

BSOE-143

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COURSE COORDINATORS

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Unit 2	Realist- Constructionist	Dr. Suraj Beri	
Unit 3	Debate Key Concept	Dr. Suraj Beri	
2	APPROACHES		Dr.Kiranmayi Bhushi
Unit4	Social Ecology	Ms. Bhawana Sharma Jha	
Unit 5	Treadmill of Production	Dr. Kamminthang Mantuong	
Unit 6	Ecological Modernisation	Dr. Kamminthang Mantuong	
Unit 7	Risk	Dr. Kamminthang Mantuong	
Unit 8	Ecofeminism and Feminist Environmentalism	Dr. Vandana Madan Dr. Kiranmayi Bhushi	
Unit 9	Political Ecology		
3	ENVIRONMENTAL ISSUES AND CONCERN		Prof. Debal Singha Roy
Unit 10	Anthropocene and Climate Change	Dr. Sarbanti Choudhuri	
Unit 11	Pollution	Dr. Sarbanti Choudhuri	
Unit 12	Environmental Policy in India	Dr. Sarbanti Choudhuri	
Unit 13	ENVIRONMENTAL MOVEMENTS IN INDIA Forest Based Movement – Chipko	Dr. Sarbanti Choudhuri	Prof. Debal Singha Roy
Unit 14	Water Based Movement – Narmada	Dr. Sarbanti Choudhuri	
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COURSE INTRODUCTION: ENVIRONMENTAL SOCIOLOGY

This course is designed to introduce students to the core debates of environmental sociology, different approaches within the sub-discipline and how these approaches may be used to understand environmental issues and movements in India.

Block 1 Envisioning Environmental Sociology: In this block there are three units that deal with various aspect of what constitutes the subdiscipline of environmental sociology. In Unit 1 **Environmental Sociology: Nature and Scope** we introduce you to the emergence of Environmental Sociology as a discipline in various parts of the world, its nature deriving from the varied contexts of its origin. We also enumerate some of the environmental problems and ecosystem disruptions/degradations upon the natural environment by the actions of human beings living in the society. Finally, we see that to understand the scope of relationship between the human society and its biophysical environment, one must comprehend societal response to environmental crisis. This conceptualisation is a never-ending dialogue between the theoretical ideas of environmental scientists/sociologists and the environmental activism of the varied environmental movements across the globe. Thus, Unit 2 on **Realist- Constructionist Debate** introduces to the arguments debates between the constructionist and realist conception of environment. Hence, the continuously evolving nature and scope of the discipline of Environmental Sociology. Unit 3 delineates the **Key Concepts** in environmental sociology that help us understand the interconnections among human beings, social institutions, and environment. Several concepts were discussed to show how ecology and environment are addressed in sociology.

Block 2 Approaches: this block deals with various approaches to the study of Environment its relation with culture and society. Unit 4 of this block which is on **Social Ecology** traces the origins of this perspective from the writings of P.A. Kropotkia in the 19th century to Murray Bookchains anarchist socialist social ecology of 20th and 21st century. Next, we examine the origins of social-ecological perspective in India through the writings of Radhakamal Mukherjee, during the first phase of environmental awakening in India. However, the second phase of environmentalism in India inaugurated by popular social movements in the wake of unabated ecological destruction caused by development led industrialisation, has alerted the social scientists to investigate and find solutions in the framework of 'sustainable development'. Thus, indicating the evolving nature of 'social ecology' as a paradigm. The next unit **Treadmill of Production** tries to understand the 'treadmill' metaphor used in the treadmill of production theory within the context of industrialisation in the west. We then examined the logic of the treadmill and its impact on society and environment. Next, we explored why the treadmill theorists focus on production rather than consumption in their theoretical framework. We also examined how material desires are socially constructed by the treadmill elites and the role of citizen-workers in the productive system. Finally, we examined the treadmill of production within

the context of globalisation. Unit 6 **Ecological Modernization** tries to understand ecological modernisation. We then examined the contributions of various ecological modernisation theorists and the revision that has taken place in ecological modernisation theory. Unit 7 is on **Risk**, in this unit we tried to understand the emergence of the notion of risk by tracing briefly its origin and evolution over a period of time in human history and culture. We examine the contributions of Ulrich Beck and Anthony Giddens to the understanding of new risk, which has its origin in modern institutions of science, business and politics. We saw how this 'risk' is different from all previous known form of risks due to its potential for catastrophe. Their work shows how risk is a product of reflexive modernisation and how it is pervasive and global in nature. Unit 8 is on **Ecofeminism and Feminist Environmentalism** where we examine some of the critical debates on the relationship between gender, environment, development and patriarchy. We looked specifically at the role of maldevelopment and the exploitation of women and nature with the help of the work of Vandana Shiva and Ecofeminism. We then examine the critical perspective of Feminist Environmentalism and the work of Bina Agarwal that emphasised the need to broaden our understanding of the material realities and exploitative and destructive role of development on the lives of women. Unit 9 which is on Political Ecology looks at connection between environment and political economy. We discuss how ecological issues emanate from an embedded context which have huge bearing on who bears the cost of environmental related crisis. To better understand how politics and economics play a part we examine colonial state policies on forest and follow it up with more articulation on equity and human rights with regards to environmental burdens and responsibilities through the concept of environmental justice and climate justice.

Block 3 Environmental Issues and Concern : this block looks at some major concerns that one has to grapple with in the contemporary times of environmental crisis. Unit 10 is on **Anthropocene and Climate Change** where we start with a general introduction of the geological time-scale to understand the evolution of the anthropocene. We capture the impacts of climate change and then go on to conceptualise global warming and try unearthing its historical roots. We analyse the nexus between industrialisation and global warming and its consequences for the anthropocene. In unit 11 on **Pollution**. Pollution is the introduction of contaminants into our natural environment that cause harmful change. Pollution can take several forms of chemical substances or energy, such as noise, heat, or light. Pollutants or the components of pollution, can be either foreign substances/energies or naturally occurring contaminants polluting the environment. Major forms of pollution include air pollution, light pollution, soil contamination, and water pollution. Pollution control mechanisms though are getting evolved with time, pollution still remains beyond control of our society at large. Unit 12 is on **Environmental Policy in India**. We start the unit with a general introduction of climate change and go on to discuss at length the international time line of the policies and how the perspectives changed over time especially in recognising the wedge between the developed and developing classes. We then discuss at length on

the shifting paradigms in the field of national policies . India's response and the call for sustainability and the necessary measures for moving towards the greener earth and a clear sky are discussed

Block 4 Environmental Movements in India: has three units on various environmental movements. The units 13 is on **Forest Based Movement – Chipko** International ecologists consider Chipko as a cultural response of the people's love for their environment. Chipko was later popularised by the feminist movements which pointed out that village women have to walk for long distances to collect fuel and fodder and therefore, they become the first victims of forest destruction. Eco-feminists held that women are closer to mother earth and more ecologically conscious. But undoubtedly, Chipko's biggest contribution probably was the championing the pro-poor environmentalism. Unit 14 is on **Water Based Movement – Narmada** in this unit we examine the *Narmada Bachao Andolan*; The movement was mired in a long legal battle where it though won the support of the World Bank and the Supreme Court could not persist its long drawn battle. The global era with its hefty promises for modernisation and beautification often crouches on such projects to make the common men the scape goats of the post-modern era. The movement will therefore be remembered not only for instigating mass struggles but also for garnering local consciousness in one's own individual own ways too. Unit 15 is on **Land Based Movements – Anti-mining and Seed** where we examine several movements. All these movements speak of the indigenous voices of the local farmers and tribes. In the case of both land grab movement and the seed movement, the contemporary forces of globalisation, liberalisation and privatisation were counteracted forcefully by the local farmers. The mass protests spoke of the collective distrusts and anger of the poor farmers against the giant corporations and the modern infrastructures. The movements were articulating not only because they spoke of the thefts conducted by the trans-nationals but they waged a war against the ecological and environmental decay, the most pertinent challenge that the society is facing today. It is expected that after learning of these movements, you too will grow an interest for the rural agrarian structure and try find out all those products which were being patented out. This will make you aware of the ill-effects of bio-piracy and how it often leads to the wanton destruction of nature and our indigenous knowledge.

UNIT 1 ENVIRONMENTAL SOCIOLOGY: NATURE AND SCOPE •

Structure

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- 1.1 Introduction
- 1.2 Emergence of Environmental Sociology
- 1.3 Conceptualization of Society – Environment Relationship
 - 1.3.1 Human Ecology Model
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 - 1.4.5 Other Ecosystem Disruptions
- 1.5 The Societal Response – The Way Forward
- 1.6 Let Us Sum Up
- 1.7 References
- 1.8 Specimen Answers to Check Your Progress

1.1 OBJECTIVES

After reading this unit, you should be able to:

- Discuss the context of origins of Environmental Sociology as a discipline;
- Give an account of some of the theoretical accounts to understand the nature of relationship between society and environment;
- Examine some of the crucial environmental concerns brought upon itself by the human society;
- Note that Environmental Sociology as a discipline is an ongoing endeavour.

• Written by Bhawana Sharma Jha , Delhi University

1.1 INTRODUCTION

The term *environmental sociology* is a compound of two words — ‘environment’ and ‘sociology’. *Environment* comprises a close interconnection between people, other living beings, land, water, air— all that is essential for physical life on earth. *Sociology* is the systematic study of the society we live in. It is about people, groups, institutions, interactions between them and the resulting processes and structures in the society — all that is essential for social life. Therefore, *environmental sociology* is the study of relations between human societies and their physical environments, or according to R. Dunlap and Catton, ‘societal-environmental interactions’ (Dunlap and Rosa. 2000. Encyclopedia, 2000). These interactions, at the interface of society and environment have a reciprocal influence on each other. However, environmental problems or concerns emerged as a consequence of these interactions. Some of the glaring environmental concerns being — global climate change, soil degradation, declining biodiversity, ozone layer depletion, solid waste problem, pollution, acid rain, water scarcity, and many more.

