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Ecotourism

Paper Code : MBTM 3005

MBA - TOURISM

III Semester

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Ecotourism

Objectives

Students will be able to

- ➢ Understand the significance of ecotourism;
- ➢ Comprehend the theories and practices of ecotourism;
- ➢ Be familiar with the model ecotourism projects; and
- ➢ Use the theoretical knowledge to mange ecotourism resources.

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Unit - V

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UNIT - I

Unit Structure

Lesson 1.1 - Fundamentals of Ecology

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the meaning and concept of ecology and environment

➢ Find the root of evolution of ecology and environment

➢ Know the principles and key terms of ecology

➢ Be aquatinted with the basic laws and great ideas of ecology

Ecology is an important branch of the fundamental biological science that explains interdependence and interrelationships between man, animals and plants in a manner to help others to sustain and grow without any difficulties. It is a combination of pure and social science subjects to study the relationships between living and non-living organisms. Thus, ecology is a scientific study of relationship of living organisms and the processes for natural ecological succession. Further, the need for the science of ecology occurred only when several complex environmental problems related to global warming and green house emissions started causing massive harms to the planets, animal and human life. In the last several decades, this has become an independent subject and research

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area. It promotes environmental literacy and enlightens the people about the harmful effects of pollution and contamination. More importantly, it gives the ways for managing the resources in a transdisciplinary manner.

Moreover, ecology promotes interdisciplinary approaches to study and research the problems of ecosystem and landscape at the local, regional and global level. This multilevel and large-scale approach involves the entire education and innovation system to preserve the earth for future generations. Essentially, ecology is a well-recognized discipline that aims at developing an integrative approach to study the cause and effect relationships across and among disciplines. It is otherwise called as consilience. In this chapter, the meaning, concept, evolution, basic laws and great ideas are presented with illustrations to help the readers understand the importance of ecology.

Evolution of Ecology

Science is a discipline that emphasizes on the reality with sufficient proof emerged from the experiments. The value of science is to provide systematic methods to obtain results that must be justified. It is an active enterprise seeking to unite facts by explaining as to how the world is functioning. As such, evolution is a natural process that witnesses changes in the forms of organisms due to their interactions. In this way, ecological situations generally lead to evolutionary solutions and ecological problems. Adaptations are some of these evolutionary solutions and it is genetically determined feature prevalent in a population. There is a popular concept called "Survival of the Fittest. One organism adopts itself to improve its ability to survive and reproduce given various obstacles in a particular environment. Above all, evolution is a genetic change in a population of organisms over time. Evolution is a change that occurs in the characteristics of living things through time. The change occurs in the form and behavior of organisms from one generation to other. Hence, the forms of organisms starting from the DNA sequences to morphology and social behavior may be found at all levels.

Ecology and the evolution of various organisms are so intimately related that one organism's survival is under threat without the support of other organism. In this process, the ecological situation of organisms directs its evolution and the organisms respond to its ecological situation.

Further, ecological relationships have undergone a fundamental change and many other species in the earth are directly or indirectly affected by these changes. Scientists often distinguish between proximate and ultimate explanations. Proximate explanations offer immediate causes for a particular phenomenon. Ultimate explanations provide historical reasons for observed ecological phenomena.

Ecology & Its Origin

To understand ecology thoroughly can help you understand the entire biology. It is essentially required to a complete biologist in order to be an ecologist. In the modern days, ecology is now seen as not just a biological science but a human science that is connected to the growth and prosperity of human civilization. In this context, it is appropriate to be careful for the preservation of our future species. It all depends on how wisely that we can learn the management of natural resources

The word "ecology" is derived from the Greek word "Oikos" and "logos". The former signifies the "Household" and the latter represents "Study". Therefore, it is the study of environmental house that includes all the living and non-living organisms in it. It also encompasses the functional processes to provide sufficient energy for the organisms to sustain and grow in natural environment. The house of organisms must be habitable and each one must reciprocate others in the exchange of energy. Generally, ecology is the study of life at home with much emphasis on the totality or pattern of relations between organisms and their environment. In a broad sense, ecology is otherwise called as management of nature and economics of nature. The term ecology was first coined by Reiter in 1868 and was first defined by German Scientist Ernest Haeckel in 1869.

Ecology rose to become a popular scientific discipline in the late nineteenth century. More particularly, the Charles Darwin's ideas about ecology and evolution could become an important scientific approach to the study about natural history independently. As a result of which, it was influenced by the need for an independent subject called "Ecology" to study about the relationships of organisms. Further, ecology was identified as a quantitative science with regard to the nature of interconnectedness of organisms within ecosystems after the World War II.

The work related to energy flows through ecosystems by Raymond L. Lindeman in 1942 paved the ways for undertaking research woks and studies on ecology. Further, Aldo Leopold, the naturalist and forester, explained that ecology was the basis for understanding and managing planetary resources. The research work of Leopold on personal transformation from carnivore-hunting representative of resource-extraction industries to ecologically oriented philosopher and conservationist brought about a paradigm shift in the consciousness of people about the close relationships between the organisms.

Ecology became a subject and got into the public consciousness during the 1960s and 1970s when pollution, overpopulation, and allocation of resources were recognized as critical societal issues. These issues were dealt by the ecologists with certain permanent solutions that changed the perceptions of people towards the conservation of plants and animals. The epoch-making book namely Silent Spring by Rachel Carson in 1962 book was an eye-opening for the government and public. The book created such a huge public awareness that necessitated the federal legislation to enact laws associated with the environmental protection. It includes the Wilderness Act and the Endangered Species Act to the Clean Air Act and the Clean Water Act. The fundamental concepts of ecological include water and water flows, vegetation and biological diversity, populations, particularly populations of animals and interconnections at the landscape scale, particularly fragmentation of habitats and hydrology.

Meaning & Definition of Ecology

It is a century old discipline with the primary focus on the principles, theories, and concepts for dealing with growing environmental problems and finding the sustainable solutions for the preservation of organisms in the planet during the last four decades. The subject has gained worldwide visibility and acceptability as a higher-level concept to study the behaviour and habitation of organisms. Thus, it is defined as a scientific study of relationship of living organisms in the processes that help them grow and sustain for future. It is, however, a study of natural ecological succession that preserves the species. It is an advanced paradigm with the success of the Savannah River Ecological Laboratory (SREL) during its conception. In essence, ecology is the study of relationships of organisms to their environment and to one another.

Types of Ecology

The types of ecology are classified as follows:

Behavioral Ecology: It is the study of the evolutionary basis for animal behavior due to ecological pressures. It outlines the four causes of behavior that consists of causation, development, function and phylogeny.

Human Ecology: It is the study of the human species and its interactions with its surroundings. It recognizes that organisms both change their surroundings and are changed by their surroundings. A human ecology approach might highlight the mutual change that has taken place. Three laws of human ecology propounded by Garrett Hardin in 1993 are fundamental for sustainable development. These laws are as follows;

➢ **First Law of Human Ecology**: We can never do merely one thing. This is a profound and eloquent observation of the interconnectedness of nature.

➢ **Second Law of Human Ecology**: There's no away to throw to. This is a compact statement of one of the major problems of the effluent society.

➢ **Third Law of Human Ecology:** The impact (I) of any group or nation on the environment is represented qualitatively by the relation.

Population Ecology: A population consists of individuals of the same species and they live, interact and migrate through the same niche and habitat. It is the study of the dynamics of species populations and the interactions with the environment.

Principles of Ecology

Ecological principles present the collective properties and it is the sum of the components that explain the properties such as birth rates of a population equal to the sum of individual births during an indentified time period.

➢ Adaptations and life processes for organisms to derive energy to survive and grow

➢ Abundance of organisms and distribution them across the ecosystem for mutual sharing the energy

➢ Abundance and distribution of biodiversity in accordance with the environmental conditions

➢ Movement of materials and energy through living communities at various levels

➢ Development of ecosystems in a successive way

Scope of Ecology

The emergence of applied ecology may be dated back to the beginning of the 20th century and the study of interactions of human beings with all the components of ecosystem has made the subject more popular worldwide. Thus, ecology explains the interconnectivity between community and spatial organizations and the impact on the biotic world. Nature thus can provide the goods and services sought by human, including recreation and appreciation of scenic beauty or disposal of waste. Raw materials and energy sources used by human like ores, coal and oil are the gifts of nature to the human habitation to sustain for future. Interestingly, nature is so beautiful that provides outdoor recreation, wildlife and scenery to the people to learn, appreciate, experience and enjoy. It is no doubt an essential life support system that perennially provides soil, air and water.

The scope of ecology covers a wide array of interacting levels of organization spanning micro-level or cells to planetary scale or ecosphere phenomena. Ecosystems contain populations of individuals that aggregate into distinct ecological communities. It can take thousands of years for ecological processes to bring about the final successional stages of a forest. Ecology is interdisciplinary in nature and it derives the basic concepts from sociology, anthropology, psychology and health sciences.

Key Terms of Ecology

Ecosystem: Ecosystem is a process of linking the organisms for continuous supply of energy from producers to consumers for sustainable habitations. The habitats within biomes form an integrated whole. It is

dynamically responsive system with a wide array of physical and biological complexes.

Ecosystem Engineering: The niche construction is nothing but a process and concept of ecosystem engineering. Organisms directly or indirectly get adjusted with the resources and share with other species. In this process, it causes physical changes in biotic or abiotic materials in an ecosystem.

Food Web: Food web is the archetypal ecological network though which all the organisms, both producers and consumers, accumulate the energy for their survival and help others to survive mutually. For example, plants produce simple sugars during photosynthesis from the use of the solar energy. In this stage, plants continue to grow and accumulate nutrients. Plants are eaten by grazing herbivores like cattle, buffalo, dear, etc. Subsequently, the energy transferred through a chain of organisms by consumption is called as food web. The larger interlocking pattern of food chains, where more organisms get involved, creates a complex food web in an ecological community.

Biome: Biomes are the larger units of organization. The categorization of different regions of the earth's ecosystems is done as per the structure and composition of vegetation. Biomes dominated by different functional types of vegetative communities are limited in distribution by climate, precipitation, weather and other environmental variables.

Biosphere: The largest scale of ecological organization with the sum of ecosystems on the planet is called as the biosphere. Ecological relationships control the flow of energy, nutrients and climate to the planetary scale in a biosphere.

Biodiversity: Biodiversity is the variety of life and its processes. It includes the variety of living organisms, the genetic differences among them, the communities and ecosystems in which they occur, and the ecological and evolutionary processes that keep them functioning, yet ever changing and adapting.

Habitat: The habitat of a species indicates the size and capacity of environment over which a species directly or indirectly depends for

receiving energy. Further, the habitation region in environmental space represents a biotic or abiotic environmental variable.

Water: Extensive pumping of groundwater to satisfy human needs for potable water has led to substantial declines in groundwater depth in most urban and suburban areas, and exurban areas are similarly threatened. Subsequent depletion of aquifers causes associated surface waters to dry up, thereby reducing surface waters such as streams and lakes. Habitat for plants and animals that live in well-watered areas is threatened when these features are reduced or eliminated by groundwater pumping. A portion of the water that infiltrates is taken up by plants and pumped back into the atmosphere via transpiration.

Vegetation: Vegetation refers to the kinds and numbers of plants in an area. Vegetation serves as habitat for animals. The variety of life forms is called biological diversity or biodiversity. The dominant measures of biodiversity are species diversity or species richness, terms that refer to the number and abundance of species in an area.

Nonnative Species: Nonnative species are species that have become established beyond their native ranges. All the individuals of a species that live in a particular place are called a population. Concern is especially apparent for these species when their existence is threatened from a local area (extirpation) or from the planet (extinction).

Fragmentation: Fragmentation of habitats and corridors for animal species receive particular attention. Such mitigation must account for ongoing and likely future changes in global, and therefore regional, climates. As Earth warms and precipitation regimes change, habitat for all species is being altered. Some species are capable of the rapid movement necessary to keep up with changes in climate, but many others move and reproduce too slowly to adapt.

Transcending Functions & Control Processes

The ecological hierarchy with basic functions at each level has unique emergent and collective properties. These are the transcending functions, such as behavior, development, diversity, energetic, evolution, integration, and regulation. Some of the properties function throughout

the hierarchy and others differ at different levels in the process of functions. Moreover, mutations and other direct genetic interactions at the organism level take place with the involvement of natural selection evolution, but indirect co-evolutionary and group selection processes at higher levels.

The positive and negative feedback controls are obvious and common. Homeostasis is one when the organism down, control is set point, in that it involves very exacting genetic, hormonal, and neural controls on growth and development. The term homeorhes is, from the Greek meaning "maintaining the flow," has been suggested for this pulsing control.

Therefore, there are no equilibriums at the ecosystem and ecosphere levels, but there are pulsing balances, such as between production and respiration or between oxygen and carbon dioxide in the atmosphere. Failure to recognize this difference in cybernetics has resulted in much confusion about the realities of the so-called "balance of nature".

For example, a species of desert plant faces a rather harsh climate that includes high temperatures and very little precipitation. As a consequence, it must compete for water with neighboring plants. This ecological situation tends to favor those plants that produce a mat of fine roots near the soil surface. This type of root system would more effectively capture the water that occasionally falls in the area

Basic Laws of Ecology

Twenty-seven basic propositions cover ecological formulae and comprise the body of the Laws of Ecology. The propositions have been collected by Pierre Dansereau. The basic laws are as follows;

A. Physiology of Ecotopic Fitness (1-9)

➤ **Law of the in Optimum:** No species encounters in any given habitat the optimum conditions for all of its functions.

➤ **Law of Aphasy:** Organic evolution is slower than environmental change on the average, and hence migration occurs.

> **Law of Tolerance:** A species is confined, ecologically and geographically, by the extremes of environmental adversities that it can withstand.

> **Law of Valence:** In each part of its area, a given species shows greater or lesser amplitude in ranging through various habitats (or communities). This is conditioned by its requirements and tolerances being satisfied or nearly overcome.

> **Law of Competition-Cooperation:** Organisms of one or more species occupying the same site over a given period of time use(and frequently reuse) the same resources through various sharing processes which allow a greater portion to the most efficient.

> **Law of the Continuum:** The gamut of ecological niches, in a regional unit, permits a gradual shift in the qualitative and quantitative composition and structure of communities.

> **Law of Cornering**: The environmental gradients upon which species and communities are ordained either steepen or smoothen at various times and places, thereby reducing utterly or broadcasting greatly that part of the ecological spectrum which offers the best opportunity to organisms of adequate valence.

> **Law of Persistence:** Many species, especially dominants of a community, are capable of surviving and maintaining their spatial position after their habitat and even the climate itself have ceased to favor full vitality.

> **Law of Evolutionary Opportunity:** The present ecological success of a species is compounded of its geographical and ecological breadth, its population structure, and the nature of its harboring communities.

B. Strategy of Community Adjustment (10-14)

> **Law of Ecesis:** The resources of an unoccupied environment will first be exploited by organisms with high tolerance and generally with low requirements.

> **Law of Succession:** The same site will not be indefinitely held by the same plant community, because the physiographic agents and

the plants themselves induce changes in the whole environment, and these allow other plants **heretofore** unable to invade, but now more efficient, to displace the present occupants.

➢ **Law of Regional Climax:** The processes of succession go through a shift of controls but are not indefinite, for they tend to an equilibrium that allows no further relay; the climactic topographic-edaphicbiological balance of forces results in an ultimate pattern which shifts from region to region.

➢ **Law of Factorial Control:** Although living beings react holocenotically (to all factors of the environment in their peculiar conjunction), there frequently occurs a discrepant factor which has controlling power through its excess or deficiency.

➢ **Law of Association Segregation:** Associations of reduced composition and simplified structure have arisen during physiographic or climatic change and migration through the elimination of some species and the loss of ecological status of others.

C. Regional Climatic Response (15-20)

➢ Law of Geo-ecological Distribution: The specific topographical distribution (micro distribution) of an ecotypic plant species or of a plant community is a parallel function of its general geographical distribution (macro distribution), since both are determined by the same ecological amplitudes and ultimately by uniform physiological requirements.

➢ Law of Climatic Stress: It is at the level of exchange between the organism and the environment (micro biosphere) that the stress is felt which eventually cannot be overcome and which will establish a geographic boundary.

➢ Law of Biological Spectra: Life-form distribution is a characteristic of regional floras which can be correlated to climatic conditions of the present as well as of the past.

➢ Law of Vegetation Regime: Under a similar climate, in different parts of the world, a similar structuralphysiognomic-functional response can be induced in the vegetation, irrespective of floristic affinities and/or historical connections.

> Law of Zonal Equivalence: Where climatic gradients are essentially similar, the latitudinal and altitudinal Zonation and cliseral shifts of plant formations also tend to be; where floristic history is essentially identical, plant communities will also be similar.

> Law of Irreversibility: Some resources (mineral, plant, or animal) do not renew themselves, because they are the result of a process (physical or biological) which has ceased to function in a particular habitat or landscape at the present time.

D. Geographic Distribution (21-27)

> **Law of Specific Integrity:** Since the lower taxa (species and subordinate units) cannot be polyphyletic, their presence in widely separated areas can be explained only by former continuity or by migration.

> **Law of Phylogenetic Trends:** The relative geographical positions, within species (but more often genera and families), of primitive and advanced phylogenetic features are good indicators of the trends of migration.

> **Law of Migration:** Geographical migration is determined by population pressure and/or environmental change.

> **Law of Differential Evolution:** Geographic and ecological barriers favor independent evolution, but the divergence of vicariant pairs is not necessarily proportionate to the gravity of the barrier or the duration of the isolation.

> **Law of Availability:** The geographic distribution of plants and animals is limited in the first instance by their place and time of origin.

> **Law of Geological Alternation:** Since the short revolutionary periods have a strong selective force upon the biota, highly differentiated life forms are more likely to develop during those times than during equable normal periods.

