive agriculture, a redirection and not only an expression of education so that it becomes basic and not merely literary and academic and a redistribution of land wealth to create greater equality."

He further said, "It is only in the latest years that we have more generally come back to Gandhi's ideas, when even some economists have moved to press for an integrated planning which is the modern term for what Gandhi was all the time teaching. My Indian friends will not be offended when I say that if Indian planning has not been more successful than it has actually been, the main explanation is that they have not kept as close as they should, to the fundamentals of the teachings of the Father of the Nation" (Nagpur Times, 16.02.1973).

4.8 SUMMARY

The goals of Gandhian economic system are quite different from ones the country has been pursuing since independence. Therefore, plans for economic development such as one envisaging a seven per cent or eight per cent rate of growth, which are some times presented as Gandhian alternatives, must be outside the framework of the Gandhian Economic System taken seriously. The Gandhian path is not an alternative path of reaching the same goal of economic development which the country is pursuing. It is a path leading to an alternative goal of human life and existence. The Gandhian alternative is Sarvodaya, a classless society based on destruction of the class but not on the destruction of the individuals who constitute the classes, a system of production that does not fail to make use of science and technology for creating an economy of abundance but does not in the process either kill individual initiative or freedom for development nor create a psychology of ceaseless striving for more and more of material goods, a system of distribution that will ensure a reasonable minimum income for all and, while not aiming at a universal equality of an arithmetical kind, will nevertheless ensure that all private

property or talent beyond the minimum will be used as a trust for the public good and not for individual, aggrandisement, a social order where all will work but there is no inequality either in status or in opportunity for any individual, and a political system where change is the result of persuasion, differences are resolved by discussion, and conflicts by love and recognition of mutuality of interest (Sharma, 2003, p.186).

4.9 TERMINAL .QUESTIONS

1. Critically examine Gandhi's approach to Development.
2. What are the shortcomings in our dominant ways of living? How can these be removed through Gandhian approach to Development?

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