The unit will start with an account of the emergence context of Environmental Sociology as a discipline. Following which we will examine some of the theoretical accounts of the nature of the relationship between humans and their environment. Underlying these environmental problems is the recognition of detrimental impact of industrialisation, urbanisation and the continuing globalisation on the bio physical environment. Acknowledging the pervasive environmental degradation has led to recognition of exercise of power and the consequent conflict deriving from environmental issues. Since, exercise of power tends to operate unequally in the society, conflicts in the realm of environmental problems tend to highlight the significant role of social inequality. Thus leading to the emergence of environmental activism through the various environmental movements (like, Chipko, Narmada Bachao Aandolan, Earth Hour, Environmental Justice Movement, Greenpeace, etc.) which try to bring about a balance in the relationship between society and environment, which has become highly skewed in favour of society apparently, but does not favour either society or the environment in the long run.

Hence, the emergence of a new field of Environmental Sociology “...out of the intellectual and political ferment generated by movements for social reform and change.” (Hannigan, 1995).

1.2 EMERGENCE OF ENVIRONMENTAL SOCIOLOGY

Thinking about the environment, prior to the emergence of discipline of Environmental Sociology, lay at the door of Conservationist (like George Perkins Marsh, Gifford Pinchot, Aldo Leopold and others) and

Preservationists (like John Muir, Robert Marshall and others) who highlighted the fragility of the biosphere and the attendant ecosystem. However, with the advance of industrialisation, specially its rapid pace after the Second World War, led to not only unsustainable encroachments on the natural environments, but even over-exploitation through resource extraction and waste addition, such that they increasingly underwent depredations and environmental degradations and even destruction in some instances.

Box 1. Environmental Concern landmarks

- The term ‘environmental sociology’ was coined by **Samuel Klausner** in his book *On Man in His Environment* (1971).
- 22nd April, 1970 was celebrated as the ‘**Earth Day 1970**’, a debut of the modern environmental movement.
- 1970’s was identified as the ‘Environmental Decade’.
- Publication of *Silent Spring* (1962) by **Rachel Carson**, an expose of ecosystem damage consequent to the use of agricultural pesticide.

Prior to the 1970’s, American interest in environment was restricted to ‘rural sociology’, with a two-pronged interest in – communities dependent on nature for their livelihood, and in parklands as wilderness areas. However, 1960’s and 1970’s turned out to be environmentally turbulent decades – socially, politically and economically, which compelled the intellectuals and academicians to rethink their academic standpoints in terms of the environment.

Box 2 Silent Spring (1962)

Is an environmental science book written by Rachel Carson after almost a decade of research on the adverse environmental impact of indiscriminate use of synthetic pesticides, like DDT. The effects of these pesticides are not simply limited to eliminating pests from the natural ecosystems, but are also harmful to human existence.

Not only did this book bring environmental concerns to the forefront of American public, but it brought about numerous policy changes and led to the creation of the US Environmental Protection Agency (EPA).

Riley Dunlap and William Catton, founders of the field of ‘environmental sociology’ in US and other key contributors to this field have made a distinction between – ‘Sociology of environmental issues’ and ‘environmental sociology’. Sociology of environmental issues is, “ the application of traditional sociological perspectives on public opinion, social movements and formal organisations to topics such as the characteristics of environmental activists, and the tactics and strategies employed by environment groups” (Hannigan, 1995). Whereas, “‘Environmental

Sociology' focused on the study of environment- society interaction...[i.e.] the underlying relationship between modern industrial societies and the physical environments they inhabit." (Hannigan, 1995)

Box 3. Love Canal Debacle

Love Canal is a neighborhood in Niagara Falls, New York, US. It came into prominence subsequent to an environmental disaster befell the community living there. During the 1940's, the Love Canal became a landfill for dumping chemical wastes by the Hooker Chemical Company. As the population increased gradually, the landfill too became inhabited. However, during construction of various buildings the dumping sites were partially exposed, such that during and after the rains the chemicals started seeping above ground into people's homes and backyards and started adversely impacting their health and wellbeing. Result of blood tests showed high white blood cell count, a precursor to leukemia, and chromosomal damage among the residents up to 33%, and many other ailments.

By the 1970's, the Love Canal became the most appalling environmental tragedy in American history. It was identified as a 'federal health emergency' by the then US President, Jimmy Carter. Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in 1978, also known as the Superfund Act, in response to such environmental hazards. Simultaneously, environment ('greens') became a political force to be reckoned with, on the European Continent through activist non-governmental organisations, green political parties and environmental movements. In Britain, though initially, interest in the environment tended to be theoretical, linking classical sociological perspectives to the relationship between nature and society. However, by the 1980's, due to the establishment of Global Environmental Change Programme, empirical research in the field of environment flourished. Unlike Britain, in Netherlands research in environmental sociology focused on agriculture and risk assessment, thereby searching for practical solution to the problem of inundation, as 26% of Netherlands land area falls below sea level.

Environmental Sociology as a discipline established in the early 1990's in the East— Japan and Korea. However, in Japan, research in the field of environment had begun in the 1950's, subsequent to the identification of Minimata disease as a man-made environmental casualty. In 1992, Japanese Association for Environmental Sociology was established. Even though, the Korean Association for Environmental Sociology was established in 2000, research in and teaching of the discipline of 'environmental sociology' began in the early 1990's in Korea.

Box 4. Minimata Disease is a neurological syndrome, caused by severe methyl mercury poisoning. Symptoms include, ataxia, numbness in hands and feet, general muscle weakness, narrowing of the field of vision and

damage to hearing and speech; and many other depending upon the severity of poisoning. Minimata disease is caused by the daily consumption of large quantities of fish and shellfish, which were heavily contaminated with methyl mercury. Methyl mercury is a toxic chemical waste generated by the chemical factories during the process of production of acetaldehyde (a raw material of octanol, a chemical used in polyvinyl chloride manufacturing, much in demand in international markets), which was then dumped into the sea.

The first case of Minimata epidemic occurred in the 1950's in the Southern coastal area of the Yatsushiro Sea in the Minimata Bay, Japan. And, the second epidemic occurred in 1960's in the basin of the Agano River, Japan. Minimata disease is caused by environmental pollution due to industrial activity. (Noriyuki Hachiya, 2006).

Check Your Progress 1

Complete the following sentences by filling in the blank spaces:

- 1) Environmental sociology is the study of relations between
- 2) Some of the glaring environmental problem are (give at least three)
- 3) is the sustainable use and proper management of the biosphere.
- 4) Research in environmental sociology in Netherlands focused on

1.4 CONCEPTUALISATIONS OF SOCIETY – ENVIRONMENT RELATIONSHIP

Deriving our understanding of 'society - environment relationship' from the definition of environmental sociology given above, as societal-environmental interactions – includes the ways in which human actions in the society influence the environment, and the environment modified as a consequence of human actions influence the society, reciprocally. This relationship also includes the manner in which such interactions are socially construed and acted upon. However, these interactions gain significance due to the value of biophysical environment for the survival of humankind. This necessitates an understanding the nature of relationship between the biophysical environment and the society undergoing a continuous change due to imperatives of development.

1.3.1 Human Ecology Model

The *human ecology model* given by Robert E. Park in the 1920's, borrows a series of principles from the biophysical environment given by Charles Darwin and other naturalists. Park derives his understanding of the inter-relation and interdependence between plants and animals in nature and related it to inter-relations and interdependence between individuals and communities in human societies. He begins with an explanation of '*web of life*' (a succession of organisms in the biophysical environment that are linked to each other through transfer of energy and nutrients) establishing a '*biotic balance*' or '*ecological balance*' i.e. a state of equilibrium in the natural systems. He uses the metaphor of '*biotic balance*' to explain '*social equilibrium*' in the human society.

A key principle of '*web of life*' is '*competition*' and '*struggle for survival*', processes which disrupts the equilibrium established in nature / society. This disruption is overcome by the survivors finding their '*niches*' in the physical / social environment, and also through '*division of labour*' among different species in the ecosystem / categories of people in the society. In the human society, the disequilibrium is usually due to famine, disease, war, excessive urban development and industrial pollution, which artificially breaks the chain of web of life in the social environment. However, "he believed that such changes had the capacity to give a new and often superior direction to the future course of events forcing adaptation, *change* and a *new equilibrium*." (Hannigan, 1995).

Even though Park identified similarities between the physical environment and human society, yet he acknowledges the differences between human ecology and bio-physical ecology. According to him, the main difference lies in the fact that human society is organised at two levels — biotic and cultural; whereas, the natural environment is organised at another set of two levels — biotic and abiotic. Therefore, culture and its attendant features play a significant role in not only distinguishing society from physical environment, but also becomes the context for human mastery over nature, and setting in motion ecological depredations.

Box 5. Chicago School and Environment

Robert E. Park, E. Burgess and McKenzie applied the principles of human ecology to the urban spatial arrangements in the city. The city was seen as territorially based ecological system in which a continuous struggle over land use produced changes and redistribution of urban population in various zones, arranged concentrically. This is known as Concentric Zone Theory.

1.3.2 Society - Environment Interactions

One of the best enunciation of ‘ society-environment interactions ’ is W. Cotton and R. Dunlop’s model of ‘ *three competing functions of the environment*’ which serves the human society.

First, the environment provides the sustenance base or acts as the supply depot for human societies. Humans need air, water, food, forests, fuels, manufacture many other articles for consumption for their sustenance. Environment is the source of all these renewable (e.g. forests) and non-renewable (e.g. fossil fuels) natural resources. However, when we use resources faster than the environment can supply them, we create resource shortages or scarcities.