> **Law of Domestication**: Plants and animals whose selection has been more or less dominated by man are rarely able to survive without his continued protection. Collated as an Appendix to an article,

"Ecological Impact and Human Ecology," by Pierre Dansereau in the book Future Environments of North America by, edited by F. Fraser Darling and John P. Milton; The Natural

Human Interventions & Ecology

From the time immemorial, human needs have been satisfied from the natural's bounty. The interaction to help each other is a natural process and man comparatively depends more the nature to survive. In the course of time, many species have been disappeared from the earth's ecosystem due to the ignorance and greedy behavior of human towards nature. It is reported that rapid industrialization followed by the urbanization in North America and Western Europe was principally responsible for the degradation of ecosystems, loss of vegetations and species. There were profound changes in assemblages of the remaining species in the wake of industry, construction of road and railway lines and development cities. People plunged into the use of natural resources to meet their own needs and sell them to earn revenue. In this process, hundred years of trees were cut into pieces and small trees were planted to make over the loss of forest. At the same time, animals were hunted for meeting the need of food and other essential household items. Forest areas were cleared for settlement and agricultural activities. It is plowed large landscapes, transforming fertile soil into sterile and lifeless dirt.

Ecosystems have been disturbed and pollution and dumped garbage from the industry and cities have started dirtying our air, contaminating the purity of water and contributing greatly to the global warming leading to ice melting.

Humans played an important role in loss of species and degradation of vegetations. The human transgressions, as found by Leopold, against other species could make huge loss to the biodiversity. He suggested that maintenance of biological diversity is important for present and future generations. There is a responsibility to future Homo sapiens and to non-human species to retain as much biological diversity as possible. The wild land ecosystems must be managed in such a way that maintenance and restoration of ecological processes should not be hampered. These processes include pollination, herbivore, seed dispersal and competition between co-occurring species.

Summary

Ecology has become one of the advanced biological sciences. It deals with living and non-living organisms and their interrelationships. The study ecology has made significant contribution to the preservation of the various ecosystems in a more scientific manner. The global warming and green house emissions have become two important challenges that ecologists are findings the pragmatic solutions through the continuous research works on different key areas of ecological sciences. More importantly, there are interventions of humans into the nature for exploitation of resources that largely lead to destroying the ecosystem and ecological processes and functions. Thus, ecology remains to plan a dominant role in the biological sciences.

It has become so imminent that the need for the science of ecology occurred only when several complex environmental problems related to started causing massive harms to the planets, animal and human life. In the last several decades, this has become an independent subject and research area. It promotes environmental literacy and enlightens the people about the harmful effects of pollution and contamination. More importantly, it gives the ways for managing the resources in a trans-disciplinary manner.

Moreover, ecology promotes interdisciplinary approaches to study and research the problems of ecosystem and landscape at the local, regional and global level. This multilevel and large-scale approach involves the entire education and innovation system to preserve the earth for future generations. Essentially, ecology is a well-recognized discipline that aims at developing an integrative approach to study the cause and effect relationships across and among disciplines. It is otherwise called as consilience. In this chapter, the meaning, concept, evolution, basic laws and great ideas are presented with illustrations to help the readers understand the importance of ecology.

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Lesson 1.2 - Functions & Management of Ecosystem

Learning Objectives

After reading this chapter, you should be able to

- ➢ Explain the meaning and importance of ecosystem
- ➢ Know the functions of ecosystem and its dynamic roles
- ➢ Understand problems in the management of ecosystem
- ➢ Find the ways of managing the ecosystem
- ➢ Find the relationship between biodiversity and conservation

The study of ecosystem is an important element of the science of ecology. An ecosystem represents a biological community or living and non-living elements which interact and share the energy. The physical and chemical factors create its non-living or abiotic environment. Energy transformations and biogeochemical cycling are the fundamental processes of ecosystem. The complex relationship between the living and non-living organisms needs management of resources in order to ensure their continuous flow of energy in the food chain or food cycle. Thus, ecosystem management is a process aiming for conservation of major ecological services and restoration of natural resources while meeting the socioeconomic, political and cultural needs of current and future generations. The primary goal behind the need for ecosystem management is to make efficient maintenance and ethical use of natural resources.

Meaning of Ecosystem

Ecosystem is otherwise called as a network of ecological relationship that provides opportunity for organisms to make interactions with one another along with the environment in which they occur. It occurs at the level of the individual, the population, the community and the ecosystem. Thus, ecosystem is a dynamic process that helps in the functions or the flow of energy produced by photosynthesis. Moreover, the flow of energy or materials across several steps in a food chain can be only effective only

when the organisms are sufficiently present in a particular ecosystem. It controls the rate of decomposition of materials or the rate at which nutrients are recycled in the system.

Ecosystem can be as small as a village or estuary or as big as a desert or sea or ocean or mountain or river. There is no fixed physical boundary to limit the movement of energy from one source to other. On the contrary, there are natural boundaries within which organisms function for their own survival that in turn helps others sustain and grow. There is a requirement of energy transformation and cycling continuously in the form of sunlight in an ecosystem. At the same time, some energy is lost when it transfers to a higher trophic level. Nutrients are recycled within an ecosystem and the supply of nutrients normally limits biological activity. In addition, energy is moved through an ecosystem through a natural food web. It is the interlocking food chains that directly and indirectly connect to the producers and consumers in the food web. A biome is a major vegetation type and they spread over a large extended area. Generally, temperature and precipitation patterns on the Earth's surface determine the distribution patterns.

For example, energy is first captured by photosynthesis that is called as primary production in an ecosystem. The availability of amount of energy to higher trophic levels is determined by the amount of primary production. Hence, ecosystem function is mainly controlled by top-down and bottom-up controls.

Components of Ecosystem

When you are clear about the meaning of ecosystem and its processes and functions, it will be easy to understand the components of ecosystem that help in interlocking with top and bottom level of organisms. It is essentially important to know the relationship between climate and soil with ecosystem along with the diversity of plants and animals and their independences. It is a natural process that links animals and microbes with water, nutrients and food. The components of ecosystem are broadly classified into the abiotic and biotic.

In an ecosystem, you may find the biological communities with the functional groupings. It is a biological category composed of organisms

and it performs mostly the same kind of function in the system. For example, all the photosynthetic plants or primary producers form a functional group. The basic components of ecosystem are given in Table.

Abiotic	Biotic
Sunlight	Primary producers
Temperature	Herbivores
Precipitation	Carnivores
Water or moisture	Omnivores
Soil or water chemistry (e.g., P, NH4+)	Detritivores

Basic Ecosystem Components

Processes of Ecosystems

The interdependence of the plants, zebra, lion, and so forth with the two main ideas about how ecosystems function can be seen in the ecosystem models. Ecosystems have energy flows and ecosystems cycle materials. These two processes are linked, but they are not quite the same.

In a typical ecosystem, energy enters the biological system in the form of light energy, or photons. It is subsequently transformed into chemical energy in organic molecules by cellular processes by including photosynthesis and respiration. Finally, it is converted to heat energy. The dissipation of energy is nothing but it merges to the system in the form of heat. There is no question of recycling them once it is lost to the system.

In this processes, biological systems would quickly break down without the continuous input of solar energy. Earth is an open system as far as flow and entry of energy is concerned. There are elements like carbon, nitrogen, or phosphorus enters the earth's system in a variety of ways. As a result, plants obtain elements from the surrounding atmosphere, water, or soils. Animals may also obtain elements directly from the physical environment. But they obtain these elements mainly as a consequence of consuming other organisms. These materials are transformed biochemically within the bodies of organisms. In natural processes, they are returned to an inorganic state due to excretion or decomposition. Decomposition or mineralization takes places when bacteria complete this process.

As the earth is also an open system and so also a close system during decomposition because materials are not destroyed or lost. These elements are cycled continuously between their biotic and abiotic states within ecosystems. When the supply limits the biological activity is called as nutrients. It is a state of first primary production or the generation of production of energy for living things. For example,

Herbivores receive their energy by consuming plants or plant products. Similarly, carnivores, as it is the second stage of flow of energy, obtain energy by eating herbivores directly. In the third stage, detritivores consume the droppings and carcasses for the microbes to eat. Thus, it is cycle of flow of energy form the producer to consumers and vice-versa.

In a usual large ecosystem, a food chain is extended from the energy from the sun captured by plant photosynthesis to other levels like herbivores, carnivores, scavengers, detritivores and decomposers. It is a flow of energy from one trophic level to another trophic level through the food chain. A tropic level consists of organisms that provide energy or living in the way that includes primary producers (plants), primary consumers (herbivores) or secondary consumers (carnivores). In this process, it is natural to produce dead tissue and waste products. But all such wastes are consumed by scavengers, detritivores and decomposers. All of them act as consumers of carcasses. Finally, microbes finish the job of decomposition. The variation of the process of energy and the amount of primary production is directly determined by the amount of solar radiation and the availability of nutrients and water. The fluctuation creates less supply of energy from one topic level to another. Where there is an inefficiency in the transfer of energy through the food chain, it explains that the supply of energy is relatively less at the herbivore level than at the primary producer level and subsequently at the carnivore level. This may otherwise be called as the pyramid of energy. Figure illustrates the pyramid of energy in an ecosystem.

Controls on Ecosystem Function

The function of ecosystem is largely determined by the bottom-up and top-down control. The former explains that the supply of nutrient to the primary producers is controlled by the herbivores like grass, tree, etc. The later explains that predation and grazing by higher trophic levels on

lower trophic levels ultimately controls ecosystem function. These two theories ultimately control the functioning of ecosystem. When there is an increase in the level of nutrient at the bottom level of a food chain, the production of autotrophs will correspondingly be spread across the food chain. As a result, all other organisms at various tropic levels will ultimately get benefited from the creation of additional food. In this situation, the energy and materials will cycle comparatively faster.

In the case of top-down control approach of ecosystem function, predators play a dominant role in deciding the availability of nutrients in the food chain. When the populations of predators increases that will have direct impact on the grazers like deer, cattle, etc, the number of grazers will diminish in the food chain. Hence, the decrease in grazers results in more primary producers as fewer of them are usually eaten by the grazers. Thus, control of ecosystem is essentially important to ensure the balance between the producers and consumers in the conventional food chain. The marginal variation of grazers or predators can cause imbalance in the supply of nutrients. In this context, it is significant to maintain the population numbers and total available productivity that cascades from the top levels to the bottom tropic levels.

Types of Ecosystem

Rain forests and Tundra

Biome is a major vegetation type that extends over a large geographic area. Tropical rain forest, grassland, tundra, etc. are some of the examples of rainforest and Tundra ecosystem.

Aquatic Ecosystems

An aquatic ecosystem functions in a body of water in which communities of organisms are dependent on each other. For example, marine ecosystems and freshwater ecosystems are two types of aquatic ecosystems.

Grasslands and Deserts

A biological community with few trees or shrubs is characterized by mixed herbaceous vegetation cover is called as grasslands and desert ecosystem. Mountain:

The difference in ecosystem occurs due to the climate differences from place to place. For example, the terrestrial ecosystems are mainly influenced by the dominant vegetation.

Distribution of Biomes

The amount of sunlight that each and every place receives is almost equal and there is a great deal of variation in the amount of heat that is generated from the sun's rays. As such, the sun's rays strike low latitudes directly but high latitudes obliquely. The uneven distribution of natural occurrence of sun ray changes the wind speed and ocean currents and it also leads to determining the amount of rainfall. For example, certain plants are distinctive and they can only grow in certain climates. It finally creates the vegetation appearance that is called as biomes. Therefore, the high tundra is as much desert as is the Sahara.

Ecosystem Management

Management of ecosystem is a recent phenomenon that focuses on the interventions of scientific knowledge to control, distribute and manage the food chain in an ecosystem. An efficient management of ecosystem can be more effective in conserving major ecological services and restoring natural resources. The primary objective is to meet the needs of present and future generation. At the same time, processes and functioning of ecosystem should be affected.

Ecosystem management is focused at the efficient maintenance of natural resources and it can only be possible with responsible use of natural resources. The interrelation of socio-cultural, economic and ecological systems is essentially important for ecosystem to function dynamically. Adding management with ecosystem does not serve the purpose unless and until the principles are implemented and obeyed by the users of natural resources.

Principles of Ecosystem Management

The principles of ecosystem management give importance on the social values and priorities. Certainly right, there is no beginning and end to the ecosystem management. The question arises where to

start and where to end the efforts for maintaining the energy supply in an ecosystem. There is every chance that energy flow gets disrupted due to the nature of relationships between the producers and consumers. Maintaining ecosystem with the support of humans has become a great challenge. However, principles of ecosystem management can regulate the transgressions in the ecosystem. The principles are as follows;

- The boundaries of each ecosystem must be clearly and formally defined as each ecosystem place specific and sensitive.

- Maintaining ecosystems in the appropriate condition must be the desired objectives in order to obtain social benefits.

- Limited ability to accommodate stressors must be taken into consideration while responding to the ability of ecosystems for a variety of stressors, natural and man-made.

- Ecosystem management must ensure biological diversity as it leads to sustainability.

- The time period, the benefits and costs must be assessed before implementing various management approaches for ecosystem conservation.

- Ecological footprints and carrying capacity of each ecosystem must be assessed.

It is not wise to depend on management techniques to control or maintain the ecosystem as it is debatable and controversial. However, a well-defined policy can ensure the effective management of ecosystem. These assertions are important to understanding much of the conflict surrounding ecosystem management.

Types of Ecosystem Management

These are the following management approaches that have suggested by the eminent ecologists and practitioners for effective ecosystem management

- Adaptive management
- Natural resource management
- Strategic management
- Command and control management.

Stakeholder Management

Stakeholders are individuals or groups of people who are affected by decisions and actions on environmental conservation. They can be called as partners or beneficiaries from the functioning of ecosystem. The outcomes of environmental decisions relating to ecosystem management are largely done in consultation with the stakeholders.. In most of the time, they can influence the policy decisions of government on ecosystem management. The most important stakeholder is community which is a critical element for managing ecosystem as they have diversity of knowledge, perceptions and values of nature. Thus, effective management of ecosystems requires a negotiation process that is mutually beneficial and agreed. All the stakeholders must have dialogue to find the permanent solutions to the degradation of vegetations and animal life.

Adaptive Management

Thus, adaptive management serves as a "learning by doing" method for ecosystem management. It is one of the advanced techniques to help save the ecosystem. This approach generally helps in the prediction of future influences or disturbances to ecosystem. Managing the ecological integrity by practicing the ability to accept changes based on new knowledge, experience and insights is the primary objective of this approach. It aims to identify uncertainties in the management of an ecosystem and suggest the ways to deal with the uncertainties. The ecological needs of an ecosystem can be maintained with primary focus on the relationship between bottom-up and top-down controls. For example, lack of decision-making skills of custodians of ecosystem or government officials prevent the authorities from making the technique more effective. However, socio-economic and political conditions of local community must be affected when the decisions to go for preserving the ecosystem are taken into consideration.

Natural Resource Management

Management of natural resources for human use has been a key issue for maintaining the whole ecosystem. Natural resources are limited and maximum exploration or utilization of these resources would be practical impossible given the functioning and processes of ecosystem.

Sustainable use of natural resources is the primary objective of natural resource management. Efforts are taken to maintain balance between development and conservation over a long period of time. It is difficult to maintain balance due to the change at different spatial and temporal scales. In essence, the ecosystem management concept is based on the relationship between sustainable resource maintenance and human demand for use of natural resources.

The duties and responsibilities of forest officials or custodians of national parks and wildlife sanctuaries to maintain the balance of resources for the human use as well as the conservation of natural resources are given below.

➢ To fulfill the demand for a given resource without causing harm to the ecosystem, or jeopardizing the future resource.

➢ To establish partnerships between all the stakeholders for a more sustainable use of limited natural resources.

Forest officials must initially assess the capacity of ecosystem and resource extraction should be done after examining the supporting resources. Professionally managed resources can meet the present demand for food while leaving enough to repopulate and provide for future demand. Thus, the demand for natural resources is unpredictable due to the rise in human populations.

Strategic Management

Formulation of goals and driving to achieve the goals can be possible only when there will be better strategy. Strategic management develops different resource management model that can benefit the ecosystem without affecting socio-economic interests of other stakeholders. It is a process of implementing policy and programmes of the government.

Landscape Level Conservation

It is a method to meet the wildlife needs at a broader landscape level scale at the time of taking conservation initiatives. It is one of the ecosystem management approaches that focuses on the interconnected of ecological systems. As such, measuring and weighing the landscape

requirements of wildlife while taking the needs of humans into consideration is a complicated and complex process. For example, project tiger or elephant is created to provide special attention due to the loss of predator population. This is done by creating habitat fragmentation. However, human-induced environmental degradation has become a chronic problem and the landscape level ecology plays an important role in preserving the ecosystem.

Command & Control Management

In order to manage the ecosystem, there needs the command and control as a form of management technique. It is top-down control approach that attempts to control nature, its processes and functioning with an objective of improving product extractions. It uses a liner problem solving technique to solve the problems with laws, threats, contracts and agreements. These controlling devices have so far become very useful for preserving the ecosystem and managing the natural resources. These are the following actions of command and control management

➢ Protection of crops for harvesting more products
➢ Use of herbicides and pesticides to protect the crop
➢ Select the predators to create reliable game species
➢ Curb the timber supply by suppressing forest fires

Biodiversity &Conservation

The term biodiversity refers to the variety of life on Earth at all its levels, from genes to ecosystems, and the ecological and evolutionary processes that sustain it. Biodiversity includes not only species which are rare, threatened, or endangered, but every living thing-even organism, such as microbes, fungi and invertebrates. Biodiversity is present at all places. Species and habitats in distant lands play a role in maintaining healthy ecosystems. The need for biodiversity is to satisfy basic needs like food, drinking water, fuel, shelter, and medicine. Much of the world's population still uses plants and animals as a primary source of medicine, Ecosystems provide services such as pollination, seed dispersal, climate regulation, water purification, nutrient cycling, and control of agricultural pests. Many flowering plants depend on animals for pollination, and 30% of human crops depend on the free services of pollinators.