Second, environment provides the living space or habitat for human societies to exist. It provides us with our home, workspace, playgrounds, travel and transportation systems; in other words, all the essentials of our daily life. However, overuse of this function results in overcrowding and congestion. It also impinges on the ability of the environment to sustain other species.

Third, the environment also functions as a sink or waste repository. In the process of living and consuming the various resources provided by the environment, humans produce vast quantities and varieties of waste products. The environment then acts as a sink or waste repository for these wastes, either absorbing or recycling them (e.g. when trees absorb carbon dioxide and produce oxygen). However, modern societies which are densely populated generate more waste than the environment can absorb or recycle. Thereby, resulting in various kinds of pollution — land, water, air, and others.

Furthermore, with the advancement of civilization each of the three functions of the environment compete for space to expand their activities. Such a competition is especially obvious in conflicts between the living space and waste repository functions. Using an area for a waste site usually makes it unsuitable for living, for instance, the Love Canal Debacle. Similarly, increasing urbanisation creates more living space for people, but the land can no longer be used as a sustenance base for humans or wildlife. In recent years, competition and conflict among the three competing functions of the environment has grown considerably. Also, when human societies overuse their bio-physical environment’s ability to fulfill these three functions, *environmental problems / disruptions* in the form of pollution, resource scarcities and overpopulation, result.

1.3.3 Society-Environment Dialectic

With the increase in environmental problems coming to public attention in the 1970’s, a need to examine, “the structural relationship between societal organisation and physical environment” (A. Schnaiberg, 1975) came to fore in the discipline of environmental sociology. A groundbreaking study by Allan Schnaiberg, *Social Syntheses of the Societal – Environmental*

Dialectic: The Role of Distributional Impacts (1975) to address the issue led to an understanding of a dialectical relationship between the society and environment due to the modern industrial societies excessive extractive demands from the natural surroundings, and the consequent environmental degradation which followed. It is this relationship of reciprocal influences between the society and environment, that this approach examines. This dialectic focuses on:

- a) economic expansion of societies necessarily requires increased environmental extraction;
- b) increased levels of environmental extraction inevitably lead to ecological problems, ranging from the disorganisation of natural biotic systems to the depletion of fixed (non-renewable) resources; and
- c) these ecological problems pose potential restrictions on further economic expansion.

(A. Schnaiberg, 1975)

Thus, outlining the nature of contradictory relations between the imperatives of economic development and environmental degradation. This means that a complex industrial society, requires to continually expand its economic system by generating more demand, even when the ecosystem has reached its physical limits to growth and even exceeded it, and can no longer sustain it.

Furthermore, Schnaiberg identifies a *dialectic tension* between the demands for increasing economic expansion and environmental protection during the process of policy formulation in advanced industrial societies. In such a scenario, the state needs to increasingly balance its dual role--as a promoter of economic development, and as an environmental regulator. Caught in a contradictory position, different governments have taken various positions in the balancing act.

The *society – environment dialectic* has been further examined and taken forward analytically by Allan Schnaiberg through *Treadmill of Production* approach in his book, *The Environment: From Surplus to Scarcity* (1980).

Check Your Progress 2

- 1) What is the focus of Environmental Sociology?

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- 2) Elucidate the ‘society – environment interactions’ given by R. Dunlap and W. Catton.

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- 3) Examine the ‘human ecology model’ to understand the relationship between society and environment.

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1.4 THE ENVIRONMENTAL PREDICAMENT

The reciprocal influence of modern industrial society on the environment and vice-versa, has led many environmentalists and environmental sociologists to pay close attention to the potential challenges to sustainability. Awareness about the different kinds of environment problems and the extent to which the well-being of societies are being impacted by them needs to be examined. Furthermore, societal responses to the environmental concerns and problems or the threat thereof, does merit attention as well.

Some of the potential threats to sustainability have been enumerated as follows:-

1.4.1

Global Warming, is a consequence of a rapid increase in carbon-di-oxide (CO₂) in the earth’s atmosphere produced by burning of fossil fuels (coal, gas and oil), wood, and forest lands. This buildup of CO₂ in the earth’s atmosphere traps the sun’s heat, increasingly raising the temperatures on earth. This is known as the ‘greenhouse effect’. Carbon-dioxide accounts for only about half of human induced climate change. Other greenhouse gases like methane, nitrous oxide, chlorofluorocarbons (CFCs), ozone, soot or black carbon released by various processes of human activity, contribute as much or even more to the process of global warming.

Some of the glaring consequences of global warming impacting our lives are- broiling hot summers; drought alerts; melting glaciers; rising sea levels;

changes in rainfall patterns and weather conditions; increasing hurricanes; increasing forest-fires; increase in number and variety of diseases unknown until now; and many more known and unknown consequences.

Since, different regions of earth are experiencing various kinds of changes, directly or indirectly induced by global warming, many environmentalists prefer to label the associated issues as global climate change.

1.4.2 Ozone Depletion

Ozone (O₃) forms a vital layer in the upper atmosphere, which protects life on earth's surface from the harmful effects of the sun's ultraviolet radiations. Exposure to ultraviolet radiations can cause skin cancer, cataracts in the eyes, damage to the immune systems and disruptions in the ecosystem. Therefore, ozone layer forms a protective covering in the upper atmosphere for all the life-forms living on the earth.

However, chlorofluorocarbons (CFCs) generated through refrigerants (like coolants used in refrigerators, cars, air conditioners, etc.), fire suppression systems in aircraft and aerosols and other pollutants escape into the upper atmosphere and compromise the integrity of the ozone layer. Massive depletion of ozone layer, as discovered by scientists in 1985 over the South Pole, leads to the creation of **ozone hole**. This depletion of ozone layer is also found over the North Pole, but to a smaller extent. Most worrisome is that the area of high depletion might spread to heavily populated areas, leading to harmful consequences of exposure to ultraviolet light/ radiation. (See also: <https://www.youtube.com/watch?v=aU6pxSNDPhs>)

1.4.3 Smog is a consequence of air pollution.

There are two varieties of smog:-

- a) *Photochemical Smog* the brown smog is found in all the cities of the world as a brown haze. The key component of photochemical smog is Ozone. Ground level ozone is formed when sunlight comes in contact with the polluted air on earth's surface. Fossil fuel combustion, cars and factories discharge large volumes of various nitrogen oxide compounds (NO_x, pronounced 'Knocks') reacts with 'volatile organic compounds' (VOC) in the presence of sunlight to form *photochemical smog*, the brown haze.

Although, ozone in the upper atmosphere is crucial in preserving life-forms on the earth, but its presence on the earth in the inhabited parts are harmful to all life forms. It burns the lung tissue in humans and animals during inhalation, and the leaf tissues of plants. When it drifts out of the urban areas into the countryside, it reduces crop yields and damages forests.

- b) *White Smog* comprises of fine particulates in the air. These particles are microscopic (ie. 2.5 microns, or smaller than the diameter of a human hair), which deeply penetrate the lung tissue. Half of these particulates are primarily *dust*, released as a result of poor fuel combustion in cars, trucks, power plants, traffic, construction, outdoor burning and wind erosion from farms. Rest of the fine particulate comprises of tiny pieces and droplets of sulfates, nitrates ammonium compounds and volatile organic compounds (VOCs) -- known as 'secondary' particulates.

Unlike the brownish haze of the photochemical smog, fine particulates cover the city/ urban areas with white smog. Deeply penetrating the lung tissue, the fine particulates decrease lung capacity, asthma and increased heart attack rates; thereby, multiplying pre-mature deaths.

1.4.4

Acid Rain results when sulfur dioxide and NO_x emissions on the earth combine with water in the atmosphere. Acid rain directly damages plant tissues, leaching of nutrients from the soil leading to decrease in crop production, acidification of water bodies resulting in sharp decline in the population of some varieties of fish, frogs, marine life, and even wildlife in the forests, as extensive signs of stress and dieback in many forests have been observed. Various studies have also corroborated to increase in percentage of defoliation rates of trees in some Chinese forests up to 40%. Despite efforts to curb nitrogen emissions in various parts of the world, acid rain continues to be a worrying phenomenon.

1.4.5 Other Ecosystem Disruptions

As more and more people overuse the resources in the natural environment through expansion in agriculture and industry in the name of development, more is the threat posed to land and water resources (air pollution has been examined earlier) through erosions and pollutions, more are we reducing the earth's capacity to sustain life.

- a) **Soil erosion** is a gradual process of removal of surface layer of nutrient rich soil, through the action of wind or water. Usually, soil erosion exceeds replacement rates through ecological processes. According to estimates, almost 23% of the world's cropland, pasture lands, forests and woodlands have been degraded. Top-soil erosion not only negatively impacts the agricultural production, but also degrades the quality of water (i.e. Water pollution) as the fertilizer in the fields washes off into streams, river and groundwater. Thereby increasing the possibility of pesticide residues in food, endangering the health of human and other species.
- b) **Salinisation and Water-logging** – With an increasing population in the 20th century world over, irrigation became the means by which gains in crop production could be brought about to feed them. But, irrigation can

also be the source of soil salinisation. Since most irrigation occurs in parched regions, the intense sunlight of dry climates evaporates much of the water, leaving salts in the ground. Many regions of the world, like Egypt and China suffer from excessive salinisation.

Irrigation has also been identified as one of the sources of *water-logging* of poorly drained soils. Water-logging is a drainage problem resulting from high water inflow caused by rain, runoff, rise in groundwater, flooding, or even over-irrigation. Drainage problems could be because of low water outflow, or slowdown in the rate of evaporation through the leaves of plants due to clearing of forests / land for agriculture or other human activities, as in the case of Western Australia.

Thus, over irrigation can lead to both, creation of swamps as well as salinisation, simultaneously.

- c) **Water Shortage** is a glaring scenario in the 21st century. Studies of 'water stressed' regions like Middle East specially, show that these countries no longer have sufficient water resources to fulfill their agricultural or industrial needs, nor even their population's residential, everyday needs. Even in countries which have not been classified as water-stressed, increasing water shortage is a factual reality. Falling 'water tables' result from rapidly depleting groundwater resources. Ground water extracted for everyday uses in urban areas and agricultural purposes in rural areas far exceeds the rate of replenishment. Over-extraction of groundwater has not only led to dropping of water tables to the bottom of the aquifer, but also degraded the quality of remaining groundwater due to increase in 'salinisation'. Furthermore, lowering of water tables is causing major 'land subsidence' (i.e. a gradual settling or sudden sinking of the earth's surface due to subsurface movement of earth materials, like groundwater) in many regions of the world like Venice, Mexico City, and others.
- d) **Water Pollution** is the release of substances (harmful or otherwise) into subsurface groundwater, lakes, streams, rivers, estuaries and oceans, to the extent that these substances interfere with the natural functioning of the ecosystems. Various kinds of pollutants released in water may be domestic sewage, toxic waste from industries or hospitals, sediment, thermal pollution, oil spills, etc. Usable and accessible freshwater and their sources are decreasing rapidly, not only due to water pollution, but also due to global warming as glaciers and polar ice caps melt, flood the streams and rivers which ultimately flow into the ocean. However, with the advances in technology, cleaning of polluted water is possible, which can then be used for various human activities.
- e) **Loss of Species or Biodiversity Loss** – According to Charles Darwin's theory of natural selection, species have always come and gone, whether of plants, animals, insects or others. However, the rate of these losses has

greatly increased since the Industrial Revolution. As per the estimates of a study by the World Conservation Union, as of 2007, 16,306 species of plants and animals are threatened with extinction – out of which 12% of bird species, 20% of mammal species, 4% of fish, 5% of reptiles and 29% of amphibians. (M.M. Bell, 2008). Some have disappeared because of habitat loss, pollution, or even no defense against animals, plants and diseases brought about by human activities unintentionally. The loss of global gene pool means a declining genetic resource base for development of new crops, drugs and chemicals. Additionally, decreased biodiversity destabilises the ecosystem.

- f) **Deforestation** refers to the loss of forests across the world due to human activities like agriculture, urbanisation or mining of minerals, greatly accelerated since the 1960's. About one-third of world's forestlands are 'primary forests' which are little disturbed by human use. According to estimates, about 30 million hectares of primary forests during 2000 and 2005 have been lost, with their richness of species and habitat (M.M. Bell, 2008). Thus, deforestation has negatively affected natural ecosystems, biodiversity and the climate.

Activity 1

Identify at least one species each of plant, animal and bird, which have been lost to your habitat. Also enumerate the reasons for this loss.

Check Your Progress 3

- i) Complete the following sentences by filling in the blank spaces:-
- is the release of substances into subsurface groundwater, lakes, streams, rivers, estuaries and oceans.
 - Sulfur di-oxide and NO_x emissions on the earth's surface combine with water in the atmosphere, resulting in
 - Removal of nutrient rich, top layer of soil, through the action of wind and water is known as

1.5 THE SOCIETAL RESPONSE: THE WAY FORWARD

The ways in which human societies have been overusing the ecosystems and altering their environments have created 'ecological disruptions', which over a period of time have become 'ecological problems' to be understood and dealt with. There are two ways in which environmental problems have been conceptualised – at the level of ideas, and at the level of practice.

At the level of *ideas*, environmentalists whether scientists or sociologists have been thinking through ideas to explain the problematic condition of the

environment theoretically through – conservationism, preservationism, the New Ecological Paradigm (NEP), Human Exemptionalism Paradigm (HEP), Treadmill of Production (society-environment dialectic), Ecological Modernisation, Reflexive Modernisation, Risk Society thesis, Political Ecology, Social Ecology, Environmental Justice, Deep Ecology, Ecofeminism, Environmental / Green Criminology, Critical Animal Studies and ongoing debates such as Realism vs. Constructionism or even Co-Constructionism.

At the level of practice, however, environmental activism through the various environmental justice movements have made their presence felt nationally and internationally in many parts of the world. Some of these being – the Sierra Club in the US, Greenpeace movement and Earth Hour are two of the most well-known movements worldwide. India too is home to many growing environmental issues the Chipko movement, Narmada BachaoAandolan, Save Silent Valley Movement, Appiko Movement, anti –miming movements, anti-GM crops and many more.

The two dimensions of environmental concern – ideas and practices – are in constant conversation and interaction with each other, such that power, politics, social inequality and conflict play a significant role in determining the form of environmental issues. It is these issues and their attendant theoretical and practical dialectic, is the concern of Environmental Sociology as a discipline.

1.6 LET US SUM UP

In this unit, we saw the emergence of Environmental Sociology as a discipline in various parts of the world, its nature deriving from the varied contexts of its origin. Next, we examine the conceptualisations of Robert E. Park, Riley Dunlap and William Catton, and Allan Schnaiberg's understanding regarding the reciprocal influence of human actions on the environment, and vice versa, and the social constructions of these interactions. Further, we enumerated some of the environmental problems and ecosystem disruptions/degradations visited upon the natural environment by the actions of human beings living in the society. Finally, we see that to understand the scope of relationship between the human society and its biophysical environment, one must comprehend societal response to environmental crisis. This conceptualisation is a never-ending dialogue between the theoretical ideas of environmental scientists/sociologists and the environmental activism of the varied environmental movements across the globe. Hence, the continuously evolving nature and scope of the discipline of Environmental Sociology.

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1.8 SPECIMEN ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- a) Human societies and their physical environment.
- b) Global warming, declining biodiversity and pollution.
- c) Conservation
- d) Agriculture and risk assessment

Check Your Progress 2

- 1) 1960's and 1970's turned out to be environmentally turbulent decades – socially, politically and economically, which compelled the intellectuals and academicians to rethink their academic standpoints in terms of the environment. Environmental Sociology' focused on the study of environment- society interaction. In the contemporary context it would be the relationship between modern industrial societies and the physical environments they inhabit.
- 2) One of the best enunciation of 'society-environment interactions ' is W. Cotton and R. Dunlop's model of ' three competing functions of the

environment which serves the human society: First, the environment provides the sustenance base or acts as the supply depot for human societies. Environment is the source of all these renewable (e.g. forests) and non-renewable (e.g. fossil fuels) natural resources. However, when we use resources faster than the environment can supply them, we create resource shortages or scarcities. Second, environment provides the living space or habitat for human societies to exist. However, overuse of this function results in overcrowding and congestion. It also impinges on the ability of the environment to sustain other species. Third, the environment also functions as a sink or waste repository. Modern societies which are densely populated generate more waste than the environment can absorb or recycle. Thereby, resulting in various kinds of pollution — land, water, air, and others. In recent years, competition and conflict among the three competing functions of the environment has grown considerably. Also, when human societies overuse their biophysical environment's ability to fulfill these three functions, environmental problems / disruptions in the form of pollution, resource scarcities and overpopulation, result.

- 3) The *human ecology model* given by Robert E. Park in the 1920's, borrows a series of principles from the biophysical environment given by Charles Darwin and other naturalists. Park derives his understanding of the inter-relation and interdependence between plants and animals in nature and related it to inter-relations and interdependence between individuals and communities in human societies. According to Park, culture and its attendant features play a significant role in not only distinguishing society from physical environment, but also becomes the context for human mastery over nature, and setting in motion ecological depredations.

Check Your Progress 3

- i) a) Water Pollution
b) Acid Rain
c) Soil Erosion

UNIT 2 REALIST & CONSTRUCTIONIST DEBATE

Environmental
Sociology: Nature
and Scope

Structure

- 2.0 Objectives
- 2.1 Introduction
- 2.2 What is Realism
- 2.2 Realism in Environmental Sociology
- 2.3 Critiques of Realist Perspective
- 2.4 What is Constructionism
- 2.5 Constructionism in Environmental Sociology
- 2.6 Critiques of Constructionist Perspective
- 2.6 Let Us Sum Up
- 2.7 Key Words
- 2.8 Further Reading
- 2.9 References

2.0 OBJECTIVES

After reading this unit, you will be able to:

- Discuss the realist approach and its usage in Environmental Sociology
- Know the critiques of the realist approach
- Explain the constructionist approach and its usage in Environmental Sociology
- Know the critiques of the constructionist approach

2.1 INTRODUCTION

In this unit, we will cover some of the main research emphases and related theoretical debates that have been significant to the field of environmental sociology. We begin by examining the divide between realist and constructivist perspectives on environmental problems and how these perspectives have evolved. Then we examine the critiques of each of these approaches, their applications to understand the causes of environmental problems, the social impacts of these problems, and explanations of these problems in environmental sociology.

2.2 WHAT IS REALISM

Realism, popularly known as an approach in social sciences, refers to certain theoretical assumptions and methodological concerns about the reality. One of the major characteristics of realism is the assumption that the world with all its structures, events, and phenomena exist independent of human experience, consciousness and perceptions about it. For example, natural life consisting of territories, rivers, mountains, different living species i.e. animals/birds, different weather conditions or events exist independent of human beings and their consciousness of these things. Secondly, the realist approach to the knowledge believes that the world as it exists can be known through human senses, observations and hence we can know the world, measure its nature, identify its mechanisms and their way of working, and thus predict events. In other words, this approach works on the assumption that there is an objective reality out there which we can study, examine and explain. Critical realism, associated mostly with Roy Bhaskar, Margaret Archer, Andrew Sayer etc., is one of the many models to understand the world within the realist perspective.