Summary

Ecosystems are under unprecedented pressure, threatening prospects for sustainable development. While the challenges are daunting, they also provide opportunities for local communities, business and government to innovate for the benefit of communities, economies and the global environment. However, in order to secure the environmental conditions for prosperity, stability and equity, timely responses that are proportionate to the scale of the environmental challenges will be required. In creating such responses, governments, the international community, the private sector, civil society and the general public all have an important role to play. As the environmental programme of the United Nations, UNEP is working to articulate, facilitate and support appropriate responses.

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Lesson 1.3 - Pollutions

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the primary reasons for creation of pollution

➢ Explain various types of pollutions

➢ Know the impacts of pollutions on ecology and environment

➢ Find the ways and means of controlling the pollutions

Pollution has become a contentious issue for the last several decades. The cause for concern for the pollution has occurred due to radioactive fallout from the explosion of atomic bomb at Hirosima and Nagasaki in Japan after the end of World War II. Environmental pollution has become a global concern for which the world leaders are united to help save the earth from different types of pollutions. The amount of pollutions is increasing alarmingly worldwide due to the over exploitation of resources and rapid development of infrastructure and superstructure for the industry, town and city. It is an undesirable change in physical, chemical or biological characteristics of air, water and land determining the sustenance of human life and their living conditions, the lives plants, animals and other species, production of output through the industry and exploration of raw materials for the greedy human consumption.

There are different types of pollutions such as air pollution, water pollution, light pollution, littering, noise pollution, soil contamination, radioactive contamination, thermal pollution, visual pollution and aesthetic pollution. Further, the relationship of tourism with the environment is complex. It has adverse and beneficial effects on the environment. In this chapter, you will be reading about the meaning and types of pollutions along with the relationship between tourism and environmental pollutions.

Meaning of Pollution

Pollution is nothing but an entry of contaminants into the natural environment. It causes adverse change to the environment. These are chemical substances that create pollutions in the noise, heat or light. Pollution is a phenomenon of an undesirable change that occurs in the physical, chemical or biological characteristics of air, water and land. The sudden or gradual change directly and indirectly affects the survival and growth of human and animal life, processes of producing the quality of output and raw material resources. There are two important sources such as man-made pollution from the irresponsible act of humans and natural pollution from the eruption of volcanoes, natural gas, fire in the jungle, Ultra Violet ray, that largely create pollution and contamination.

Further, there are key materials having harmful effects on the processes and functioning of ecosystem and environment. These materials are the waste products and by-products. Other constituents of pollutions include the emission of smokes form the industry and automobile, discharge of chemical waste and creations of radioactive substances from the nuclear plants, etc. There are three major pollutants such as sewage, discarded household materials and unused old ships and cruise lines.

Types of Pollution

Air Pollution

It is a release of chemicals and particles such as carbon monoxide, sulfur dioxide, chlorofluorocarbons and nitrogen oxides into the atmosphere. These contaminants are produced from the various manufacturing industries and motor vehicles. Air gets polluted from two important sources such as photochemical ozone and smog. The sunlight gets reaction from the production of nitrogen oxides and hydrocarbons. Ozone pollution can cause respiratory disease, cardiovascular disease, throat inflammation, chest pain, and congestion.

Air pollution can be prevented if purified or filtered fuels, fuel with low sulphur, lead-free petrol are used for the automobiles as the number of vehicles is increasing alarmingly. The rapid industrialization is an important source for the creation of pollution. The pollutions from

the industry can be reduced significantly when industrial equipments are modified with the primary objective of consuming less energy. As heavy vehicles and passenger public transports use the large quality of diesels, it is time to use eco-friendly bio-diesels to neutralize the amount of pollutions. Many developed countries have planted trees to absorb certain pollutants without creating any adverse effect to the environment. One such example is orange tree that can absorb N2O.

Water Pollution

It is a form of pollution that occurs due to the discharge of solid and liquid commercial and industrial waste wastewater from into surface waters. These industrial and urban wastes are released into river, lakes and seas without making any treatment. The wastes contain chlorine as an important contaminant that creates maximum damage to the marine, river and lake ecosystem. Water pollution causes approximately 14,000 deaths per day, mostly due to contamination of drinking water by untreated sewage in developing countries.il spills can cause skin irritations and rashes.

Water pollution is one of the forms that are largely polluted due to the irresponsible behavior of humans and the use and waste of water. Both ground, river, pond or lake water gets contaminated in the city and urban areas due to the lack of sewage treatment facility. Largely the industrial effluents get emptied into the river or lake without any treatment and it also causes pollutions. The effluents or residues from the industry can only be curbed only when there are mechanisms for recycling them for further use. At the same time, agriculture wastes after the harvesting are thrown in the outside that are washed into river and lake.

It affects the marine life. Planktonic blooms-blue green algae and green algae largely harm the quality of water leading to affect the functioning of marine or lake or pond or river ecosystem. Spilling oil form the ships, cruise lines and fishing boats or passenger lunches harm the aquatic species. For example, the Chilika Lake in Odisha is facing the challenge of saving the Irrawaddy dolphin form spilling of kerosene or diesels by the fishing or countryside boats. Siltation in the lake or dam can threat to the particular ecosystem. (an increase in the concentration of chemical nutrients in an ecosystem)

Water contamination has certain effects that disturb the aquatic ecosystem, biological magnification, eutrophication, human health and ground water pollution. However, there are ways to curb the amount of contamination through certain possible measures. Industries and urban bodies or town planning department must do the treatment at the primary, secondary and tertiary stage. Proper chlorination, recycling of treated sewage and industrial wastes must be done. Hot water from power plants should be cooled before it is released. Disinfection should be done by ozone or UV rays. The use of potassium permanganate to kill microbes must be initiated. The use of pesticides may be replaced with the use of Neem oil.

Noise Pollution

Pollutions due to the blow of horns, running of machines, washing machines, air conditions, trains, aircraft and public address system cause huge noise. Noise pollution induces hearing loss, high blood pressure, stress, and sleep disturbance. Mercury has been linked to developmental deficits in children and neurologic symptoms. Older people are majorly exposed to diseases induced by air pollution. Those with heart or lung disorders are under additional risk. Children and infants are also at serious risk. Lead and other heavy metals have been shown to cause neurological problems.

Soil Contamination

Soil gets contaminated when any spills or underground leakage occurs from petroleum products. At the same time, heavy use of fertilizers and pesticides for growing crops also cause damage to the soil. For example, hydrocarbons, heavy metals, herbicides, pesticides and chlorinated hydrocarbons are some of the forms of soil contaminants. Further, Industrial waste, pesticides, fertilizers and manures, discarded materials and radioactive wastes are important sources of soil contamination.

Light Pollution

It is one of the forms of pollutions that occur due to the trespass of light, over-illumination and astronomical interference.

Littering

It is a form of pollution due to the rapid urbanization and industrialization in the developing countries. Throwing of inappropriate man-made objects onto public and private properties creates the soil, air and water pollution. They are not removed for long time.

Radioactive Pollution

This has become a serious form of pollution that occurs from the generation of nuclear power and manufacture of nuclear weapons and deployment. Chemical and radioactive substances can cause cancer and as well as birth defects.

Thermal Pollution

With the production of thermal power, the pollution is created due to the temperature change in natural water bodies.

Visual Pollution

It is a growing form of pollution that occurs due to the construction of power lines, over bridge, metro line, billboards, airport terminals, tall buildings, dam and scarred landforms, open storage of trash and municipal solid waste or space debris.

Pollutants & Impacts

Pollution is found to be a severe challenge that jeopardizes the quality of environment. Pollutants are otherwise termed as residue or waster or untreated waste materials that largely pollute the environment. Thus, a pollutant cause maximum damage to the quality of air, water and soil due to severity of chemical nature, the concentration and the persistence of. Human-made pollutants include combustion, construction, mining, agriculture and warfare. They adversely affect air quality, thereby harming the survival of many crucial organisms in the ecosystem. The biggest victim of air pollution is humans and many deadly diseases have take million of innocent human life. Nevertheless, one of the effects of pollution is bio-magnification where toxins or heavy metals generally pass through trophic levels.

For instance, the ocean acidification is caused due to the rising quantity of emissions of Carbon dioxide. The reason for rising global warming must be attributed to the emission of greenhouse gases. As a result, invasive species can drive the native species out that reduces the diversity of species in an ecosystem. Further, Invasive plants can contribute debris and biomolecules can alter soil and chemical compositions of an environment and it is largely created due to the invasive plants. At the same time, the force of competitiveness may be reduced. It is an irreparable loss to the native species that cannot survive without their own climate and food chain. For instance, when the nitrogen oxides go out of the air by rain, the species composition of ecosystems find severe changes due to the fertilization of land.

Another way that the process of photosynthesis is affected due to the creation of smog and haze from the industry creates the heavy production of tropospheric ozone. Many of the plants which directly obtain energy from sunlight get damaged. The further impact is infertility of soil for plants to obtain energy to grow. Furthermore, acid rain lowers the pH value of soil and both sulfur dioxide and nitrogen oxides create the acid rains.

After knowing the severity of pollutions with the rising levels of pollutants, the world is unsafe to live and create the new generation. What is expected to be done? And how is to be done?. These two questions can simply be answered if there are natural mechanisms to control the quantity of emissions and effluents into air, water and soil.

The accumulation of the waste or untreated products over the period of time is degrading degrade the environment. It is to be controlled with all stringent rules to penalize the culprit of pollutants. Thus, pollution prevention and waste minimization are more desirable than pollution control. These are the following ways or practices to prevent the pollution.

➢ Recycling
➢ Reusing
➢ Reducing
➢ Mitigating
➢ Preventing
➢ Composting

The devices of pollution control are being used to control the pollution. They include dust collection systems, bag houses, cyclones, electrostatic precipitators, scrubbers, baffle spray scrubber, cyclonic spray scrubber, ejector venturi scrubber, mechanically aided scrubber, spray tower, wet scrubber, sewage treatment, sedimentation, activated sludge biotreatrs, aerated lagoons, constructed wetlands, industrial wastewater treatment, API oil-water separators, biofilters, Dissolved air flotation (DAF), Powdered activated carbon treatment, Ultrafiltration, vapor recovery systems and Phytoremediation.

Tourism & Pollutions

Tourism can cause the same forms of pollution as any other industry:

➢ Air emissions
➢ Noise
➢ Solid waste and littering
➢ Releases of sewage
➢ Oil and chemicals
➢ Even architectural/visual pollution
➢ Air pollution and noise

Tourism has become a growing industry with the objective of presenting the country's rich natural and cultural treasure to the visitors. In this process, the industry provides services like room, food and transport at the destination and transit region. It in turn requires raw materials to process and deliver the complete services to the guests or sojourners. At the same time, the demand for travel for satisfying various motivational needs is increasing worldwide. With the advancement of science and technology, different modes of communication have been developed to cater the needs travelers and to make the travel and stay comfortable. For instance, air travel is preferred for longer distance places and rail and road transport is preferred for short distances. It is now reported that tourists use the domestic travel by air due to the paucity of time and affordable air fare. One study revealed that a single transatlantic return flight emits almost half the CO_2 emissions produced by all other sources such as lighting, heating, car use, etc. consumed by an average person yearly. Airplanes, cars, buses, trains and jet skis create maximum noise pollution.

The noise created by these modes of transports largely harms the human, animal and other species.

It is seen at the mass tourism destinations, huge accumulation of litters and untreated garbage with high concentrations make the appealing natural attractions filthy and dirty. One of the major water polluters in the water transport is movement of floating hotel like cruise ships or house boats. It is estimated that cruise ships in the Caribbean are estimated to produce more than 70,000 tons of waste each year.

Hotels, resorts, restaurants and other eater places at the tourism destination produce maximum solid waste and littering that not only contaminate the soil and water but also degrade the physical appearance of the water and shoreline. As a result, marine species get affected with the contamination from the litters and solid wastes.

In the hilly and mountain areas, various adventure tourism activities are conducted for the adventure seekers. The forms of adventure tourism include trekking, river rafting, mountaineering, etc are organized for the tourists to enjoy the nature and a great deal of solid waste is created during the activities. These wastes are oxygen cylinders, food items, plastic and polythene bags and camping equipment. For example, large scale soil contamination and water pollution is reported in the Himalayas as majority of adventure tourism activities in northern India is being organized in this region. These irresponsible practices directly degrade the environment due to lack established system for garbage collection or disposal facilities.

It is very common to witness the poor sewage treatment system at the tourism destinations. The situation has become deplorable at the hill stations and beach resorts where rampart construction of hotels and other recreational facilities create widespread sewage pollution. For example wastewater gets discharged to sea, river and lake without any treatments and this neglected act of hotels, resorts and other tourism service providers surrounding tourist attractions damage flora and fauna. Many species migrate from the place to new place. It leads to disturb the processes and functioning of ecosystem. Above all, sewage pollution threatens the health of humans and animals.

One of the frightening aspects of pollution is to disturb the natural setting and it is termed as visual pollution or aesthetic pollution. Tourism when it is promoted in mass scale loses its charm and attractions and it leads to distort the very basic natural attraction of the site. For example, several tall buildings at Agra and Bhubaneswar have damaged the aesthetic beauty of Taj Mahal and the ancient temples respectively. Aesthetic pollution is about the mismatch between the natural surroundings and heritage structure. It also fails to integrate its structures with the nature and traditional architecture. For instance, all the buildings belonging to Sri Aurobindo Trust at Boulevard have been built with the identical architectural plan and colour. It speaks so much about aesthetic beauty of the old French colony.

In most of the cases, many tourism destinations face the congestion of traffic, sewage and rainwater due to the lack of land-use planning and building regulations. For example, many hotels on the sea shore at Puri have encroached into the Coastal Regulated Zone (CRZ), thereby causing traffic, sewage and rain water congestion. It has become a regular menace in the holy city Puri, Varanasi and Haridwara.

At the same time, many hill stations have facilitated sprawling developments along coastlines, valleys and scenic routes. The sprawl includes tourism facilities and supporting infrastructure such as roads, employee housing, parking, service areas, and waste disposal. Subaltern

Impacts of Tourism Development

The development of tourism facilities is undertaken at the natural scenic places or at the cultural centers at the cost of damaging the ecosystem. Certainly right, tourism is a form of development and is an integral part of ecosystem. The impact of tourism may be positive or negative. It is obvious to see the negative impacts while obtaining positive results. Efforts are required to be taken to neutralize the negative impacts. The possible negative impacts may be occurring at the tourism destination sites. These impacts can be as small as the cutting the branch of trees for cooking food during the trekking activity or as big as changing the land setting for the construction of hotel, resorts, airports, roads, railway lines, etc. All the forms of development can have direct impacts that leads to the soil erosion, loss of wildlife habitats, deforestation, etc.

Trampling is one the forms of soil contamination and loss of priceless vegetation. When a particular trail is used frequently by tourists, the wildlife and floral life becomes vulnerable due to the regular trampling. It finally leads to loss of diversity of ecosystem. For examples, many trails have been created for the adventure tourists wishing to undertake long trek in Himachal Pradesh and Uttarakhand. There are visible disturbances to the ecosystem.

For example, construction of heli-ski resort accommodation requires the level of land and cutting down the forested land. At the same time, construction of hotels or boat jetties near the seashore or river may also directly affect the coastal wetlands. In marine ecosystems like lake or sea, several recreational activities have been created for the visitors to enjoy, but it is at the cost of the fragile ecosystems.

Anchoring, scuba diving, yachting, rowing, canoeing and cruising have certainly become the charming features to entice adventure seekers, but it has become a permanent threats to the degradation of marine ecosystems. It is however reported that a variety of negative impacts to coral like in the Caribbean countries.

These are the following impacts

- ➢ The shoreline development
- ➢ Increased sediments in the water
- ➢ Trampling by tourists, ship groundings
- ➢ Pollution from sewage
- ➢ Souvenir extraction
- ➢ Physical impacts from tourist activities

Natural habitats are degraded continuously at the tourism destinations and the loss of the habitats is reported due to tourism leisure activities. When wildlife viewing facility is created at the national parks or wildlife sanctuaries, visitors would be allowed to view the animals at the time when the chance of seeing the wild animals is high. It is form of disturbance to the breeding and grazing of wild life. Uncontrolled conventional tourism poses potential threats to many natural areas.

➢ It puts unwanted demand for housing, road, public buildings, etc that lead to soil erosion, increased pollution, discharges into the sea, natural habitat loss, increased pressure on endangered species and heightened vulnerability to forest fires.

➢ It often puts a strain on water resources. It can force local populations to compete for the use of critical resources.

➢ The pressure tourism development on natural resources increases consumption in areas when resources do not cope with the tourism development. It is already limited and scare to satisfy all kinds of needs and wants of human beings.

Tourism & Environment

Tourism is promoted at a place for two important reasons. The first is to attract the visitors with its pleasant and salubrious climate and the second is to make the stay of visitors comfortable with the facilities. When a destination is customized to satisfy the needs of tourists, there is a high possibility of altering the original settings of environment. Thus, the quality of environment is a key alluring factors for the tourists to stay longer at the destinations.

As it is discussed previously in this chapter, many developmental activities have direct bearings on ecology and environment. Many of these impacts are linked with the construction of common facilities that essentially required for the people to lead a civilized life.

However, tourism is a leisure-based industry with utmost focus on meeting the needs of tourists. As a result, resorts, hotels, restaurants, shops, golf courses and marinas are developed to attract more number of tourists, thereby earning revenue from tourism. The negative impacts of tourism development can gradually destroy the environmental resources on which it depends.

On the contrary, tourism has the potential to create beneficial effects on the environment. This is nothing but the generation of revenue for supporting environmental protection and conservation. It is a way to create awareness and belongings towards environment. It has practically become possible to provide financial support to the forest departments

for protection of wildlife and its ecosystem. One of the forms of such protection is called ECOTOURISM. It is however, important to know that negative impacts largely engulf the positive impacts. When a destination receives number of visitors more than its usual capacity, it leads to create certain the physical, social economical, cultural and ecological imbalances. There is a common concept in the theory of sustainable development e.g. "Limits to Acceptable Change".

Water Resources

Tourism industry is a major user of water for maintaining swimming pools, golf courses and gardens. These are the facilities and amenities for the guests to stay comfortable for which hotels and resorts use the ground water. This has resulted in the water crises at several hill and beach resorts around the world.

On the other than, accommodation operators create large quantity of waste waters that contaminate the quality of water. For example, all the hotels in Manali and Kullu in Himachal Pradesh use the ground water and release the used water into the Beas River. Similarly, the hotels in Agra and other mass tourism destinations have already faced the shortage of water.

It is a global concern to save the water for future. The act of tourists at the naturally sensitive places contaminates the water that leads to affecting the organisms. The issue of scarcity of water and portable drinking water is a particular issue that can be resolved with the eco-friendly practices. It is reported that per head consumption of guest in an average hotel is relatively more due to the available leisure and vacation time.

It is however reported that many golf resorts use the water for two purposes: one is to water the golf course and another is to use for the golf players or the guests in the resorts. For example, the golf courses in Gulmarg, Jammu & Kashmir. Golf course maintenance can also deplete fresh water resources. An average golf course in a tropical country needs 1500 kg of chemical fertilizers, pesticides and herbicides per year and uses as much water as 60,000 rural villagers.

Local Resources

Tourism is a big user of local resources that are supposed to be meant for the local community. This leads to the conflicts between the local community members and tourism service providers. These resources include electricity, manpower, food, water and other raw materials. Greater extraction and transport of these resources due to the demand of tourism industry have direct bearing on the physical impacts associated with their exploitation. Tourism is a seasonal business and it is determined by the variation of tourist inflows. For example, there are shortages of all kinds of resources due to more demand and limited supply of resources. For example, the is a power cut for certain hours in day during the summer and it affects the functioning of hotel and resorts as it is a busy season. It is reported that many destinations face the problems of inflation, crimes, traffic congestion, water shortage and power cut.

Land Degradation

Land resources include fertile soil, forests, wetlands and wildlife. Development of tourism facilities has made unwanted pressures in the resources, thereby creating ecological imbalances and affecting the ecosystem and its functioning. The natural resources in the provision of creation of tourist facilities need the use of land for building accommodation and other infrastructure. Forests often suffer negative impacts of tourism in the form of deforestation caused by fuel wood collection and land clearing. For example, one trekking tourist in Uttarakhand not only clears the forest for the route but also use the wood for cooking and campfire.

Summary

Pollution is a cause for concern for tourism industry to grow and develop in the future. It is a global issue as well as challenge. Several attempts have been made to find the practical solutions to save the earth from different types of pollutions. The amount of pollutions is increasing alarmingly due to over exploitation of resources and massive developmental works. It has resulted in change in the quality of air, water and land leaving the human beings, animals, plants in state of uncertainty. Thus chapter There are different types of pollutions such as air pollution, water pollution, light pollution, littering, noise pollution,

soil contamination, radioactive contamination, thermal pollution, visual pollution and aesthetic pollution. This chapter has explained the meaning and reasons pollution along with types of pollutions and pollutants. Tourism and pollutions do go each other. The more the pollution the lesser would be the tourism activities. Tourism is a victim of rampant pollutions and tourism also creates pollutions and contaminations at the destinations. Thus, this chapter has also described the impacts of tourism development on environment and ecology along with its direct impacts on water and other local resources.

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Lesson 1.4 - Ecological Footprints

Learning Objectives
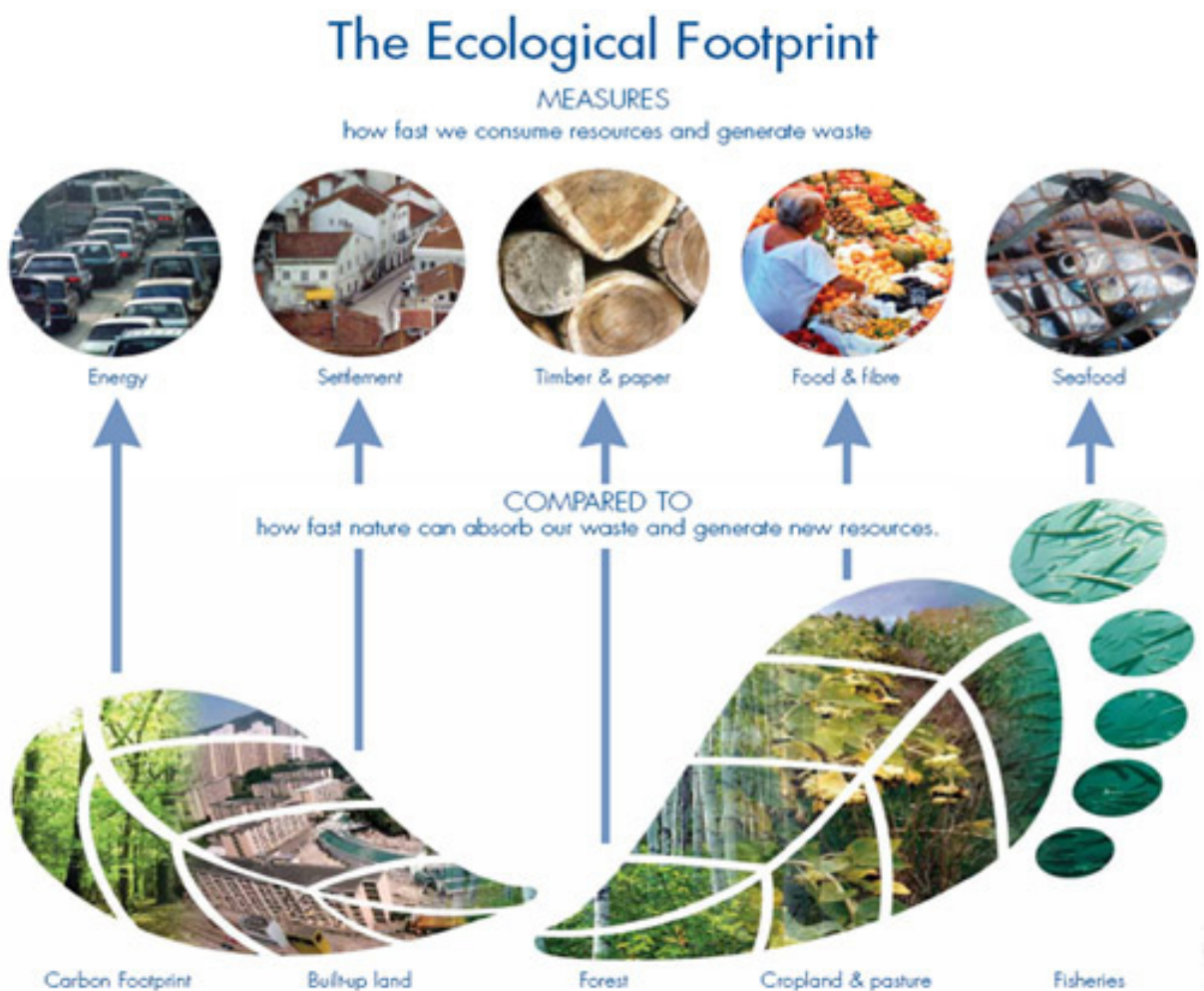
After reading this chapter, you should be able to

➢ Understand the concept and principles of ecological footprints

➢ Know the need and importance of measuring the demand on natural resources

➢ Understand the impacts of ecological footprints

➢ Explain the requirement of natural resources for human sustenance

➢ Suggest the methods of curbing the ecological footprints

Ecological footprint is a key concept in ecosystem of ecology. It is a technique to measure the use of natural resources. The importance of assessing and measuring the human demand for natural resources is emphasized at the global level. Measurement is essentially required to find how much human need and demand can be satisfied given the availability of natural resources. The ecological footprint is a measure of human demand on earth's ecosystem and it gives comparative facts and figures on the requirement of human demand in accordance with the planet earth's ecological capacity to regenerate for future use. It helps in the management of ecological assets more methodically and wisely for meeting the needs of present and future generation.

Further, ecological foot printing is a well-defined indicator for measuring the sustainability of environment that can withstand the human demand and consumption. Thus, the relationship between tourism and ecological footprint is complex and there is an inverse relationship between the tourist arrivals and the demand for resources at the destinations. The study of ecological footprint is significant from the perspectives of tourism, including ecotourism. In this chapter, meaning, nature, principles, benefits, methodologies and measurement techniques of ecological footprint will be presented.

Meaning of Ecological Footprint

Measuring ecological footprint is an important objective of ecology. It is a key concept for evaluating the environmental sustainability. It is an indicator for ascertaining the capacity to absorb the amount of development. The ecological footprint is a technique of measuring the biologically productive land, sea, lake, river, pond, mountain, desert, etc that are in need of producing resources for growth and development of human life. All these human activities need these resources to consume and create the waste. Thus, ecological footprint is a method of measuring the level of consuming resources and absorbing the waste it generates. It is nothing but a comparison between the human need and the available resources.

Human needs are always satisfied as per the capacity of nature. There are three fundamental things. The first is what nature offers and the second is how we know the amount of resources being used by the human beings and how do we have to use as per the capacity of mother's resources.

To answer these three questions, ecological footprint has been evolved as a best technique to measure the demand on nature by humans for meeting the needs. It measures the quality of land and water that a human population requires to produce the resources in order to consume and absorb its carbon dioxide emissions by using the ecological principles or eco-friendly measures. In the last several decades, the world has witnessed the technological advances to reduce the carbon dioxide emissions. Figure illustrates the image of an ecological footprint that explains how much it can be consumed and generated as waste.

Origin of Ecological Footprint Concept

The ecological footprint as a tool or technique for measuring the pressure on planet was conceived by Mathis Wackernagel and William Rees at the University of British Columbia in 1990. William Rees in 1992 was the first researcher who made the first academic publication about the ecological footprint Mathis Wackernagel evolved the calculation method in his Ph.D research work at the University of British Columbia in Vancouver, Canada, from 1990–1994. Both Wackernagel and Rees termed the concept "appropriated carrying capacity". The term of Ecological Footprint was popularized by Rees in his research work. As a result, Wackernagel and Rees published the book titled "*Our Ecological Footprint: Reducing Human Impact on the Earth* in 1996.

The Ecological Footprint is now used by scientists, business firms, governments, agencies, individuals and institutions to monitor and measure the ecological resource use and advance sustainable development. It is clearly reported that there has been an overshoot of annual demand on natural resources like water and energy due to the rising population growth and diversification of needs. But there is unevenness between the available resources and the demand for utilizing the resources. Thus, it is found that the demand exceeds the capacity of mother earth. As a result, moth earth has failed to regenerate the resources due to the several limitations. The overuse or over demand of resources can only be met by liquidating the Earth's resources. This will ultimately lead to depleting the natural resources. It is therefore important to note that ecological footprint is so significant that the ability of earth to provide resources can be measured scientifically. Furthermore, ecological assets can be managed for sustainable development only when the pressure on the planet can be measured.

Key Concepts of Ecological Footprints

Bio-capacity

It is shorthand for biological capacity. It is explained as the ability of an ecosystem to produce useful biological materials and to absorb wastes generated by humans.

Global Hecter

It is a common unit that encompasses the average productivity of all the biologically productive land and sea areas in the world in a given year.

Overshoot

It is shorthand for ecological overshoot. It occurs when a population's demand on an ecosystem exceeds the capacity to regenerate the resources that it consumes and to absorb its wastes.

Objective & Principles of Ecological Footprint

The measurement of impacts of ecosystem is carried out with the help of various methods of ecological footprint. It is by far one of the proven tools for measuring the human demand in the Earth's ecosystems. The Ecological Footprint Standards use global hectares as a measurement unit and it makes data and results globally comparable. The ecological footprint has the objective to

➢ To compare the human demand with planet earth's ecological capacity to regenerate

➢ To manage ecological assets more wisely

➢ To give an indication of maximum damage due to human and industrial waste

➢ To find the ways for sustainable development

➢ To help guide the planners and policymakers in controlling the pollutions and contaminations

> ➢ To provide continuous information about the carrying capacity of ecosystem

> ➢ To make the stakeholders in ecosystem aware and concern for preservation of organisms

> ➢ To help in the distribution of resources for judicial and economic use

Ecological footprint is governed by certain principles stipulated for regulating the industrial houses and human beings to be rational and responsible while utilizing the natural resources. It reported that the World Wildlife Fund (WWF) found that the human footprint has exceeded the bio-capacity. That means the present natural resources are inadequate to meet the growing human needs and demands.

Therefore, Wackernagel and Rees originally estimated that the available biological capacity for the 6 billion people on Earth at that time was about 1.3 hectares per person, which is smaller than the 1.8 global hectares published for 2006.

The Ecological Footprint Measures

> ➢ Biologically productive capacity of land and sea

> ➢ The human demand for food, fiber, timber, energy and space for human survival and growth

> ➢ The capacity of mother earth to absorb the waste products from the human economy

The biologically productive areas include cropland, forest and fishing grounds and deserts, glaciers and the open ocean are not included in the productive areas.

Ecological Footprint Standard

The Ecological Footprint is a resource accounting tool to find the pressure of development on the availability of resources. It is used widely as a management and communication tool for the governments, business firms, educational institutions and NGOs to deal with complex ecological issues like carbon emission, green house effect, water contamination

radioactive pollution, thermal pollution, noise pollution, visual pollution, etc. The standard or principles set by the elected bodies is to explain the threshold limits of the use of biological capacity of the planet beyond which there is an imbalance in the food chain or web in a particular ecosystem. It is further explained that the maximum capacity that mother earth or planet can provide for human sustenance. It is however considered as a standardized measure of demand for meeting physiological and biological needs that are contrasted with the planet's ecological capacity to regenerate the resources. Furthermore, the amount of biologically productive land and sea area necessary to supply the resources for a human population yo consumes and absorb associated waste.

For example, humanity's total ecological footprint was estimated at 1.5 planet Earths for 2007. Thus, the term ecological footprint has become a common method of calculating the demand on planets. The method can be comparable and consistent.

Methodologies for Calculating Ecological Footprint

The ecological footprint was designed by Kajel Bahia. There are two methods with which ecological footprints are accounted. The first is Ecological Footprint Accounting Method and the second is Calculation Methodology for the National Footprint Accounts. Both are published in the Ecological Footprint Atlas at the national level. However, there are differences in the methodology used by various ecological footprint studies.

For example, methods are used to find the number of fossil fuels as against the available of sea areas. In 2003, a team of researchers developed Footprint 2.0 in 2003 as it offers a series of theoretical and methodological improvements to the standard footprint approach. The primary advancements include the entire surface of the Earth in bio-capacity estimates, allocation of space for other (non-human) species, change the basis of equivalence factors from agricultural land to Net Primary Productivity (NPP) and change the carbon component of the footprint as per the global carbon models. For example, The average ecological footprint is 5.45 global hectares per capita (gha) with variations between regions ranging from 4.80 gha in Wales to 5.56 gha in the East England.

Steps for Ecological Footprint Calculation

The method of calculating ecological footprints can be applied for individuals or groups of people or a group of nation or world or the whole economic activities. It can calculate the impact of ecological footprint for a small hill area or a large mountain range. It can calculate for a person's ability to consume the quantity of biological materials and subsequent generation of wastes from the consumption of materials in a given year. Individuals and institutions must recognize the maximum ecological limits that a person or nation or world can demand for meeting the needs. Thus, management of ecological assets is essential for humanity's survival and success and it can only be possible with the use of the Ecological Footprint. For instance, the average biologically productive area per person worldwide was approximately 1.8 global hectares (gha) per capita in 2006. In the same year, The U.S. footprint per capita was 9.0 gha, Switzerland was 5.6 gha per person and China was 1.8 gha per person.

The analysis of ecological footprint compares the human demand on nature as against the ability of biosphere to regenerate resources and provide services to the human consumption. Footprint values are categorized for Carbon, Food, Housing, and Goods and Services. The total footprint number of Earths is needed to sustain the population worldwide at that level of consumption. The global hectares is a normalized measure of land converted from the quantity of consumption of energy, biomass (food and fiber), building material, water and other resources resource.

Thus, these are the following steps that ecological footprint is calculated.

➢ All these materials and wastes consumed by a person are separately translated into an equivalent number of global hectares.

➢ The amount of materials consumed by a person can be converted to tonnes per year

➢ It can be divided by the yield of the specific land or sea area to annual tonnes per hectare from which it was harvested, or where its waste material was absorbed.

➢ The number of hectares is then converted to global hectares using yield and equivalence factors.

➢ The sum of the global hectares needed to support the resource consumption and waste generation of the person is called as the Ecological Footprint of a person.

Per capita ecological footprint (EF) or ecological footprint analysis (EFA) is a means of comparing consumption and lifestyles of population worldwide. The change in lifestyle and increasing dependence of people on natural resources creates imbalances between the ability of planet to provide resources and generation of residue or waste. However, it measures the resources against the ability or capacity of nature to provide resources for consumption.

The governments and other agencies use the footprint as a medium to sensitize the people about the effects of over consumption and carrying capacity. Changing the behavior of people and their consumption pattern can maintain the ecological footprint. However, the need for ecological footprint measurement arises as the present lifestyles of people in the urban areas is highly unsustainable.