2.3 REALISM IN ENVIRONMENTAL SOCIOLOGY

Scholars have observed that environmental sociology has witnessed heated arguments between the proponents of the two major approaches: social constructionism and realism. It acquires a particular significance in environmental sociology since the discipline deals with questions of nature-society relations, environmental changes, social interactions with natural environment and so on. Realism has been applied to the study of nature widely. Realists take the point that the analysis, examination and formulation of concepts related to nature, environment actually refer to environmental reality and aid in formulating environmental policy. Scholars like Ted Benton, Peter Dickens, Raymond Murphy follow a realist perspective. According to these scholars the realist model helps us in examining the aspects, events and practices of natural world and its implications for social institutions, and vice versa. Nature then is defined as structures, processes that constantly operate within the physical world. Realists ask the question, 'what is the truth about this environmental issue' or 'what causes this phenomenon' i.e. global warming, acid rain, rising pollution levels, depleting green reserves in cities etc. They look towards finding a causal explanation of any environmental issue, problem or phenomena.

Ted Benton has stressed the significance of environmental realities for societal interaction. According to him, any understanding of nature includes not just the humans but also life, actions and contexts of non-humans, other objects, living beings, ecosystems, and entities of the biophysical world. Realists for example are trying to draw scholarly, policy and political

attention to the issues of ozone depletion, global warming, climate change by arguing the limits of human intervention in the natural world. They stress the idea that the global environment crisis due to heavy industrialization is real in nature, effects and implications for nature and society. Nature and its dynamics are not simply socio-cultural perceptions, concepts or categories. They exist with their own autonomous characteristics and functioning. Nature has its own functioning, capacity and dimension of existence, which are obviously in interaction with human world (Murphy, 2002; Benton, 1994). Without understanding the dynamics and forces of nature and its processes, we cannot make sense of the environmental events, incidents, changes e.g., genetic modifications, rising sea levels, depleting heights of glaciers, occurrence of floods, etc.

Raymond Murphy (2002) discusses the material aspects of the natural world and their implications for human society. He mentions that there are cases when we took the signals of natural crisis seriously and understood them as real. Based on those factors, countries formed policies to evaluate the impact of any environmental risk or hazards, their nature, functioning and took appropriate actions to avoid loss of lives. When the risk is acknowledged as real, many industrial and developing countries made policies specifically dealing with these problems i.e. pollution of lakes and rivers, threat of ChloroFluoro Carbons (CFCs) to ozone layer, deforestation, earthquakes etc.

Realists are of the opinion that one should not discard the nature and its structures, processes in understanding the human-environmental interrelations. They stress the view that sociologists should understand the dynamics of nature, environmental factors and not simple focus on human society, social life. By terming every claim whether for support or against as 'socially constructed' or 'contested', constructionists, Murphy argues, deny the basis or ground to environmentalists to criticize the business lobbies for further degrading environment (Murphy, 2002: 318 – 320). Murphy (2002) says this is precisely what chemical industry wished that, by denying the reality of ozone depletion i.e. by saying that no such problem of ozone depletion exists, they can continue their profit making. Realists would argue that an environment problem i.e. radiation, pollution, acid rain, etc. can exist before its socially and politically acknowledged as a social problem for communities living there, but it still exists materially (Murphy, 2002: 320). Realists emphasize the significance of developing a social theory of environment that reflects realistically the relations between human society and forces of nature. They do not leave out the autonomous functioning of nature from their sociological analysis. Realists hence examine the way human society is embedded in the nature and how society acts back on the nature (Murphy, 2006).

2.4 CRITIQUES OF REALIST APPROACH

There are several problems associated with the theoretical arguments of the realists. Social constructionists have pointed out a number of issues with the realist assertion of being able to know the 'reality' objectively (Sutton, 2004). Some would argue that realists tend to overlook the cultural aspects of reality through which people perceive and interpret nature world (Proctor, 1998). Critics say that due to their biological and material biases, realists are not paying attention to the social process of the meaning making i.e. construction of something as an 'environment problem' (Proctor, 1998). For instance, pollution might be perceived very differently by different people in different time periods. The rank ordering of environment problems by actors do not always correspond to the natural objective reality out there, but also gets framed by complex social cultural discourses, and political agenda setting (Hannigan, 1995).

Constructionists critique the realist's absolute certainty about the environmental realities by drawing attention to the fact that all of our knowledge of nature, of science, is a human construct that has been produced under certain social situations and is open to influence of similar social factors. In addition, scholars hold the view that many of the realist theorists have little formal training in the environmental sciences and are therefore not quite equipped to evaluate the exact causes factors of environmental issues. Dickens defends the realist position while critiquing the social constructionist account of nature. He argues that environmental issues and problems are not just constructs made by environmentalists or scholars (Dickens, 1996: 80 – 85). The threat of nuclear reactors or the impact of the nuclear bombs is real whether it's the case of Japan or India.

Check Your Progress 1

- 1) What are some of the main points of reference for the realists perspective on environment?

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- 2) What are some of the central arguments against realists perspective?

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2.5 CONSTRUCTIONISM

Constructionism is one of the very popular approach in the field of social sciences. It helps us exploring what we know and how we know anything about the world we inhabit. Constructionist approach primarily denies the existence of an external objective, singular reality which is independent of human perceptions about it. It stresses the significance of social perceptions, conceptions, ideas, knowledge that help people understand their world. This change was broadly referred as 'interpretive turn' emerging in 19th century with the writings of Wilhelm Dilthey, Max Weber, Edmund Husserl, John Dewey. Sociologists focused on understanding the meanings humans ascribed to their experience and actions in this world. Each individual, according to them, constructs knowledge through social perceptions, social interaction, ideological worldviews, and shared understandings of the realities. This paradigm differs from realist one in its emphasis on understanding human contexts i.e. their social origin, value system, interests, socialization that shape how people perceive any issue or problem. For constructionists, the important question is 'whose *truths* about this environmental issue are portrayed as *the truth*'. An individual's understanding and knowledge formation is mediated by his/her socialization, learning of language, cultural context.

Constructionists argue that nature does not present itself in an unmediated form and always requires interpretation, mediation of social meanings, constructions, discourses about it (Proctor, 1998). It is centered on the idea that human knowledge is socially constructed, and not passively received from environment. Social dimensions such as language, collective symbols, tools, socialization, political discussion, everyday practices, cultural beliefs and values. If any animal is socially classified and categorized as 'cat', for instance, then it will be understood accordingly by the society. Because people have grown up hearing and believing that there is an animal with certain features defined as 'cat'. Peter Berger and Thomas Luckmann give a detailed analysis of the concept of 'social construction of reality'. They argue that human interactions evolve concepts about human behaviour and gradually these concepts become part of social habits and get institutionalized (Berger & Luckmann, 1967). Our knowledge about this world and this reality is based upon our conception of reality, which is in turn constructed upon the experiences we had in social situations, during interactions, socialization.

2.6 CONSTRUCTIONISM IN ENVIRONMENTAL SOCIOLOGY

Constructivists argue that environment is socially constructed. Instead of taking any claims about environment for granted, a social constructionist perspective would try to situate in a given social, cultural context. It would try to examine the different stakeholders in relation to the problem or issue, analyse who is making any claim, who is opposing them, why a certain discourse about environment (i.e. environment change, global warming, degradation etc.) becomes quite popular and why other issues get silenced. At the heart of the social constructionist approach is the idea that environmental 'realities' are deeply shaped by historical practices, political interests and culture perceptions. Whether there is any social group which is able to take benefit of any claim, and on whose shoulders is the burden shifted with what consequences. Speaking methodically, a social construction perspective highlights the social embeddedness of the knowledge claims about the environment, and thus place human societies and its meaning making, concept & discourse making aspect, capacity central to the analysis (Burningham & Cooper, 1999).

Demonstrating its approach towards reality, John Hannigan writes, 'social constructionism does not deny the independent causal powers of nature but rather asserts that the rank ordering of these environmental problems by social actors does not always directly correspond to actual need' (Hannigan, 1995: 30-31). Hannigan provides the application of the social constructivist perspective to understand the environmental debate on biodiversity (Hannigan, 1995). He identifies three factors that provide the social context for the emergence of such a discourse. Firstly, the growing corporate interest in utilizing genetic resources and monopolizing it via the patents and intellectual property rights. Secondly, during 1970s the academic interest in conservation biology about emerging ecological crisis contributed to it becoming a popular research area. And finally, the formation of legal and organizational structure for environmental issues in American context gave it the necessary impetus to the popularity of this debate. The growth of international organizations and their conventions helped significantly in raising the issue of biodiversity loss at the international level and provided new domains for environmental campaign. This context contributed in the increased academic attention to the species extinction, deforestation, environment conservation. The context of 'environmental crises' allowed a particular kind of voices, claims and discourses to play a dominant role in constructing a claim for diversity loss. Hannigan (1995) and Burningham & Cooper (1999) show that environment problems and issues are not a self-evident problem but was socially constructed as significant environmental issue.

In other words, a social construction perspective is able to demonstrate that concerns over the loss of biodiversity have been socially constructed at

different levels in the society and this process can be analytically studied. It also shows how similar other environmental discourses are constructed at different places and times. The success of one of many environmental claims also challenges the

Box 2.1

Necessary factors for the successful construction of an environmental problem:

- Scientific authority for and validation of claims
- Existence of ‘popularisers’ who can bridge environmentalism and science
- Media attention in which the problem is ‘framed’ as novel and important
- Dramatisation of the problem in symbolic and visual terms
- Economic incentives for taking positive action
- Recruitment of an institutional sponsor who can ensure both legitimacy and Continuity

Source: Hannigan, 1995: 77 – 78.

absolute nature of such concerns. According to social constructionists, the language we use to classify, categorise and understand the ‘objective’ ‘reality’ of nature has social, cultural and political consequences for the real people. Constructionists stress on examining the process through which certain ecological discourses become hegemonic over others and thus restrict the public awareness about the overall situation. They also highlight that constructionist position helps us to see through the rhetorical slogans, popular announcements that state and industry develop to convince the public that something is being done to address environmental issues even though nothing is actually done. Thus, social constructionism can be extremely valuable approach for the sub-discipline since it stresses the central task for sociologists to examine and interrogate the ways in which any environmental issue is generated and brought before the people in society. It asserts that the rank ordering of environmental problems by different social actors reflects the political nature of agenda setting (Hannigan, 1995: 31).