Ecological Footprint & Carrying Capacity

There is a relationship between the carrying capacity of a particular area or ecosystem and the impacts or pressures or demand for the natural resources. It is otherwise called the ecological footprint that refers to the maximum limit or capacity of an ecosystem that can withstand human development pressures without making any negative impacts. It is an actual estimate on the real or possible capacity of a particular area to bear the pressures of human demand.

In brief, ecological footprints emphasize on the capacity of mother earth to support the survival and growth of population in a given year. It includes standard of living, biological production and technology.

Tourism Development & Ecological Footprints

Tourism development and ecological footprints are closely related as the former uses the natural resources and the latter accounts the consumption of resources. Tourism is a major user of natural resources like land, water, power, food, etc and the host destination or country

is generally prepared to provide the resources to the visitors indirectly through the direct tourism service providers like hotel, resort, restaurant, etc. A tourism destination cannot be sustainable unless it possesses the necessary facilities and amenities. This can only be possible with the help of indigenous resources.

It is to be noted that people around the world started expressing their concerns over the ecological effects of tourism during the 1960s and 1970s. There are many instances where tourism destinations are partly or fully transformed into a mainstream city. The National Geographic Magazine presented the ecological condition of Acapulco due to overdevelopment.

At the same time, the high concentration of mass tourism activities Balearic Islands and the Costa Brava in Spain spoiled the natural beauty of these two islands. Tanzania in Africa largely depends on the wildlife and ecotourism that contributes to the country's economy.

It is however important for game conservation in the interests of ecology, tourism, game farming and ranching for moral, aesthetic and philosophical reasons.

The relationship between tourism and environment conservation can be considered so close from three different forms. The first is *conflict* that occurs due to the mismatch between tourism development and the need for environmental conservation. The second is *coexistence* with which tourism and environment are complementary to each other. It further explains that organisms in an ecosystem live together with sharing resources.

The third is *symbiosis* that explains the mutual help and reciprocation for survival and growth of others. The survival of other depends on the responsible act of other. There were distinct differences between development for purposes of improvement and aesthetic appeal while taking the vulgar, undesirable, and irreparable damage created by modern tourism into consideration.

For example, ski-slopes, holiday villages, camping site, trekking routes, etc create adverse effects on the environment forever for their own uses. Many recent studies have revealed the negative impacts of tourism.

It includes pollution, crowding and congestion, damage/destruction of heritage resources, land use loss, ecosystem effects, loss of flora and fauna and increased urbanization.

Projected Ecological Footprint

The projection of the UNs clearly indicates the change in with consumption trends due to the population growth by 2030. In order to cater the new consumption habits, two earths would even be insufficient to meet the demand for food, fodder, energy and space. This will obviously lead to making serious impacts to the bio-capacity. At the same time, production must be increased to meet the growing demands for food, energy and space for which agriculture production is being increased with the help of fertilizers, pesticides, hybrid seeds and irrigation. This has been giving direct threats to the ecosystems.

Thus, the Ecological Footprint (EF) is an innovative method to make comparative measurement of the requirement of natural resources for meeting needs and demands of different types of tourists at the destinations. It aggregates many areas of ecological impact into a single indicator. Further, the EF is measured by the area (ha) of productive land needed to support an individual for an indefinite period of time.

The EP can measure the amount of resource consumption in the processes and delivery of tourism services by the tourism industry and it gives a common value to different types of tourist facilities, transportation methods, infrastructure, services and even specific behaviours. The results of EP help the government to formulate polices and planning to protect the resources from depletion.

The equitable distribution of using the natural resources is the ultimate objective of sustainable development as it can contribute to maintain better quality of life for the local community and holiday experiences to the visitors. It is an indicator of giving the status of sustainability of the places as against the human needs and demands. It is a simple measurement technique to assess the strengthen and weakness of the tourism development. However, the EP may not make the measurement of impacts beyond raw resource use.

These are the five assumptions on which the measurement of EP is carried out.

➢ There would be resource use and waste by humans

➢ There resource and waste would be transformed to the biologically productive for maintaining the flow.

➢ Each particular acre would be translated to an equivalent area of world-average land productivity.

➢ Each standardized hectare can be added up to a total productivity area.

➢ Finally, there would be comparison the total human demand against the available land areas to supply of ecological services.

The EP components are measured as impacts on one or more of the following land use types; fossil energy. The impacts of footprints would be measured on one or more of the land use. The five forms of land use generally represent the generalized location of appropriated land area that constitutes the Ecological Footprint. There are five different types of land use on which tourism development has direct impacts. It includes

➢ Arable land

➢ Pasture

➢ Forest

➢ Built-up land

➢ Sea

The Ecological Footprint of Tourism

The footprint calculation is explained as a total consumption of a product divided by average yield per hectare for that same product. The objective of measuring EP of tourism is to find whether a destination would be sustainable for the present or future or not. The use of the Ecological Foot print is quite common to measure the sustainable development of tourism as it is a largest consumer of nature resources. It was Hunter (2002) who expanded the concept of using EP in tourism to help decision makers in identifying sustainable options.

Hunter however classified the views of tourism researcher into 'light green', or 'dark green' views. The former is called as weaker and the later is stronger in the approaches for promoting sustainable tourism. Sustainable tourism is seen more as product and is exemplified by specific types of tourism, such as nature tourism or ecotourism. The Ecological Footprint is used to quantify the qualitative differences between these light and dark tourism as far as tourism development is concerned.

For example, The World Wildlife Fund's "Holiday Footprinting: A Practical Tool for Responsible Tourism" (2002) in Majorca and Cyprus and Cole and Sinclair's "Measuring the Ecological Footprint of a Himalayan Tourist Centre" (2002) in Manali provide sufficient evidence on Ecological Footprint to be used a model to compare different aspects of the tourism experience.

The WWF and Cole and Sinclair used the Ecological Footprint to compare components of ecological impacts on bio-reproductive land, bio-reproductive sea, built land, energy land, and area for biodiversity for both a family and couples-style resort vacation. This total ecological value is expressed in hectares per bed night, and in total hectares for a year of resort operations. The Ecological Footprint of each resort is bifurcated to ecological impacts that include air travel, waste, food, and hotel energy use.

Summary

Ecological footprint is an important measurement technique to provide early alarm to the policymakers and planners to make use of resources in a sustainable and responsible manner. It is a recognized concept for measuring the use of natural resources to help the governments to be cautious of the use of natural resources. It gives comparative facts and figures on the requirement of human demand as per the bio-capacity of ecosystem to regenerate resources for the present as well as future use. The EP is an indicator for measuring the sustainability of environment to withstand the human demand and consumption along with other complex processes. Thus, the relationship between tourism and ecological footprint is complex and direct. The use of EP is significant for ecotourism to be sustainable as it is promoted in an eclgocally sensitive place. The Ecological Footprint is used as an evaluative tool for planners

and managers to compare and measure the impacts of potential purchase, operation, or management decisions in the tourism industry. This chapter part from describing meaning, nature and principles of EP has described with examples of benefits, methodologies and measurement techniques of ecological footprint with reference to ecotourism in particular and tourism in general.

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Lesson 1.5 - Relationships between Ecology &Tourism

Learning Objectives

After reading this chapter, you should be able to

➢ Explain the coexistence of tourism and ecology at the destination

➢ Understand the need and importance of relationship between ecology and tourism

➢ Find different types of tourism impacts

➢ Be familiar with the conflicts of interest of tourism with the ecological conservation

➢ Know the underlying objective of achieving sustainable development

Tourism is a form of development that brings about radical changes in the socio-economic conditions of people in the host destination. Development is essentially important for tourism to grow with the purpose of revenue and employment generation. Gone are the days when attention was not given to the ecosystem and environment due to the lack of systematic planning and policy guidelines. Misunderstandings between environmental protection and tourism occurred when tourists were inclined to see the nature for the sake of enjoyment without considering the negative consequences leading to damage the level of links and interdependency between tourists and environment. It is common to see the unacceptable behaviour of tourists and tourism service providers towards environment.

In order to establish the relationship between tourism and ecology, the principles of sustainable development are being propagated for the citizens to choose appropriate model of living on the earth without destroying the global ecosystem. It secures for future generations to find the living with the untouched living resources. It is now a cause of concern for the governments to find a harmony between tourism development and conservation of plant and animal life at the destination. It is reported that

tourism has created harms to the ecosystem and many indigenous plants and animals are endangered.

On the other hand, tourism has also made exemplary contributions to the preservation of wildlife and plants. Thus, the relationship between tourism and ecology is complex as the former is consumer and the later is producer. Both are practically contrary to each other due to the lack of clarity in the policy and planning for tourism development. Each tourism destinations is influenced by a particular ecosystem and tourists and their needs and demands largely affect the functioning of ecosystem. Tourism development must respect the ecological vulnerability that can be possible with the promotion of responsible tourism or sustainable tourism. In this chapter, the objectives, principles and benefits of ecotourism will be presented.

Tourism & Environment- A Historical Perspectives

Tourism has made an adverse impact on nature conservation and it has resulted in the loss of habitat, damage to soil and vegetation, fire, pollution, and disturbance of flora and fauna. The study on the relationship between tourism and environment was largely undertaken in the last quarter of 20th century. There were not much literature on tourism and environment prior to 1980. However, Mathieson and Wall's work on Economic, Social and Ecological Impacts (1982) explained about the tourism development and conservation of nature. Subsequently, Pearce's Tourist Development (1991) critically reviewed the work of tourism development and its direct impact on environment. It was a major breakthrough in the tourism literature when Romeril (1985) contributed a research paper on Tourism to the International Journal of Environmental Studies. Many researchers were motivated to contribute the research papers on how to counter or overcome the negative impacts of tourism. It became a global concern and the world leaders expressed their concern over the loss of major habitats from the natural ecological system. The United Nations Human Environment Conference of 1972 (Human and Environment), the World Conservation Strategy of 1980, the Report of the Brandtland Commission (1987) and the Manila Declaration on World Tourism in 1980 have made significant mark in the study of tourism and environment. For example, the UN's first conference highlighted on the eco-development and the Brandtland Commission emphasized on the meaning and principles of sustainable development.

Shackleford (1985) brought out the history of ecological concern in the tourism industry.

The International Union of Official Travel Organizations (IUOTO) or presently UNWTO has been working for the environment conservation since the early 1950s. The protection of heritage was included an agenda item for this organization from 1954 onwards. The Fifteenth General Assembly of IUOTO resolved that nature in its most noble and unchanging aspects constitutes and will continue increasingly in the future to constitute one of the essential elements of the national or world tourist heritage.

All these conferences or global summit level discussions concentrated on the judicious use of tourism resources. It is further emphasized that the use of tourism resources could not be left uncontrolled without running the risk of their deterioration, or even destruction. The satisfaction of tourism requirements must not be prejudicial to the social and economic interests of the population in tourist areas and to the environment. Above all, natural resources are the fundamental attractions of tourism and historical and cultural sites. All tourism resources are part of the heritage of mankind.

Pearce (1985) reproduced in the special edition and explained the framework for the study of environmental stress as established by the OECD in 1981. These are the following objectives identified in the framework.

- Permanent environmental restructuring
- Generation of waste
- Tourist activities
- Effects on population dynamics

Tourism & Environment

Both natural and man-made environment is essential for tourism development. However, the complex relationship of tourism with the environment needs to be explained with pertinent illustrations. Tourism needs the quality of environment to be maintained at different levels. Environment expects from the tourism industry to be more responsible

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and contribute largely for its maintenance. The elements of environment include climate, altitude, temperature, topography, soil, water, etc and these elements make the environment better or worse depending on the awareness of people involved directly and indirectly in the business.

Many activities of tourism can have adverse environmental effects due to the development of infrastructure. It includes the construction of roads, rail lines, seaports and airports and touristic facilities include resorts, hotels, restaurants, shops, golf courses and marinas. The positive aspects of these activities create additional facilities for the local people and stimulate several other forward and backward linkages in the economic activities. In addition, tourism has the potential to create beneficial effects on the environment by contributing to environmental protection and conservation. It is a way to raise awareness of environmental values and it can serve as a tool to finance protection of natural areas and increase their economic importance.

On the other hand, tourism developments, in all possibilities, can have harmful effects on the functioning of ecosystem. Tourism is otherwise a destroyer or polluter of environment in the form of its carbon emission and creation of waste materials. The negative impacts of tourism development can gradually destroy the environmental resources and its restoration becomes almost impossible. Whether is air or noise or water or visual pollution, each form of pollution has its harmful effects on the ecology and environment. At the same time, tourism is a largest consumer of environmental resources. Negative impacts are reported from several mass tourism destinations due to the uneven and imbalance development. When the numbers of visitors go on increasing at a particular destination, the ability or capacity of destinations to cater the facilities to the visitors becomes low. As a result, the environmental ability to absorb the pressure of growing tourist/ visitors arrivals becomes a very big challenge. It may further be simplified that when the demand for tourism resources exceeds the capacity of environment to supply, there occurs the negative impacts. When the limit gets exceeded, it does not fall within the acceptable limits of change.

Uncontrolled or unplanned tourism largely creates maximum negative impacts. The mainstream or mass tourism makes the environmental situation deplorable. It often puts maximum strain on water

resources as water is a key requirement for running hotel and resultants. When the local people are deprived of getting the sufficient quality water, there will be protests from them to stop the operation of tourism activities. Tourism development puts pressure on natural resources when it increases consumption in areas where resources are already limited.

Thus, negative effects of tourism lead to

- Soil erosion
- Increased pollution
- Discharges into the sea
- Natural habitat loss
- Increased pressure on endangered species
- Heightened vulnerability to forest fires

Tourism & Ecology

Tourism's direct link with the nature areas clearly indicates that both must care for each other. Ecology considers tourism as a major constituent for running the ecological processes. Tourism is a consumer that directly extracts the resources for the comfortable stay, visit and movement of visitors. Moreover, tourist is a conscious member of the society and is an active of part of ecosystem. Tourist is a consumer of resources. For example, the more the number of tourism demand for apple juice, the production of apple would be maximized to meet the demand. As a result, apple growers clear the forest land to grow the apple leading to ecological imbalances. On the contrary, horticultural or herbal gardens are opened to the visitors nearby the places of tourist interest for two important reasons: The first is to educate the people about the varieties of herbal and medicinal plants and the direct positive effects on the human body. The second is to generate revenue from the entry of tickets or sale of herbal products to help maintain the herbal garden. These efforts have helped save many endangered herbal pants worldwide. This may be treated as the relationship between tourism and ecology. The positive effect of tourism is to provide financial support to protect the nature and the human environment. The ecological awareness and behaviour in tourism needs to be ecologically balanced. Tourism marketing tends to increasingly highlight those destinations where the nature is intact and landscapes pure. It gives much scope for ecological conservation.

Tourism Activities & Threats on Ecology

In industrial countries, mass tourism and recreation are now fast overtaking the extractive industries as the largest threat to indigenous communities, and 'pristine' environments. Attractive landscape sites, such as sandy beaches, lakes, riversides, and mountaintops and slopes, are often transitional zones, characterized by species-rich ecosystems. The ecosystems most threatened with degradation are ecologically fragile areas such as alpine regions, rain forests, wetlands, mangroves, coral reefs and sea grass beds.

For example, visits to the 10 most popular mountainous national parks in the United States have increased twelvefold since 1945. In the European Alps, tourism now exceeds 100 million visitor-days. Every year in the Indian Himalaya, more than 250,000 Hindu pilgrims, 25,000 trekkers, and 75 mountaineering expeditions climb to the sacred source of the Ganges River, the Gangotri Glacier. They deplete local forests for firewood, trample riparian vegetation, and strew litter. Even worse, this tourism frequently induces poorly planned, land-intensive development.

The demand for normal water and fresh drinking water is one of the most critical natural resources. Many tourism destinations have face the acute shortage of drinking water. Other local resources like energy, food, and other raw materials are also becoming scarce in supply. The situation becomes worse during the peak tourism season. A high demand heating, hot water in winter and air condition during the demand can also pressure on the energy.

Tourism can cause the same forms of pollution as any other industry: air emissions, noise, solid waste and littering, releases of sewage, oil and chemicals, even architectural/visual pollution. Transport by air, road, and rail is continuously increasing in response to the rising number of tourists and their greater mobility.

For example, the number of international air passengers worldwide rose from 88 million in 1972 to 344 million in 1994. One consequence of this continuing increase in air transport is that tourism now accounts for more than 60% of air travel and is therefore responsible for an important share of air emissions. One study estimated that a single transatlantic

return flight emits almost half the CO2 emissions produced by all other sources (lighting, heating, car use, etc.) consumed by an average person yearly. Transport emissions and emissions from energy production and use are linked to acid rain, global warming and photochemical pollution. Air pollution from tourist transportation has impacts on the global level, especially from carbon dioxide emissions related to transportation energy use. And it can contribute to severe local air pollution. Some of these impacts are quite specific to tourist activities. For example, especially in very hot or cold countries, tour buses often leave their motors running for hours while the tourists go out for an excursion because they want to return to a comfortably air-conditioned bus.

In areas with high concentrations of tourist activities and appealing natural attractions, waste disposal is a serious problem and improper disposal can be a major despoiler of the natural environment - rivers, scenic areas, and roadsides.

For example, cruise ships in the Caribbean are estimated to produce more than 70,000 tons of waste each year. Today some cruise lines are actively working to reduce waste-related impacts. Solid waste and littering can degrade the physical appearance of the water and shoreline and cause the death of marine animals.

New Directions of Global Tourism towards Environment

Tourism is now one of the leading global industries with its 11 per cent contribution to the global GDP. It produces significant impacts on resource consumption, pollution, and social systems. The amount of consumption of tourism industry can be compared with any other major industry in terms of its harmful impacts. A new concept that has been figured in the policy and programming of many government is Green Tourism. It means the promotion of more nature tourism and creation of more afforestation activities with the help of tourism industry. The objective of green tourism is to lessen the use and pressure on natural resources and enhance the capacity of resources through recycling or reusing methods. Thus, the nature-based tourism can play a crucial role in the communities and natural environments under the greatest pressure from the development of tourism.

Ecology of Sustainable Tourism

The ecology of sustainable tourism aims at explaining the roles of tourism industry to make through checking of lighting, landscaping, color contrasts, exterior and interior decorations, street appearances and city themes, parking lots and internal transportation service to help visitors understand the richness of the places of tourism interest. Local festivals reflect the long tradition of local community and festivals should be made a part of ecology of sustainable tourism. It is the duty of the local administration to ensure safe and secure atmosphere. Thus, it must be part of the planning and there must be psychological and sociological analysis for making the ecology of sustainable tourism more appealing and enticing.

Environmental Protection & Tourism

The nature and environment is closely associated on their values. Environment is an interaction of its subsystems comprising the biosphere, technological and social sphere. Tourism industry uses environment for its own purposes. As it is explained, the complex consequences of tourism activities influence the environment. Thus, it needs certain protections.

- ➢ Reduction of intensive exploitation of land areas to save the landscape
- ➢ Reduction of pollution of air, soil and water; fuel burning, evaporation of solvents, leakage of chemicals, waste disturbance factors like noise or stench.

Marketing Activities in Tourism & Ecological Balance

The need for protection of environment is significantly contributing to the efforts for making the sustainable relationship between man and nature. The impacts of free time and tourism on aspects of environment have changed over the years. The land use and devastation of environment, pollution of water, air and forests and finally in climate changes can be mimized through the responsible marketing practices. For example, the TUI is of the largest tour operators. It has an excellent track record for contribution towards ecological balance in tourism. The global conglomerate has pledged to practice the principles of sustainable

development and linked players from all over the world in its ecological network, namely TUI-Umwelt-Netzwerk. The objective is to provide protection of water, flora and fauna, natural and cultural heritage; they want economic and careful use of land, water and other resources and reduction of waste and pollution wherever possible.

As suggested, municipalities in tourist resorts should be included in tourism planning and the use of domestic products and services should be stimulated. Partnerships with private companies and public institutions should be strengthened to develop a strong framework for sustainable development of tourism. Practitioners must take into consideration the following

- ➢ Integrating tourism with planning
- ➢ Supporting of local economy
- ➢ Involving local communities directly in the decision-making
- ➢ Establishing undisrupted communication network between shareholders and community
- ➢ Training and developing skills of local people
- ➢ Promoting responsible tourist marketing

Nature-Based Tourism - An Alternative Option

Nature Tourism is one of the forms of Ecotourism that attracts the nature lovers to understand and learn the functioning of ecosystem. Its primary focus is to experience the natural areas that fosters environmental and cultural understanding, appreciation and conservation. Nature tourism offers outdoor travel to remote areas with scenic attractions. The inclusion of ecology as an integral educational element has become increasingly important for which nature tourism is a part of ecological processes.

A special type of planning, conservation management, and economics has been evolved for nature tourism to be more acceptable to the ecosystem. Otherwise, there may be severe reactions from ecology and nature tourism can become an odd form of attraction in a natural areas. The objective of nature tourism is to provide interesting information on organisms and their unique relationship and it gives importance to the

sustainability of ecosystem through methodical conservation management, education, equitable social benefits and community responsibility. Thus, the principles of Nature Tourism now include

- ➢ Providing education on nature and its functioning
- ➢ Stressing on sustainable use of resources
- ➢ Giving scope for avoidance of degradation
- ➢ Empowering local community as a part of nature tourism
- ➢ Respecting local culture and heritage
- ➢ Providing sustainable profits to the business firms involved in nature tourism

Nature-based tourism offers on-site activities include hunting, fishing, photography, bird watching, and visiting parks and studying information about the ecosystem. Visiting, photographing, and learning about the Silent Valley in Kerala or Valley of Flowers in Uttarakhand may be the best example of nature tourism. The experience changes the perception, attitude and beahviour of an individual towards the nature. He/she may act as an ambassador for protecting the nature. Hence, nature tourism has emerged as a human activity distinct from adventure travel.

One study has estimated that a single transatlantic return flight emits almost half the CO_2 emissions produced by all other sources such as lighting, heating, car use, etc. consumed by an average person yearly. For example,, 76,271 people entered Yellowstone National Park on snowmobiles in winter 2000 and it outnumbered the 40,727 visitors who came in cars, 10,779 in snow coaches and 512 on skis.

A survey of snowmobile impacts on natural sounds at Yellowstone found that snowmobile noise could be heard 70 per cent of the time at 11 of 13 sample sites, and 90 per cent of the time at 8 sites. At the Old Faithful geyser, snowmobiles could be heard 100% of the time during the daytime period studied.

Thus, the concept of ecotourism has come into common use in the last decade. It describes a goal towards which tourism entrepreneurs, government agencies, non-governmental organizations (NGOs) and communities have been aiming at for much longer. Professionals working

within the field of ecotourism generally agree that 'ecotourism' stands out within the area of nature tourism by:

- ➢ Travel to a natural area.
- ➢ Travel that supports the conservation of biodiversity.
- ➢ Travel that brings benefits to local host communities.
- ➢ Travel that leads to greater understanding of the natural or cultural environment visited

Nature tourism requires interactions and partnerships with conservation NGOs, government tourism and resource management agencies, community groups and the private sector. As a result of which, the the Commission on Sustainable Development (CSD) as the Interagency Coordinator or lead agency appointed the United Nations Environment Programme (UNEP) to promote the implementation of Agenda 21 issues on tourism. The United Nations World Tourism Organization and the UNEP promote sustainable tourism for CSD.

Responsibility in Tourism

Responsibilities of the resource owners are responsible for different segments of tourism business. It makes the formation of guideline development, the maintenance of reliable quality level and the well-balanced communication much more difficult. Thus, tourism ecology is a tourism development theory and practice that naturally makes possible the efficient development of rural areas building upon natural and socio-cultural resources.

Summary

Tourism development partly or fully damages the environment or ecology when tourism activities exceed the ecological or environmental capacities. Brining these two to the stage of balance is a critical task. All the efforts at the global, regional and local level have produced fruitful results that have substantially reduced the pollutions and contaminations. At the same time, tourists and tourism industry are becoming more responsible towards the ecology and environment. Thus, the relationship between tourism and environment is natural and mutual. Both must help

to live together for their own benefits. Tourism is certainly a liability to the nature, but nature can be protected with the help of various educative forms of tourism. This chapter has described the relationship between tourism and environment along with the impacts of tourism activities on ecology and new approaches of global tourism for environmental preservation and sustainable development. The concepts of marketing activities in tourism & ecological balance, nature-based tourism and responsibility in tourism have also been presented with examples. Thus, tourism and environment must live together for the mutual benefits as the existence of both can provide better learning experiences and enjoyment to the visitors and generate revenue for better management of protected areas and create awareness among the stakeholders to be responsible towards environment.

Self Assessment Questions

1. Explain the fundamental concepts of ecology?

2. Explain the principles of ecology and assess how far these principles are practiced?

3. Which are the transcending functions and control processes? Explain with examples.

4. Which are the basic laws of ecology and how these laws can be enforced for the preservation of ecology?

5. Explain the relationship of component of ecosystem and its functions.

6. Describe meaning, types and processes of ecosystems.

7. What are the principles of ecosystem? How can the ecosystem be managed?

8. Explain the need for biodiversity conservation.

9. Explain the different types of pollutions and how are they created?

10. What are the impacts of pollutants on the environment?

11. Explain the impacts of tourism on pollutions and vice versa.

12. How does tourism and environment exist each other? Explain.

13. Explain the meaning, key concepts and origin of ecological footprint.

14. What are the objectives and principles of ecological footprint?

15. How is the ecological footprint standard maintained and how it can be measured?

16. Explain the relationship between ecological footprint and carrying capacity with reference to tourism development.

17. Trace the origin of relationship between tourism and environment.

18. Discuss the impacts of tourism activities that pose serious threats to ecology and environment.

CASE STUDY
Ecotourism in Kerala

Ecotourism promotes nature conservation and environmental education. Ecotourism activities include trekking, bird watching trails etc Kerala is known for promoting ecotourism activities for achieving two important objectives: Employment creation and preservation of ecosystem. Tourism is one of the major income earners for Kerala's economy to the tune of Rs 81.8 billion. As per the projection of World Tourism & Travel Council in 2013, the State is expected to receive Rs.569.3 billion from tourism that is estimated to be 11.4 per cent annual growth. Ecotourism is a key contributor to the total revenue generation from tourism in the state. As many as 56 ecotourism destinations have been indentified in 14 districts and these ecotourism sites are developed as per the principles of sustainable tourism as ecotourism is a means to achieve sustainable development. The Department of Forest, Government of Kerala has introduced the concept of Ecotourism in 15 wildlife sanctuaries and 5 national parks. The objective of promoting ecotourism activities in the protected sanctuaries and parks is to prevent the local community members from destroying the forest and killing wild animals. The Department of Forest has also introduced the constitution of Eco-development Committees / Participatory Forest Management Committees (Vana Samrakshna Samithi) to empower local community members to take their own decisions to plan for ecotourism as it is an alternative source of income for the community. This is the way through which benefits of ecotourism can be percolated to the local people and the support of local community for forest protection can be largely motivated. For examples, Konni is an indentified ecotourism site in Pathanamthitta district in Kerala and it is an

important part of the Western Ghat. Seeing the elephants is the primary attraction of this ecotourism site. This means that wildlife watching is an important activity of Konni. Other activities that an eco-tourist can enjoy include trekking, rock climbing, elephant safari, wilderness camping, river cruise by rafting, wildlife watching, bird watching. The production of rubber plantation and the cultivation of pepper and ginger provides different rural experience to eco-tourists. Konni is a model forest-based ecotourism development initiative due to the joint efforts of Department of Tourism and Department of Forest. There are two types of ecotourism zone: Soft and Hard ecotourism zones. The VSS of Konni manages the entry of visitors and facilities for eco-tourists. Several measures have been undertaken to ensure the long-term sustainability of ecotourism programmes in Konni and Environmental Impact Assessment (EIA) is also being done time to time to maintain the development in harmony with the capacity of ecosystem. Training programmes for local guides, local vendors, souvenir and handicrafts manufacturers, small local transport operators are organized for self-employment activities. Thrust is given to local horticulture, handicrafts that can contribute to local economic development considerably. Private investment outside the forest for the construction of eco-friendly resorts, eco-lodges, etc has been allowed with the condition to satisfy the ecotourism principles. Several private estates adjoining the forest ecosystems have been converted to eco-lodges.

Questions

1. Why the Department of Forest, Government of Kerala has taken decision to promote ecotourism?
2. What are functions of Eco-development Committee?
3. What are the ecotourism activities at Konni?
4. Has Konni become a successful ecotourism destinations
5. Why the Department of Forest has allowed the private investors in ecotourism project in Konni?

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UNIT - II

Unit Structure

Lesson 2.1 - Ecotourism - An Alternative to Mass Tourism

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the concept and characteristics of mass tourism

➢ Find out the mass tourism impacts at the tourism destinations

➢ Search for practical solutions for the onslaught of mass tourism

➢ Find the significant roles of ecotourism as an alternative to mass tourism

➢ Suggest for the implementation of sustainable tourism principles

Mass tourism was well appreciated for its significant contributions towards socio-economic development and many lesser-known tourism destinations have become big towns and cities with the tourism development. Mass tourism activities bring about noticeable changes in the economic well-being of people due to diverse categories of employment and self-employment opportunities. With the heavy and unprecedented inflow of tourist traffic during the summer and winter months, sporadic developments in terms of road, rail, airports, hotels, parking, business centers have been built around the destinations to cater

to the tourist demands. Furthermore, the requirements for inputs have increased manifold due to massive demand from the tourism industry. As a result of which, numerous destinations have been witnessing the irreparable damages to the ecology and environment. Thus, the positive impacts have been overshadowed with the negative impacts so much that policymakers and planners are rigid for mass tourism at the cost of ecology and environment of the place.

Taking the permanent loss to the local environment by the mass tourism activities, many countries have almost enforced the guidelines of sustainable tourism to help check the unplanned tourism development. At the same time, ecotourism has become an emerging form of nature-based tourism to neutralize the loss already caused to the ecology and environment and to help function ecosystem effectively. As such, ecotourism aims to attract the visitors who must be conscious and cautious towards the ecology and environment. Thus, ecotourism has been identified as an alternative form to curb the menace of mass tourism and maximize the positive impacts. In this context, this chapter describes the concept and impacts of mass tourism and the promotion of ecotourism as an alternative approach to minimize the impacts through various sustainable tourism practices.

Evolution of Mass Tourism

Mass travel to the religious and pilgrimage sites gave rise to concept of mass tourism. The period of renaissance brought several changes in the society and traveling to distance places was no longer difficult. Most of the holy places of world's principal region became overcrowded and religious institutions were ready to provide accommodation and food to the devotees and pilgrims. In addition, people in the Romanian Empire used to travel to the hill stations and mountain for spa bath. There was a major change in mass travel during the rapid industrialization due to rise in income and holidays. Further, mass tourism got major breakthrough paid holidays introduced in the Western Europe and North America during the massive industrialization in 17th and 18th century.

Many popular destinations in Italy, France, Switzerland, Egypt and the United Kingdom were the mass tourism destinations.. At the same time, the mode of transport and communication system further induced

people to go for long or short travel as per their preferences and choices. It was a major breakthrough that the invention of supersonic Jet Engine and Luxury train & bus travel also contributed significantly to the growth of mass tourism worldwide. Mass tourism traditionally means a large scale travel undertaken for the purpose of leisure, pleasure and recreational activities to the conventional or the beaten-track places. The popular mass tourism destinations were the Southern Europe, the Caribbean Islands and North America region in the 1960s and 1970s. Mass tourism has unleashed the form of development that is short-term and free-market in principles with a huge amount of employment creation.

Tourism is one of the growth-led and economic-driven industries worldwide and the number of international tourists across the countries has been increasing steadily owing to the rising disposable income, affordable organized holiday packages, hassle-free travel formalities, online travel portals, web technology, etc. Mass tourism traditionally means a large scale travel undertaken for the purpose of leisure, pleasure and recreational activities.

The popular mass tourism destinations were the Southern Europe, the Caribbean Islands and North America region in the 1960s and 1970s. In nutshell, mass tourism creates a form of development that is short-term and free-market in principles with a huge amount of employment creation.

Mass tourism is defined as the occurrences of assembly or congregation of a large number of tourists at a particular point of time, thereby causing maximum damages to the quality of air and water and creating noise and radioactive pollution. To deal with the mass tourism menaces, the popular and potential destinations with all attributes entice innumerable tourists in a short period of time. Mass tourism destinations need massive development of infrastructure and superstructure to cater to the needs of visitors.

On the other hand, overutilization of facilities and amenities happens when the inflow of tourists into the destinations increases due to the seasonal, demographic and other external factors. At many world-famous tourist destinations, the mass tourism becomes a nuisance factor when it is not regulated in a planned way.

Meaning & Definition of Mass Tourism

Mass tourism is defined as the occurrences of assembly or congregation of a large number of tourists at a particular point of time, thereby causing maximum damages to the quality of air and water and creating noise and radioactive pollution. Mass tourism in a rather unspecific manner is known for its accumulated appearance of tourists in a special destination. Thus, mass tourism constitutes the major share of tourism arrivals and activities since majority of tourists prefer to visit conventional places of tourist interest. Mass tourism cannot be rejected absolutely for two important main reasons. The first reason is to generate foreign exchange for countries and the second reason is to enhance socio-psychological behaviour of host population.

Mass tourists usually like to undertake organized package tour and take the help of professional travel agents to make transport and accommodation arrangements. Language is not a constrain as the host populations or people working for the tourism industry pick up some functional or operational words and sentences to help tourists in finding hotels, vehicles, restaurants, shopping complex, et. As such, mass tourists like to have accommodation or other travel services with a very hard bargain and they wish to stay at reasonable hotels or in some cases expensive hotels. The amount of expenditures is relative higher as it includes the cost of room, food, sightseeing, shopping and other entertainment activities.

The crowding of tourists to enjoy usual or common attractions without facing any problems of accommodation, transportation, food, hygienic, safety, etc may called as mass tourism. Because mass tourism destinations are well developed with maximum infrastructure and the quantity of development is related to the quantity of tourist arrivals. For example, Agra, Varanasi, Gaya, Ooty, Shimla, Puri, etc are the popular mass tourism destinations.

According to the UNWTO (2003), the term "mass tourism" is known for its development over the past 40 years in terms of the growth of tourist resorts, hotel, airports and larger aircrafts. Mass tourism creates both positive and negative impacts on the ecology and environment of the destinations. Leisure tourism boom in the 1960s and 70s to the Mediterranean region and other exotic islands added to the growth of

mass tourism. Many alternative forms of tourism as opposed to a mass phenomenon include sustainable tourism, ecotourism, slow tourism, soft tourism, responsible tourism and pro-poor tourism.

These are following indicators for defining mass tourism:

➢ The number of tourists gathered at a particular time or in season

➢ The intensity of the visitors in their interactions with local social, cultural, ecological an environmental conditions

➢ The mode of transports used for transferring the visitors and transporting goods for the tourism industry

➢ The type of accommodations and its locations

➢ The temporary or permanent character of the impacts of mass tourists arrivals, movement and stay

➢ The amount of water, land, energy, etc used for meeting their needs and comforts

➢ The impacts of carrying capacity at an individual site or as a whole.

➢ The establishment of support infrastructure and its direct impact.