Burningham and Cooper (1999) highlight the two key positions social constructionists take while dealing with environmental issues. Firstly, the sociologists engage in social research of drawing attention to the human mistreatment of the environment. But they should refrain from political positionson environmental issues and rather concentrate on examining the mainstream debates or narrativesabout the environmental conditions (Burningham& Cooper, 1999: 312). The examination of the process of social

and cultural construction of the dominant environmental claims is in itself capable of providing certain directions to formulating policies or solving environmental problems. Secondly, they argue that instead of being 'neutral' in their normative orientation, social constructionists actively take the views of local people or community in their studies on environmental issues (ibid: 312).

2.7 CRITIQUES OF SOCIAL CONSTRUCTIONISM

There are several scholars who challenge the social constructionist model on various grounds. Firstly, due to its insistence on understanding constructed nature of any environmental problem, issue or claim, scholars allege that constructionists avoid and ignores talking about direct solutions and actions. Opponents argue that at a time when urgent action is required, constructionists appeal for understanding social meanings attached to the specific environmental issue (e.g. greenhouse effect) by different people. Critics say that it delays in building any concrete political position on that issue. Secondly, many scholars depict constructionists work as way to undermine the vitality of sociological imagination by indulging in relativism and contributing to some sort of fictional narrative about environment. It can be destructive to nature as this approach suspends any action and rather remains trapped in conceptual analysis. Environmental activists have often complained against constructionists for spreading pessimism. Thirdly, realists' critique constructionists for asserting that nature and reality are just mental constructs. According to critics, this view undermines the legitimacy of the arguments that environmental problems are real and thus deserve the urgent attention (Murphy, 2006). Anthropologists such as Tim Ingold argue that socio-cultural construction and understanding of nature is limited in its scope as it views nature or environment as given (Ingold, 1992: 43). These insights also indicate the view that all these social constructions about any environmental issue, problem do not change the reality of that problem as such. People can have different term, concepts, meanings and categorizations of "air pollution" and that will change its uses *for* human beings. But even without such categories 'air pollution' continue to exist with its negative implications for societal and environmental health.

Realists' scholars like Raymond Murphy (2002) also criticize constructionists' view of environment by highlighting the significance of nature and the autonomous dynamics of its existence. Modern societies have little control or success in abolishing the occurrence of earthquakes, volcanoes, ice storms, hurricanes etc. While upholding the realist position of nature, he stresses that the meanings given to the dynamics of nature by humans can be socially constructed, but those dynamics cannot be ignored by just talking about human perceptions, meanings and their social constructions

regardless of the meanings assigned to them by humans (Murphy, 2002: 317).

Check Your Progress 2

- 1) Write briefly on Hannigan and Burningham analysis of environmental issues as socially constructed.

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- 2) What are some of the major criticism against constructionist

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2.6 LET US SUM UP

This unit outlined the two major perspectives in environmental sociology: realist and constructionist. It discussed the different aspects of the realist perspective that tries to explain the environmental issues, problems and concerns with an objective and scientific method. Realist model works on the assumption that the environmental reality can be understood, mapped and analysed concretely. On the other hand, a social constructionist position focuses on the social contexts, discourses and constructed nature of environmental issues and concerns. It provides a more interpretive understanding of the environmental claims. Constructionists approach the environmental problems i.e. global environmental change, green house effects, global warming, increased pollution by drawing attention to their social and cultural contexts, meanings and discourses, role of different social actors such as communities, government institutions in production and maintenance of certain ideas, knowledge claims about these problems. This debate helps us understand the knowledge scholars produce related to human-environment interactions. Given the entrenched positions of realists and constructionists, environmental sociologists have now started thinking to draw upon both of these positions to develop new ways of thinking and researching environmental issues.

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Specimen answers to Check Your Progress

Check Your Progress 1

- 1) Scholars like Ted Benton, Peter Dickens, and Raymond Murphy follow a realist perspective. According to these scholars the realist model helps us in examining the aspects, events and practices of natural world and its implications for social institutions, and vice versa. Nature then is defined as structures, processes that constantly operate within the physical world. Realists ask the question, 'what is the truth about this environmental issue' or 'what causes this phenomenon' i.e. global warming, acid rain, rising pollution levels, depleting green reserves in cities etc. They look towards finding a causal explanation of any environmental issue, problem or phenomena.
- 2) Constructionists critique the realist's absolute certainty about the environmental realities by drawing attention to the fact that all of our knowledge of nature, of science, is a human construct that has been produced under certain social situations and is open to influence of similar social factors. In addition, scholars hold the view that many of

the realist theorists have little formal training in the environmental sciences and are therefore not quite equipped to evaluate the exact causes factors of environmental issues.

Check Your Progress 2

- 1) Hannigan provides the application of the social constructivist perspective to understand the environmental debate on biodiversity (Hannigan, 1995). He identifies three factors that provide the social context for the emergence of such a discourse. Firstly, the growing corporate interest in utilizing genetic resources and monopolizing it via the patents and intellectual property rights. Secondly, during 1970s the academic interest in conservation biology about emerging ecological crisis contributed to it becoming a popular research area. And finally, the formation of legal and organizational structure for environmental issues in American context gave it the necessary impetus to the popularity of this debate. The growth of international organizations and their conventions helped significantly in raising the issue of biodiversity loss at the international level and provided new domains for environmental campaign. This context contributed in the increased academic attention to the species extinction, deforestation, environment conservation. The context of 'environmental crises' allowed a particular kind of voices, claims and discourses to play a dominant role in constructing a claim for diversity loss. Hannigan (1995) and Burningham & Cooper (1999) show that environment problems and issues are not a self-evident problem but was socially constructed as significant environmental issue.
- 2) There are several scholars who challenge the social constructionist model on various grounds. Firstly, due to its insistence on understanding constructed nature of any environmental problem, issue or claim, scholars allege that constructionists avoid and ignores talking about direct solutions and actions. Opponents argue that at a time when urgent action is required, constructionists appeal for understanding social meanings attached to the specific environmental issue (e.g. greenhouse effect) by different people. Critics say that it delays in building any concrete political position on that issue. Secondly, many scholars depict constructionists work as way to undermine the vitality of sociological imagination by indulging in relativism and contributing to some sort of fictional narrative about environment. It can be destructive to nature as this approach suspends any action and rather remains trapped in conceptual analysis.

UNIT 3 KEY CONCEPTS*

Structure

- 3.0 Objectives
- 3.1 Introduction
- 3.2 Key Concepts
 - 3.2.1 New Human Ecology
 - 3.2.2 Environmental Attitudes and Behaviours and Practices
 - 3.2.3 Environmentalism
 - 3.2.4 Environmental Movements
 - 3.2.5 Ecological Justice
 - 3.2.6 Environmental Risk and Hazards
 - 3.2.7 Ecological Complex
 - 3.2.8 Environmental Metabolism
 - 3.2.9 Global Environmental Change
- 3.3 Challenges for Environmental Sociology
- 3.4 Environment and Sustainable Development
- 3.5 Let Us Sum Up
- 3.6 References
- 3.7 Specimen Answers to Check Your Progress

3.0 OBJECTIVES

After reading this unit, you will be able to:

- Explain the key concepts of Environment Sociology
- Discuss the changes in this field of study
- Describe the meaning, characteristics and critique of key concepts

3.1 Introduction

In this unit we will understand the key concepts in the field of Environmental Sociology. We will try to discuss the interrelations among these concepts, their definitions and changes that have happened as the discipline progressed. Environmental sociologists have for quite long tried to expand its disciplinary boundaries and scope to newer areas of study. It has been done via a critical rethinking of the foundation principles of the discipline. Scholars have

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engaged with the question of ‘environment’ much more deeply in the past one century.

Environmental Sociology has emerged as a crucial sub-field of study in social sciences. It aims to study, examine and explain the interrelations between human world and the natural world (Lockie, 2015). In other words, how environment shapes and impacts social life and vice-versa. Much before its global emergence, Radhakamal Mukherjee and Patrick Geddes highlighted the connections between social life and ecological world in Indian context. In 1920s, Mukherjee talked about ‘region’ as a key concept to understand the synthesis of ecology and social world. Later scholars working in the field strongly emphasised that society is significantly depended upon on the natural environment. It studies the ways in which ecology is connected to human institutional lives, the social and environmental problems that have emerged with developmental processes. They stressed to examine the ways in which environmental hazards and disasters have social and cultural consequences, how do they impact the inequalities along racial and class lines. In addition to the study of problems, sociologists also focus on social and governmental responses to environmental problems and threats. Following this, they are also concerned with the wider social processes and dynamics that shape and influence environmental movements, policies and reforms. The field has evolved over the decades with newer ways in which scholars have developed concepts, theories and analytical models to examine, understand, discuss the issues pertaining to environmental contexts.