Characteristics of Mass Tourism

Mass tourists have different frame of mind in order to satisfy the travel needs, preferences and motivations. The attributes of mass tourists can be easily indentified at any destinations since they are generally careless with consumptive mindset. Thus, the behavior of mass tourists include passivity, lack of preparation, hurriedness or no interest in local customs, no care for environment and people, non-comprising, etc.

In order to satisfy the erratic behaviour of mass tourists, large construction of building, shopping complex, airports, railway stations, bus terminals, public amusement park, parking areas, dumping yard, roads, etc are created to cater mass tourists with the purpose of additional revenue generation. Table shows characteristics of mass tourism and alternative or small-scale tourism on various indicators to satisfy the needs of both market.

Markets	Mass Tourism	Alternative Tourism
Segment	Psychographic –mid-centric	Allocentric-mid-centric
Volume and Mode	High; package tours	Low; individual arrangements
Seasonality	Distinct high and low seasons	No distinct seasonality
Origins	A few dominants market	No dominant markets
Attractions	Highly commercialized	Moderately commercialized
Emphasis	Generic ' contrived'	Area specific, 'authentic'
Accommodation	Tourists only or mainly	Tourists and locals
Size	Large scale	Small scale
Spatial Pattern	Concentrated in 'tourist areas'	Dispersed throughout area
Density	High density	Low density
Architecture	International style; obtrusive, non-sympathetic	Vernacular style, unobtrusive, complementary
Ownership	Non-local, large corporations	Local, small businesses
Economic States	Dominates local economy	Complements existing activities
Role of Tourism	Manly external	Namely internal
Linkages	Extensive	Minimal
Leakages	Low	High
Multiplier Effects	Non-local private sector	Local community
Regulation	Minimal to facilitate private sector	Extensive; to minimize local negative impacts
Control	Free market forces	Public interventions
Amount	Economic growth, profits; sector-specific	Community stability and well-being; integrated holistic
Ideology		Long term
Emphasis		
Timeframe	Short term	

Differences between Mass Tourism and Alternative Tourism

Source: David B.Weaver (ed.), The Encyclopedia of Ecotourism, CABI Publishing, Wallingford.

Types of Mass Tourism

There are different forms of mass tourism, but the most common of them comprise sunshine/ seaside tourism and winter sports tourism. Fink (1970) has classified mass tourism into four categories such as

➤ Participation of large number of people

➤ Collective organization of travelling

➤ Collective accommodation

➤ Conscious integration of the holidaymakers in a travelling group

Mass Tourism Activities

The concept of "mass tourism" is used in contrast to the limited participation of people in some specialized forms of tourist activities such as yachting, river rafting and scuba diving. Mass tourism is proportion to the total populations who participate in tourism or the volume of tourist's activity. To deal with the mass tourism menaces, the popular and potential destinations with all possible qualities attract a large volume of tourists in a short period of time. These destinations generally witness the massive development of infrastructure and superstructure to cater to the needs of visitors. Nonetheless, there is every possibility of overutilization of facilities and amenities when the inflow of tourists into the destinations increases and vice-versa due to the seasonal factor and other uncontrollable factors. In many cases, the mass tourism becomes a nuisance factor when it is not regulated in a planned way.

Mass Tourism: A Biggest Polluter

Mass tourism is an important source of significant economic benefits, particularly to less developed countries, but these are mostly distributed unequally. It has also generated uncongenial and sometimes destructive environmental, social and cultural consequences at the popular destinations. As a result, it threatens the sustainability of local tourist industries. For example, small countries and fragile mountain destinations, island states and mountain areas as compared to other sectors of the economy largely depend on the tourism revenue. Tourism is a dominant industry and its contribution to GDP is significant for which those countries promote mass tourism. Consequently, the quality of water, air and soil as some of the indicators of environment get affected severely with the increase in tourist inflows. In addition, the rate of inflation rises to maximum level due to the rising demand by the visitors and tourism industry. The practices of tradition and custom get also influenced largely by the intrusion of foreign or alien culture.

For example, more tourist attractions and recreational activities in the water bodies in the Mediterranean countries produce wastewaters from the septic tank seepage and lawn. Those bodies get choked with weeds and beaches with algae intensified by human influence. Further, inadequately treated effluent or raw sewage discharged into water resources is a health hazard as well. For example, the trampling impacts on vegetation and soil environmental impacts of nature tourism in Zhangjiajie National Forest Park, China.

Air pollution is a result of emissions from vehicles and airplanes. The recent issues of ozone destruction, the green house effect and global warming are related to the mass tourism activities. In congested areas, emissions negatively influence vegetation, soil and visibility. Tourism infrastructure could have negative impacts on visual quality that is a direct impact on environment. Historical buildings and monuments are also the victims of the alteration in architectural styles and it causes architectural pollution. This impact of mass tourism is especially noticeable when any form of development trims and alters the beaches or scenic beauty. It is otherwise called as aesthetic pollution. Unplanned tourism growth and its consequences in the natural areas have resulted in damaging the natural environment in the form of repercussions on the man-made environment and disruption of the socio-cultural environment. Alternative tourism or alternate development strategies help protect and preserve the quality and serenity of the environment.

For example, the rapid construction of mass-tourism infrastructures in Saint Vlas suddenly brought about changes on the town's social, economic and environmental conditions in the mid 2000s in the Bulgarian Black Sea Coast. In many destinations, mass tourism has exploited the natural and social resources and the situation is no different in Saint Vlas.

For instance, negative tourism impacts such as superstructure constructions, littering, deforestation, trampling, noise and sound pollution affecting the Cameron's natural environments tourism impacts in Malaysian highlands. The impact of consumptive activities such as hunting, poaching and trampling of the vegetation at the wildlife area creates the destruction of wildlife for souvenirs such as elephant tusks and lion-claw necklaces. Similarly, poaching or game safari is a major threat to wildlife, especially in African countries. There are some socio-cultural

impacts such as loss of cultural heritage, loss of traditional livelihood and influence of urban culture affecting in the highland region.

Sedimentation is also one of the additional impacts associated with tourism due to soil erosion and deforestation in many hill stations. Water pollution and sedimentation are directly linked to the tourism development. Sedimentation reduces the purity of water and gravely affects the aquatic life in the lakes and reservoirs for long time. On the other hand, tourism industry requires the heavy use of water for washing, swimming pools, lawn water and other uses. This is particularly problematic in areas where fresh water is scarce. For example, the physical environment impact of Western Australia Coastal areas is a matter of concern today. Therefore, adverse impacts can create degradation of dunes, loss of biodiversity, erosion, eutrophication and littering.

For instance, CPR Environmental Education Centre (2002) outlined the importance of an increase of two lakh visitors on an average in a year since 2000 in the Nilgiri hill region. In order to accommodate the growing number of tourists, many hotels, clubs, resorts and public gardens have been developed in the hill station. This unplanned infrastructure development has obviously made direct impact on the environmental pollution and garbage disposal problems in this ecologically fragile region in the recent times.

For example, the physic-chemical characteristics of the storm weather water channel and its impacts on Ooty's lake and surrounding areas have made direct impacts on growth of the productivity of phytoplankton algae domestic wastes on microbial population. Urban sewage flowing through the storm water empties into the lake with a voluminous load of silt and organic matter. The silting, dredging macrophysics, the noxious water hyacinth and sewage should be minimized and the organic load flowing into the lake is essential. The storm water channel should be regulated with proper planning to protect the self-purification properties of the lake.

Remedial Measures for Countering Mass Tourism Menace

Determining the level of environmental degradation of a resource is essential and should constitute a part of the assessment of mass tourism. Adverse physical impacts may be reduced if the relationship between

the tourism development and conservation of ecology and environment becomes sustainable. Social awareness and sensitization campaign and spreading of education across the school, colleges and universities are the effective means of reducing negative impacts at any mass tourism destinations. Display of unique ecosystem or biodiversity in interpretation centers has already proven to be an effective mechanism for managing mass tourism at the protected areas. The authority should incorporate sustainable and responsible tourism practices to minimize the mass tourism impacts in Ooty, Shimla and Darjeeling.

Advantage and Disadvantage of Mass Tourism

Mass tourism is tourism on a large scale to one country or region. This equates to the Development and Consolidation phases of the Butler tourist resort life-cycle model. Table shows economic and environmental advantage and disadvantage of mass tourism.

Advantage	Disadvantage
Economic Gain	**Environmental Loss**
➢ Powerful foreign exchange earner	➢ Complete loss of natural habitats due to the building infrastructure
➢ Stimulation to expand the domestic economy	➢ Break peace and quiet atmosphere
➢ Creation of direct and indirect jobs	➢ Increase in pollution and contamination
➢ Creation of jobs in the ancillary sectors like fishing and agriculture.	➢ Over fishing and Over cultivation
➢ Facilitate the host population to make use of infrastructure built for tourists	**Economic Loss**
Environmental Gain	➢ Disappearance of jobs
	➢ Altercation of local culture with the change in fashion
➢ Creation of awareness for conservation	➢ Heavy economic leakage
➢ Self-management through self-generated revenue	➢ Creation of low paid, low skilled and seasonal jobs

Advantage and Disadvantage of Mass Tourism

Source: David B.Weaver (ed.), The Encyclopedia of Ecotourism, CABI Publishing, Wallingford.

Rise against Mass Tourism

According to the UNWTO (2003) the term "mass tourism" is known for its development over the past 40 years in terms of the growth of tourist resorts, hotels, airports and larger aircrafts. Mass tourism creates both positive and negative impacts on the ecology and environment of the destinations. Nonetheless, majority of the research works are focused and centered on the negative impacts of mass tourism on natural resources. Tourism is often blamed to be a key consumer for resource degradation. Mass tourism is an important source of significant economic benefits, particularly to less developed countries, but these are mostly distributed unequally. It has also generated uncongenial and sometimes, destructive environmental, social and cultural consequences at the popular destinations, which threaten the sustainability of local tourist industries. Small countries and fragile mountain destinations, island states and mountain areas, in which tourism has become the dominant industry as compared to other sectors of the economy, have remained underdeveloped and are often entirely dependent on tourism. They are often exposed to financial risks created by far-away political and economic crises. Mass tourism has three effects on environment, local economy and local cultures.

In general, the impact of mass tourism always creates more positive impacts than negative impacts from natural, cultural, economic and environmental perspectives in any destination. However, it leads to creating massive negative impacts as it has been occurring at hundred thousands of tourist places of interest. Therefore, the negative impacts of mass tourism can be minimized or controlled with the alternative approach or sustainable tourism, that can maintain a strong balance between positive and negative impacts in the ecologically fragile places. Almost all the hill stations and beach resorts in India have been the victims of severe environmental and ecological disastrous due to the uncontrolled construction of hotels, connecting roads and recreations facilities for the comfort of visitors.

Mass Tourism Vs Ecotourism

Mass tourism or ecotourism is appreciated for its ability to make social and economic progress and is denounced when the activities lead to destroying the original environmental settings. Both the two forms

have common objectives that include improvement of economic well-being, generation of income and employment and advancement of society in terms of acquiring knowledge. However, both have opposite interests in case of environmental conservation and long-term development or sustainable development. For example, Goa is a finest tourism destination for wide range of leisure, pleasure and fun activities. The tolerance of local is relative high in accepting the tourism development as it was an erstwhile Portuguese Colony with an influence of European culture. The fact of the matter is, tourism development is now vehemently opposed in Goa since it had led to harming the social and cultural tradition of Goa. It is a kind of touristic culture that has almost rooted out the original culture of the tiny coastal tourist city.
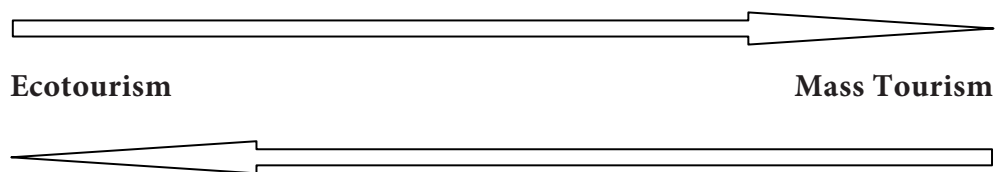
At the same time, Periyar Wildlife Sanctuary is an indentified ecotourism site located in Iddikki district of Kerala. The Department of Forest, Government of Kerala has opened the sanctuary for tourism activities in buffer area. To the utter surprise, the sanctuary has become a mass tourism destination due to the heavy inflow of tourists leading to make several negative impacts. Therefore, whether it is mass tourism or ecotourism, when it is promoted without having any control or regulation; it will certainly become an unsustainable form of tourism. In most of the research works, you may come across the monstrous behaviour of mass tourism because it dominates the tourist visiting region with its demand for non-local products and cultural activities. The inflow of revenue through tourist expenditures gets leaked to other regions of country or foreign country due to the procurement of products to cater to the tourist demand. There are star hotels and mega beach or hill resorts symbolizing the mass tourisms' domination in the region. Those hotels do aggressive marketing and publicity to sell the rooms that in turn bring more visitors and increase the per capita consumption at the destinations. It becomes more chaotic during high-peak season for example, the Christmas or Eve of New Years.

Development is the thrust of the government policy and it can be possible with the tourism development. It leads to high population density, displacing local from traditional subsistence-style livelihoods. Finally, the massive infrastructure and superstructure are only meant for meeting the expectations of visitors. Emphasis is often on commercialization of natural and cultural resources. The result is the creation of an artificial

and inauthentic representation a cultural theme or event by distorting the rich cultural heritage.

Polar Opposite between Ecotourism and Mass Tourism

➢ Imparts sustainability environmental ethos to mainstream
➢ Provides diversification opportunities for mass tourism
➢ Attractive to an increasingly 'green' tourist market

Ecotourism   **Mass Tourism**

➢ Provides sufficient market and revenue flows to position ecotourism as a major resource stakeholder with significant lobbying clout
➢ Introduction of effective environmental management systems

Source: David B.Weaver (ed.), The Encyclopedia of Ecotourism, CABI Publishing, Wallingford.

Ecotourism- An Alternative Option

The logic behind alternative tourism is to counter the onslaught of mass tourism. As Krippendorf (1982) postulated for alternative tourism to shift the priority of government from mere economic gains to preservation of unspoiled environment and consideration of the needs of local people. As he suggested that alternative tourism aims to discourage the outside influence in the development and lays emphasis on participation of local people. Thus, alternative tourism is a generic term that may represent the following themes in order to control the mass tourism activities.

➢ Appropriate tourism
➢ Ecotourism
➢ Soft tourism
➢ Responsible tourism
➢ People to people tourism
➢ Controlled tourism
➢ Small-scale tourism

> ➢ Low-impact tourism
> ➢ Cottage tourism
> ➢ Green tourism

These are the following advantages of alternative tourism**:**

> ➢ To provide income benefits for the individual or family in terms of home-stay type of accommodation
> ➢ To enhance managerial and decision-making skills
> ➢ To improve the quality of life and family well-being
> ➢ To build environment friendly facilities for visitors as well as for local community
> ➢ To check the leakage of tourism revenue and stimulate the purchasing power of local people
> ➢ To reduce social tensions with the sustained income
> ➢ To preserve the local traditions and customs
> ➢ To help cost-conscious visitors prefer the ecotourism destinations for low expenditures and direct local contract.
> ➢ To strengthen the host-guest relationships through interactions

More specifically, Weaver (1993) has presented the potential benefits of an alternative tourism that is largely designed from the perspective of accommodation, attractions, market, economic impact, and regulation. This more sensitive approach to tourism development strives to satisfy the needs of local people, tourists, and the resource base in a complementary rather than a competitive manner.

Summary

Tourism destinations are swamped with visitors with the increase in tourist arrivals. Some of the world's most famous archeological, historical and natural sites are in the brink of damage due to heavy inflow of tourist arrivals followed by sporadic development. An eminent Climatologist, Prof. David Viner predicted that intense heat, forest fires and shoals of stinging jellyfish would be the common features in the Mediterranean region by 2080. There will be more malaria in southern Spain by 2020 and

Athens has already experienced the temperature more than 40C. Further, the movements of cruise ships are damaging the coral reefs and there is more impact from the coral bleaching caused by climate change.

Thus, mass tourism is often blamed to be a key consumer for the natural resource and its degradation of the quality of environment. The emerging relationship between mass tourism and alternative form of tourism should have synthesis, convergence and symbiosis after adopting the principles of sustainable tourism. The mass tourism destinations should promote responsible, fair-trade and ethical tourism under the broad framework of sustainable tourism. As such, the principles and objectives of alternative tourism are based on the concept of cautionary and adaptive to help impart ethos of sustainability and environmental awareness to the mainstream tourism. As result, precautionary measures should be taken to regulate the quality of supplies of food grains, water, petroleum products, etc. The mass tourism industry needs to adopt environmental management strategies to sustain the positive benefits and minimize the negative impacts. This chapter has described about the genesis of mass tourism and its meaning and characteristics and activities along with its negative impacts on environment and ecology and remedial measures to for curbing the menace of mass tourism impacts. This chapter further explained about ecotourism as an alternative option to ecotourism.

> ➢ Rise against Mass Tourism
> ➢ Mass Tourism Vs Ecotourism
> ➢ Polar Opposite between Ecotourism and Mass Tourism
> ➢ Ecotourism- An Alternative Option

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Lesson 2.2 - Fundamentals of Ecotourism

Learning Objectives

After reading this chapter, you should be able to

- ➢ Find out the evolution of the term " Ecotourism"
- ➢ Understand the meaning and definitions
- ➢ Explain the objectives and principle of ecotourism
- ➢ Know different types of eco-tourists

Ecotourism has become an emerging form of alternative tourism and it provides authentic experiences to the nature lovers and enthusiasts. It is a responsible travel to study, enjoy and admire the natural beauty along with wild animals, plants and indigenous culture. The primary objective of introducing and promoting ecotourism is to conserve the environment and the social and economic wellbeing of local people. Conservation of biodiversity and cultural diversity is one of the important principles of ecotourism. It promotes the sustainable use of natural resources and provides ample opportunities for income and employment in the ecotourism destinations.