3.2 KEY CONCEPTS

This section will briefly discuss the ways in which sociologists have defined and understood the whole concept of environment. Different concepts are developed and adapted in response to the social circumstances around, new problems and new findings in social sciences. Since its origin in 1970s Environmental Sociology has focused on explaining the mutual relationship between society and environment via the application of general sociological concepts and terms. Classical sociology ignored the significance of biophysical aspect of environment and focused on social and institutional aspects only. Gradually with the growth of the environmental sociology, scholars started exploring new relationships between environment and social lives. Dunlap & Catton (1979) in their often-celebrated piece discuss the emergence and early development of environmental sociology, identify its core focus as the study of society-environment interactions.

The term *environment* is redefined with a specific set of meanings in the field. In general terms it refers to social, physical surroundings of any organism. People, places, things, trees, land, sky, hills, water bodies etc. constitute environment. In environment sociology, environment is understood by the interrelation between biosphere and social life. Unlike the traditional understanding attached with ‘social environment’, this usage of environment

has a quite different meaning. Here in environment sociology, environment is understood broadly in three categories: 'natural' i.e. biophysical environment comprising i.e. rivers, mountains, grasslands, natural deposits; 'built' environment referring to highways, factories, parks, residential areas, cities, suburbs, buildings etc.; and 'altered/modified' environment that shows their interactions i.e. polluted lakes and rivers, planned landscapes of farms etc.

3.2.1 New Human Ecology

Environment Sociologists have expanded the scope of the sub-field beyond the classical human ecology. The rich contribution of scholars to the new domain of 'new human ecology' broadly relates to the idea that sociologists also need to incorporate physical, biological, environment factors while explaining the social processes, and interactions. In a sense 'new human ecology' goes beyond the Durkheimian dictum of explaining social facts by social facts only. It does include non-social factors too in explaining social conditions. Classical sociologists made conscious efforts to keep distance with natural sciences, and it led to the formation of certain theoretical and methodological rules and values that also kept them aloof from natural environment. New human ecology thus represents a view that patterns of social organisation are shaped by imperatives of human beings to derive their existential needs from biophysical environment (Dunlap & Catton, 1979; Schnaiberg, 1975). These scholars have also asserted the point that environmental sociology should shed its anthropocentrism and reject the notion that human beings are exempt from laws of ecology that govern all other species.

3.2.2 Environmental Attitudes, Behaviour and Practices

Early studies in the field of environmental sociology aimed to explain the public attitudes and behaviours related to the matters of environment conservation. Broadly three kinds of studies have contributed to the analysis of environmental attitudes, behaviours, perceptions etc. In the first kind of studies mapped how different set of population see environmental issues. In urban areas where consumption of market goods used to be quite high, many scholars have mapped the public mindsets related to practices that preserve ecological life. Recording the environmental concern among the urban dwellers attracted a lot of attention in 1970s.

Secondly the studies examined cognitive aspects related to environmental problems. Sociologists found that levels of education, age, political ideology, place of residence etc shaped the consciousness about environment issues and problems. Survey based studies have found the income and occupational status is only weakly related to the environmental concern. These studies showed how environmental attitudes and perceptions reflected the moral values and norms related to public good, ethics etc.

Thirdly, sociologists have also studied the impacts of the environment on behaviours. For instance, they examine the impact of air pollution on social behaviour, floods and huge rains on social mobility and related public health, differential exposure to certain ecological conditions sewage, pollutants, desertification, landslides etc (Buttel, 1987). These issues also tell us the relevance of relation between physiological interactions between human beings and environment.

3.2.3 ENVIRONMENTALISM

The term broadly refers to the growing social and political awareness related to the problems of environment (i.e. soil erosion, loss of water bodies, degradation of forests, growing air pollution, global warming) and its protection. In the past several decades environmentalism has contributed to the public awareness and concern about the market led consumerist approach towards nature, land, biophysical environment, polluting behaviour. It has contributed to the formation of different agencies at the state and civil society levels. Prior to 1960s environmentalism was known by its two forms: preservation of natural environment and systematic conservation of resources (animals, birds, trees). The political agenda of this environmentalism concerned mostly with formation of legal rules to preserve the natural life. American conservationist Leopold (1949) contributed rich literature to weave together ecology, ethical and social concerns by his term 'land ethic'. Land ethic refers broadly to the ethical relationship between humans and animals, land, plants. It talked about the practices that preserve integrity, stability, life and beauty of biotic community.

After the World Wars and industrial exploitation of natural resources at huge scale, environmentalism acquired another form and dynamics. New environmentalism became more concentrated on environmental degradation specially pollution and its harmful impacts on human lives. The activists and followers of this new environmentalism mobilised public support to build pressures on welfare states to regulate industry and its usage of natural resources. Contemporary environmentalism has been associated with scathing critique of the status quo and promoting particular environmental philosophies and political values. Several writers and activists started exposing the nexus between corporate organisations and government in protecting business and economic interests more than environment. During 1990s, many scholars started depicting environmentalism as part of New Social Movements (NSMs) to build a coherent social force politically and ideologically. Norwegian philosopher Arne Naess conceptualised and later popularised the term 'deep ecology' i.e. (where humans are seen one among others who share the planet living organisms, plants, animals and other species) against what he called 'shallow ecology' (i.e. whereby all activities are centred to protect and improve lives of the humans of the western industrialised world). He argued that shallow ecology never asks deeper ecological questions to find solutions and hence bound to fail. Whereas deep

ecology provides a ruthless critique of the human society and its relationship to the nonhuman world. Many of these critiques contributed to a recognition that there exists a deeper connection between environmental problems and social issues. The movement contributed a greater academic interest in themes such as problems of anthropocentrism, relevance of ecocentrism, need for environmental ethics, environmental discourse etc.

3.2.4 Environmental Movements

The environment movements have been the area of considerable sociological researches. Environmental movements also predate the institutionalisation of environmental sociology. Sociologists have examined the connections between environment concerns, community livelihood, and social implications of environment model or policy the government brings in. They have paid attention to the origins of such environment movement and drawn connections with other socio-cultural and political mobilisations. Several empirical studies have focused on the structure of environmental organisations, their ideologies, practices, membership and social background of key figures who mobilise, produce literature on environmental issues and problems. Much recently there has been an increased interest in studying the localised and specialised environment movements i.e. anti-Posco protest, anti-nuclear agitations. Chipko movement, Narmada Bachao Movement, are the prime examples of such movements in India. Amita Baviskar notes that in India and worldwide environment activists were classified in two broad categories: one led by elites and privileged, and secondly those by activists who are marxists. The first set of environmentalists were criticised as being elitist and privileged in their character with access to state and corporate. These elitist environmentalists were said to be mostly focusing on the issue of wildlife conservation in India. On the other hand, those whom Baviskar calls as 'Ecological Marxists' (Baviskar, 2013: 45), are the ones who criticise the developmental model practiced in India and resultant displacement of indigenous people in several states.

Scholars working on environmental movements examine the pattern of their development, popularity, decline and disappearance. They look at the wider social process within which a particular set of environment movement survives, gains popularity on media, gets some response or feedback from government and local community and others do not. They investigate the issues socio-environment movements raise and the ideologies which justify the exploitation and consumption of environmental resources. Political Ecology has been the key arena and theme of such movements where scholars try to understand the broader conversion of issues like ecology, social justice, and animal rights.

3.2.5 Ecological Justice

Scholars working on environmental problems also examine the differential impact of ecological hazards, risks and problems on people. Dunlap and Catton (1994) go on to argue that conceptualising environmental sociology as the study of environment–society relations enable a shift of analytical focus from the symbolic construction of environmental problems to material explanations of their causes, consequences and potential solutions. The contemporary concern in the discipline has been to locate the causes of environmental problems in relations of production; explaining the distribution of consequences in terms of racial, gender, class and geopolitical inequalities and exploring the ways in which political institutions and social movements shape environmental policy.

Some scholars who follow the political economy approach in the study of environment recognise that the environmental problems have material dimensions. Water pollution, air pollution, soil erosion, and deforestation make some people wealthy and make some other people sick, threatens their livelihoods, and increases their risk of injury, economic misery and displacement. The unequal social distribution of environmental hazards is another central area of Environmental Sociological research, with scholars examining the processes by which socially disadvantaged populations, ethnic minorities, people of colour, lower castes and classes etc. come to experience greater exposures to myriad environmental hazards. These studies also help to explore equitable strategies to challenge environmental degradation and also to build sustainable relationship between humans and the environment. The foundation principle behind the concept of environmental justice is that all people irrespective of their race, class, caste, gender, sexuality are entitled to protection from environmental risks, disasters, pollution and hazards. Similarly, it also points to the issue of fair treatment to all people by environment regulations, laws and policies. In other words, the idea of environment justice means that environmental *goods* (green lands, clean air, water, better soil, fertile lands etc.) and environmental *bads* (pollution, waste, hazards etc) must be equitably distributed among all the people irrespective of their social background. It caters to the view that no population or social group due to any policy or law, is forced to bear disproportionate share of negative environmental consequences or impacts of pollution, degradation resulting naturally or by industrial activities.

3.2.6 Environmental Risk and Hazards

The disciplinary rigidity of not paying attention to biophysical factors their due began to change in 1980s when environmental degradation and hazards attracted sociological attention. Environmental sociologists explored the risks people face in their environmental contexts. With the depletion of natural resources and the effect on local communities and the need for an alternative resource management have become the subjects of many studies conducted

by sociologists. The environmental degradation has threatened human societies worldwide. Yet some are more vulnerable to its impact and consequences. Sociologists investigate the unequal distribution of the impact of both i) technical disasters i.e. reactor meltdowns, toxic leaks, explosions, oil spills; and ii) natural disasters i.e. earthquakes, landslides, floods, heat waves etc (Buttel, 1987). For instance, in India, indigenous communities, the landless workers, the poor and the underprivileged are the worst victims of both kinds of disasters.

Displacement, marginalisation and deterioration of the quality of life of large sections of population, the tribals, nomadic communities, craftsmen, the urban and the rural poor and women, as a result of the neoliberal economic model of the government have too attracted scholarly attention as well as civil society intervention. These negative and life-threatening impacts of environmental degradation, pollution and contamination were studied by sociologists. The impacts were also inequitably distributed across the social divisions. Gradually sociologists started looking at national level data on deforestation, energy consumption, use of pesticides, air and water pollution, chemical and nuclear waste, green house gas emissions, carbon footprints. They highlighted the disparities among poor and rich nations and that some groups impose such risks over others who are resourceless and poor. Social constructionist and as well as Marxian political economy accounts show how power and political dynamics play key role in shaping who is forced upon the disproportionate share of such environmental and health risks. Recent studies have stressed the policy changes towards environmental justice at both community and country levels by incorporating how people at the grassroots define risk and its implications for local society. A well-known study by German sociologist Ulrich Beck on risk is quite interesting to understand how risk society functions. According to Beck, risks are embedded in the modern industrial societies and are quite damaging yet ubiquitous (Beck, 1995). He argues that risks follow a pattern of class inequality in modern societies and the social production of wealth is systematically accompanied by the social production of risks.

3.2.7 Ecological Complex

Dunlap and Catton developed a new concept to address the complex modes of interactions between environment and society. Drawing upon the biologists' idea of 'eco-system', they have proposed a systemic analysis of the patterns of interaction and relationship among cultural system, personality system and social structure with physical environment by 'ecological complex' (Dunlap & Catton, 1979). Ecological complex is not just about the technologies and organisational contexts of this interaction but also pays significant attention to the human collectivities, cultural values and personalities of constituent members. This mutual relationship between physical complex and social complex, sociologists ask questions related to a) how do interdependent variations in population, technology, cultural

system, personality system, social system impact the physical environment, and b) how do subsequent changes happening in the physical environment alter population, technology, cultural system, personality system and social systems or their interrelations (Dunlap & Catton, 1979: 252).

3.2.8 Environmental Metabolism

The concept of metabolism has been extended from its biological origins to social and environmental contours. It helps in understanding the correlations and related processes between social system and environment systems. In general terms, metabolism refers to the process internal to an organism for its energy formation via breaking down of ingested substance and food and contributes to its survival. Robert E Park gave it sociological value by using it in the context of material flows and symbiosis happening in urban ecologies. The most recent contribution to this concept with Marxist approach is John Bellamy Foster's idea of 'metabolic rift' (Foster, 1999). Foster draws upon Karl Marx's idea of metabolism between labour and nature whereby the natural resources and materials are transformed into products by labour, to be used in factories and urban spaces. Marx saw migration from rural to urban cities as a disruption in socio-ecological metabolism. The metabolic rift, according to Foster, indicates the disruption of ecological processes and environmental harm caused by human beings and capitalist order (Foster, 1999). Foster argues that Marx predicted an emerging ecological crisis arising from the degradation of soil by the exploitative practices of capitalist agriculture. It produces socio-economic inequalities and demonstrates the domination of human over another human. Metabolic rift allows one to imagine a sustainable socio-ecological system can evolve under alternative economic order. Foster's concept of metabolic rift address qualitative aspect of environmental crisis. He emphasizes the qualitative dimensions of the relationship among production, consumption and ecological development.

3.2.9 Global Environmental Change

Understanding global environmental changes necessitate the study of social and environmental interactions. Several changes have happened in the environmental problems since 1970s. Firstly the scale of such problems have changed from being focused on localised issues to the global in scale and thus affecting far more people. The ecological changes have become more complex and pervasive in their impacts. The frequency and seriousness of localised environmental problems i.e. air pollution, contaminated water, solid waste etc. gradually seen by organisations and local community as generalised problems and inevitability of environmental degradation. Secondly due to global presence of some environmental issues such as global warming, shrinking green spaces, deforestation, loss of biodiversity, earthquakes, meltdown of glaciers, ozone depletion, floods etc. their origins are poorly understood and it adds to the difficulties in predicting their

occurrence. Environmental Sociologists have suggested to look into the global environmental changes vis-a-vis their changed frequency, scale and seriousness for general public. Another significant shift that has happened due to globalisation of environmental problems is that they are no more merely a symbolic issue of aesthetics of space. Rather such conditions now can have direct and detrimental impacts on human behaviour and wellbeing. Recent studies how environmental sociologists utilize global networks and flows perspective to provide adequate analysis of environmental dynamics.

Check Your Progress 1

- 1) Explain the term New Human Ecology

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- 2) What is the foundational principle behind the idea of ecological justice?

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- 3) What do you understand by the term 'deep ecology'?

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3.3 CHALLENGES FOR ENVIRONMENTAL SOCIOLOGY

Sociologists have been gradually adapting to the questions posed by the nonhuman world and challenges to their human survival. The slow and gradual response is not without reasons as well. Sociologists for very long had to struggle with denaturalization of social lives, inequalities, power

regimes of race, gender and class. Therefore, the regimes of colonialism and patriarchy have been justified with the biological determinisms which sociologists have resisted and deconstructed. On the other hand, in their study of environment sociologists were forced to question their adherence of social determinisms and adapt to the role of biophysical environment in shaping our society at large. In the contemporary times, market agencies and organizations can propagate the discourse to simply social life, avoid analysis of power, inequalities that shape biophysical world, and simply provide technical solutions to change beliefs and convince people of new ideas etc. The growing relevance of relationship between environment and society suggests that theoretical and methodological tools become more sensitive to biophysical world and yet retain their critical imagination to understand issues of power, inequality and domination.

3.4 ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

Environmental sociology has produced theoretical and empirical analyses on development issues and environment issues combined together. Environment and development are dependent on each other, if development neglects environment, then it will be detrimental to the whole society. Therefore, it is needed that any model for development should allow biophysical environment as well as human world to live a potential average quality of healthy life. The concept of 'sustainable development' was advanced by United Nations Conference on Environment and Development (UNCED). The concept emphasises the necessity of accomplishing the needs of all the people i.e. both present and future generations. Meeting the needs of all social groups requires redistributing resources in equitable manner and hence pertains a moral dimension to it. Thus, sustainable development aims at alleviating poverty by securing livelihoods that minimise environmental degradation, resource depletion and social instability. The concept refers to the promotion of development that is compatible with conservation of natural resources, preservation of regenerative capacity of ecological system and avoids burdening future generations with additional social and ecological risks and costs. One of the very popular approaches to address the issue of sustainable development has been the 'ecological modernisation' model. According to this theory, the industrial production system can be adjusted to include some reforms related to environment conservation but overall modernisation ideas can continue without necessary reorganisation of all the institutions of modern societies. It stresses a linear evolutionary model of progression of society which gradually matures to include cultural patterns, institutional arrangement and economic model becoming environmentally rational and policy makers try to minimise the environmental impacts of the development projects. This approach fails to examine the substantial costs to ecosystems and society due to its heavy technical and consumptive emphasis. This approach is criticised by scholars for ignoring the unintended consequences of

technocentric and productivity led worldviews on environment. Another important theoretical model to understand the sustainable development is the world system approach. Extending its core ideas to the environment, world system theorists argue that environmental risks, hazards and pollution are systematically shifted outside the core areas/countries to the periphery and semi-periphery. Different regions in the world are related via unequal relations of power and wealth, and core nations where capital accumulation happens are spared of the negative environmental impacts. In the long run this global capitalist system is not ecologically sustainable and hence needs to be restructured (Schnaiberg, 1975).

Check Your Progress 2

- 1) The concept of 'sustainable development' was advanced by

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- 2) How is the World System Theory applied to understand global environmental system ?

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3.5 LET US SUM UP

This unit delineates the basic concepts in Environmental sociology that help us understand the interconnections among human beings, social institutions, environment. Several concepts were discussed to show how ecology and environment are addressed in sociology. Scholars have specified the ways societies shape and in turn are shaped by the biophysical environment. We examined the cultural values and beliefs motivate people to use environment in particular ways. This unit also analysed how relationship between social and ecological is assembled, contested and reassembled via the different concepts that have been developed over the years in the sub-discipline of environmental sociology (Lockie 2015).

3.6 REFERENCES

3.7 SPECIMEN ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) Relates to the idea that sociologists also need to incorporate physical, biological, environment factors while explaining the social processes, and interactions. In a sense ‘new human ecology’ goes beyond the Durkheimian dictum of explaining social facts by social facts only. It does include non-social factors too in explaining social conditions.
- 2) The foundation principle behind the concept of environmental justice is that all people irrespective of their race, class, caste, gender, sexuality are entitled to protection from environmental risks, disasters, pollution and hazards. Similarly, it also points to the issue of fair treatment to all people by environment regulations, laws and policies. In other words, the idea of environment justice means that environmental *goods* (green lands, clean air, water, better soil, fertile lands etc.) and environmental *bads* (pollution, waste, hazards etc) must be equitably distributed among all the people irrespective of their social background.
- 3) Arne Naess conceptualised and later popularised the term ‘deep ecology’ i.e. (where humans are seen one among others who share the planet living organisms, plants, animals and other species) against what he called ‘shallow ecology’ (i.e. whereby all activities are centred to protect and improve lives of the humans of the western industrialised world). He argued that shallow ecology never asks deeper ecological questions to find solutions and hence bound to fail. Whereas deep ecology provides a ruthless critique of the human society and its relationship to the nonhuman world.

Check Your Progress 2

- 1) United Nations Conference on Environment and Development (UNCED)
- 2) Another important theoretical model to understand the sustainable development is the world system approach. Extending its core ideas to the environment, world system theorists argue that environmental risks, hazards and pollution are systematically shifted outside the core areas/countries to the periphery and semi-periphery. Different regions in the world are related via unequal relations of power and wealth, and core nations where capital accumulation happens are spared of the negative environmental impacts.