Maintaining a balance between the environmental conservation, wellbeing of local people and visitor satisfaction has thrown challenges to the planners, policymakers and tourism stakeholders. Certainly right, ecotourism or ecological tourism is a western concept that aims to find the ways and means to provide many practical solutions towards the conservation of biodiversity in the protected areas. This chapter attempts to describe the meaning and definitions of ecotourism along with the objectives and principles of ecotourism. Various forms of ecotourism and typology of eco-tourists have also been presented with suitable examples.

Evolution of Ecotourism

The origins of the term 'ecotourism' may be traced back to the four pillars or principles of responsible tourism by Hetzer in 1965, who conducted the first eco-tours in the Yucatan during the early 1970s. His study found the intricate relationship between tourists and the environments and cultures in which they interact. However, Hector Ceballos-Lascurain first coined the term 'ecotourism' in July 1983 when he was in the process of developing the PRONATURA, an NGO in Mexico. The PRONATURA worked for creating awareness for the conservation of American Flamingo in the wetlands in northern Yucatan for sustaining the breeding and feeding habitats. Other early references to ecotourism may be found from the work of Miller (1978) on national park planning for eco-development in Latin American countries. Documentation was prepared by the Environment Canada to make road-based eco-tours from the mid 1970s to the early 1980s. Each tour was conducted in ecological zone in the corridor of Trans-Canada Highways with information to help effective interpretation.

The need for conceiving ecotourism arose from the worldwide environment movement in the 1970s and 1980s. For example, the International Conference was held in Geneva on Human Environment in 1972 followed by the World Conservation Strategy by IUCN in 1980 outlined the importance of sustainable development or eco-development. Further, growing concern for environmental pollutions, loss of species coupled with the aversion towards mass tourism led to create a new class of tourists interested and motivated towards seeking nature-based experiences. At the same time, the third-world countries found the form of nature-based tourism as a means for earning revenue to sustain the livelihood of people as an additional occupation or a substitute to agriculture, logging, fishing, hunting, etc. By the mid 1980s, many such less developed countries with huge potential for promoting nature-based tourism as a means of protecting environment and ensuring development.

Meaning & Definitions of Ecotourism

From the good old days, people have been visiting the natural scenic places for doing their outdoor recreational activities. Nature has been a primary motive for all categories of the visitors since the dawn

of the civilization. However, the concern for nature conservation came to figure in the framework of policy and planning of the governments. In this context, government evolved several ways to reduce the impacts of development on nature and its environment. One such measure was the eco-development to save the environment from unplanned and uncontrolled development. Even though people used to travel to natural scenic places for the sake of enjoying good climate much before the term 'ecotourism' was evolved as a form of nature-based tourism. Thus, Ceballos-Lascuráin, Hetzer and Laarman and Durst advocated for ecotourism in the protected and natural areas for nature conservation, socio-economic improvement and visitor satisfaction. Here are given below some of the selected definitions of ecotourism.

Hetzer (1965) identified four fundamental pillars for conducting a more responsible form of tourism.

These are the following principles;

- ➢ Minimum environmental impact
- ➢ Minimum impact on—and maximum respect for—host cultures
- ➢ Maximum economic benefits to the host country's grassroots
- ➢ Maximum recreational satisfaction to participating tourists

The first formal definition of ecotourism is generally credited to **Ceballos-Lascuráin(1987),** who defines "travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas.

Laarman and Durst (1987) defined it as a nature tourism in which the traveler is drawn to a destination because of his or her interest in one or more features of that destination's natural history. The visit combines education, recreation, and often adventure.

The **International Eco tourism Society in 1991** produced one of the earliest definitions "eco- tourism is responsible travel to natural areas that conserves the environment and sustains the well being of local people.

Ecotourism Association of Australia (1992) defines ecotourism that "ecologically sustainable tourism that fosters environmental and cultural understanding, appreciation and conservation.

Valentine(1992) defines nature-based tourism as tourism 'primarily concerned with the direct enjoyment of some relatively undisturbed phenomenon of nature'. A variety of motivations for nature-based tourism have been suggested, including the desire to get back in touch with nature, a desire to escape the pressures of everyday life, seeing wildlife before it is too late, and specific interests and activities such as trekking, bird watching, canoeing and white-water rafting and kayaking.

Allcock et al., 1994) define that education and interpretation of the natural environment and is managed to be ecologically sustainable. This definition recognizes that 'natural environment' includes cultural components and that 'ecologically sustainable' involves an appropriate return to the local community and long-term conservation of the resource.

Tickell (1994) Travel to enjoy the world's amazing diversity of natural life and human culture without causing damage to either money; (iv) quality tourism; and (v) local participation,

Buckley(1994) restrictive notion of ecotourism in which ecotourism is nature based, environmentally educated, sustainably managed and conservation supporting. One further dimension of ecotourism involves the small-scale, personalized and hence alternative nature of many classical ecotourism experiences.

The **World Conservation Union (IUCN, 1996)** defines that ecotourism is a environmentally responsible travel to natural areas in order to enjoy and appreciate nature (and accompanying cultural features, both past and present) that promote conservation, have a low visitor impact and provide for beneficially active socio- economic involvement of local peoples.

Goodwin (1996) distinguished between *nature tourism and ecotourism*. The former encompasses all forms of tourism—mass tourism, adventure tourism, low-impact tourism, ecotourism —which use natural resources in a wild or undeveloped form—including species, habitat,

landscape, scenery and salt and fresh-water features. Nature tourism is travel for the purpose of enjoying undeveloped natural areas or wildlife. Conversely, the latter is low impact nature tourism which contributes to the maintenance of species and habitats either directly through a contribution to conservation and/or indirectly by providing revenue to the local community sufficient for local people to value, and therefore protect, their wildlife heritage area as a source of income.

Ross and Wall (1999) outline five fundamental functions of ecotourism; namely:

➢   Protection of natural areas;

➢   Education; and

➢   Generation of income and employment

Fennel (1999) Ecotourism is a sustainable form of natural resource-based tourism that focuses primarily on experiencing and learning about nature, and which is ethically managed to be low-impact, non consumptive, and locally oriented (control, benefits, and scale). It typically occurs in natural areas, and should contribute to the conservation or preservation of such areas (Fennel, 1999)

National Ecotourism Strategy of Australia (1994)defines that ecotourism is nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable.

Wallace & Pierce (1996) Suggest that this tourism may be said to be true ecotourism if it addresses six principles

➢   It entails a type of use that minimizes negative impacts to the environment and to local people.

➢   It increases the awareness and understanding of an area's natural and cultural systems and the subsequent involvement of visitors in issues affecting those systems.

➢   It contributes to the conservation and management of legally protected and other natural areas.

- ➤ It maximizes the early and long-term participation of local people in the decision-making process that determines the kind and amount of tourism that should occur.

- ➤ It directs economic and other benefits to local people that complement rather than overwhelm or replace traditional practices(farming, fishing, social systems, etc)

- ➤ It provides special opportunities for local people, nature tourism employees to utilize and visit natural areas and learn more about that wonders that other visitors come to see.

The United Nations World Tourism Organization (UNWTO, 2002) has defined as tourism that involves traveling to relatively undisturbed natural areas with the specified object of studying, admiring and enjoying nature and its wild plants and animals, as well as existing cultural aspects (both of the past and the present) found in these areas.

Concept of Ecotourism

Ecotourism is a form of tourism that generally involves visiting to fragile, pristine and protected areas. The activities of ecotourism have low negative impact on the ecology and it is often a small scale alternative form of tourism as against mass tourism. As such, the purpose is to provide an interactive environment for both the host and guest to understand each other and the travel to the ecotourism sites can educate the visitors, raise funds and create belongingness for conservation of ecology and ecosystem. Ecotourism typically involves travel to destinations where flora, fauna, and cultural heritage are the primary attractions. It is intended to offer tourists insights into the impact of human beings on the environment and to foster a greater appreciation of the natural habitats and their relationship.

As a result, the act of responsible travel can directly provide immense benefits in the forms of income, employment, decent facilities and dignified social life. The very basic purpose of ecotourism is to emancipate the downtrodden people in and around the sites through political, social and economic empowerment. It fosters friendship, brotherhood and mutual respect for both host and guest cultures and ensures for human rights in the form of equitable distribution of benefits percolated from the tourism revenue. Since the 1980s, environmentalists, ecologists and

naturalists have been very critical of the functioning of tourism activities in the ecologically sensitive places. Consequently, ecotourism was conceived as an alternative to the commercial form of tourism to experience and enjoy the beauty and serenity of destinations for present and future. They have been raising their concerns for uncontrolled ways of managing the ecotourism sites. Truly, ecotourism sites should not be opened to all as it can become a conventional form of tourism. It further explains that the destinations should be untouched by human interventions.

Generally, ecotourism focuses on three important aspects such as socially responsible travel, enrichment of knowledge and improvement of mental and physical health and environmental sustainability. Emphasis is given on the promotion of responsible ecotourism that can largely neutralize the negative impacts and maximize the positive impacts for the environment to remain as untouched, virgin and salubrious.

Apart from the social, cultural and economic well- being, the basic principles of ecotourism include recycling, waste management, energy efficiency, water conservation and afforestation. Thus, ecotourism is an alternative means to promote and preserve the nature and culture for present as well as future generation.

Significance of Ecotourism

Ecotourism offers opportunities to the people in the backward and remote areas to take the economic benefits. The main goal of ecotourism is to strengthen the cause of conservation by providing informed wilderness experience to visitors and it enables the visitors to study and enjoy the forest, wildlife, people and their culture by providing additional employment opportunities for local communities.

As a result, resource dependency can be reduced to a larger extent. At the same time, it can be a powerful means for protecting and promoting the unique biodiversity along with landscapes and seascapes provided the principles of ecotourism are implemented. With the percolation effects of the tourist expenditures, local people play the role of crusaders for protection of flora and fauna.

Thus, ecotourism provides gainful employment to villagers in and around the protected areas like wildlife sanctuary and national park. The types of employment being generated included guides, porters,

conservation workers, small shopkeepers. The ecotourism policy is to develop a sustainable community-oriented and managed approach to enforce rules for the visitors, service providers and community members.

Objectives of Ecotourism

These are the following objectives for the management of protected natural areas through the implementation of ecotourism.

➢ To provide compatible and sustainable tourism

➢ To provide enlightened wilderness experience to the visitors and local inhabitants

➢ To impart nature education to different target groups such as children, teachers, bureaucrats, media persons, rural people and politicians who have influence in the policy-making decisions at local, state and national level.

➢ To provide park or sanctuary interpretation facilities to generate conservation awareness among the visitors by discovering wonders of nature and its intricate relationship; and by bringing about change in perception about one's own natural and cultural environment.

➢ To strengthen the staff and infrastructure for managing the ecotourism and interpretation programmes

➢ To Create employment opportunities for local people to cater to the needs of visitors in raising taxi, hotels, engagement in ret houses, lodges etc.

➢ To generate sufficient revenue and make the activity of eco tourism self-sustaining as far as possible.

➢ To Involve local people in recycling the revenue from tourism for improvement of resources and facilities in the villages by subsidizing alternate energy devices, improving educational and medical facilities.

Ecotourism is a form of tourism that involves visiting natural areas in the remote wilderness or urban environments. Honey (1999) expanded on the TIES definition by describing the seven characteristics of ecotourism. Ecotourism

> ➤ Involves travel to natural destinations
> ➤ Minimizes impact
> ➤ Builds environmental awareness
> ➤ Provides direct financial benefits for conservation
> ➤ Provides financial benefits and empowerment for local people
> ➤ Respects local culture
> ➤ Supports human rights and democratic movements

Principles of Ecotourism

Ecotourism is a way to generate funds for conservation and scientific research, protect fragile and pristine ecosystems, benefit rural communities, promote development in poor countries, enhance ecological and cultural sensitivity, instill environmental awareness and a social conscience in the travel industry, satisfy and educate the discriminating tourist, and build world peace and harmony. These are the following principles of ecotourism.

> ➤ Minimization of the negative impacts on nature and culture that largely damage the serenity and tranquility of tourism destinations.

> ➤ Dissemination of Education to the travelers on the importance of biodiversity conservation

> ➤ Promotion of responsible business in cooperation with local authorities and people to meet local needs and deliver conservation benefits

> ➤ Generation of direct revenues to the conservation and management of natural and protected areas

> ➤ Maximization of economic benefits for the host community, local business and communities, particularly people living in adjacent to natural and protected areas.

> ➤ Development of infrastructure in harmony with the environment that can minimize the use of fossil fuels and can help conserve local plants and wildlife by blending with natural and cultural environment

> ➤ Contribution to the conservation of biodiversity

➢ Provision of the sustainable ways of maintaining the wellbeing of local people.

➢ Establishment interpretation for enhancing experience and learning

➢ Responsible action on the part of tourist and the tourism industry.

➢ Requirement of the lowest possible consumption of non-renewable resources.

➢ Encouragement to small groups with small scale investment

➢ Provision for local participation, ownership and business opportunities particularly for rural people

➢ Conservation of biological diversity and cultural diversity through ecosystem protection

➢ Promotion of sustainable use of biodiversity by providing jobs to local populations

➢ Equal distribution of socio-economic benefits with local communities and indigenous peoples by seeking their informed consent and participation in the management of ecotourism enterprises

➢ Protection of unspoiled natural resources with minimal impact on the environment being a primary concern.

➢ Minimization of tourism's own environmental impact

➢ Reduction of waste and residue

➢ Preservation of local culture, flora and fauna being the main attractions

➢ Economic benefit from ecotourism often more than mass tourism

Table presents three different principles of ecotourism studied and contributed by Wight (1994), Lindberg and Hawkins, (1993) and NEAP, Australia.

Wight (1994)	The Ecotourism Society (Lindberg and Hawkins, 1993)	National Ecotourism Accreditation Programme (NEAP) Australia Eligibility Principles
It should not degrade the resource and should be developed in an environmentally sound manner	Prepare travelers to minimize their negative impacts while visiting sensitive environments and cultures before departures	Focuses on personally experiencing natural areas in ways that lead to greater understanding and appreciation
It should provide long-term benefits to the resource, to the local community and industry	Prepare travelers for each encounter with local cultures and with native animals and plants	Integrates opportunities to understand natural areas into each experience
It should provide first-hand, participatory and enlightening experiences	Minimize visitor impacts on the environment by offering literature, briefings, leading by example, and taking correcting actions	Represents best practice for ecologically sustainable tourism
It should involve education among all parties: local, communities, government, n o n - g o v e r n m e n t organizations, industry and tourists (before during and after the trip.	Minimize travelers impacts on cultures by offering literature, briefings, leading by example, and taking corrective actions.	Positively contributes to the ongoing conservation of natural areas.
It should encourage all-party recognition of the intrinsic values of the resource.	Use adequate leadership, and maintain small enough groups to ensure minimum group impact on destinations. Avoid areas that are under-managed and over-visited.	Provides constructive ongoing contributions to local communities.
It should involve acceptance of the resource in its own terms, and in recognition of its limits, which involves supply-oriented management.	Ensure managers, staff and contact employees know and participate in all aspects of company policy to prevent impacts on the environment and local cultures.	Is sensitive to, interprets and involves different cultures particularly indigenous cultures.

It should promote understanding and involve partnerships between many players, which could involve government organizations, industry, scientists and locals(both before and during operations)	Give managers, staff and contact employees access to programs that will upgrade their ability to communicate with and manage clients in sensitive natural and cultural settings.	Consistently meets clients expectations
It should promote moral and ethical responsibilities and behavior towards the natural and cultural environment by all players	Be a contributor to the conservation of the region being visited	Marketing is accurate and leads to realistic expectations
	Provide competitive, local employment in all aspects of business operations	
	Off-site-sensitive accommodations that are not wasteful of local resources or destructive to the environment, which provide ample opportunity for learning about the environment and sensitive interchange with local communities.	

Ecotourism Principles

Source: David B.Weaver (ed.), The Encyclopedia of Ecotourism, CABI Publishing, Wallingford.

Typology of Eco-Tourists

Iso-Ahola (1982) suggested that travel motivation is purely psychological and not sociological in nature. He argued that people travel for basically two reasons: to seek intrinsic rewards (novelty) and to escape their everyday environments (escape). Both the objectives can be applicable to those tourists who wish to travel to natural environment to experience the endogenous culture & heritage and undisturbed & uncontaminated environment. It includes the taste of authentic local cuisine, the experience of local fairs and festivals, the understanding of family relationship, marriage system, agriculture, horticulture, fishing, floriculture, etc and other social practices. It is the ecotourism that can only provide novelty experience as advocated by Iso-Ahola. Similarly, Escaping from the humdrum and hustle & bustle of fast urban life to a calm and quiet place as suggested by Iso-Ahola has become

the order of the day. Urban higher and middle-class people with much disposable income spend vacation in the lap of nature as the cost of using the facilities and amenities at the ecotourism sites is high as compared to any form of commercial tourism.

MacCannell (1989) also considered the fundamental differences between types of travelers after examining the social structure of tourist space based on 'front' and 'back' regions. Front regions are those readily experienced by tourists. Places in the front region create regular host-guest interaction. On the other hand, back regions are meant for the preservation of host cultures for betterment of community and tourism industry.

These places are essentially non-tourism oriented in their function. Tourists in search of seeking authenticity sneak into back regions in the hope of acquiring real day-to-day mannerisms of residents. The problem that has been brought to the knowledge of all by MacCannell is very crtical about the back regions or core areas that are very sensitive to be destroyed with the heavy inflow of tourists.

Having taken cue from these two well-defined purpose of tourists, some of the earliest studies on ecotourism attempted to classify eco-tourists on the basis of setting, experience and group dynamics. Kusler (1991) typified eco-tourists into three main groups.

- ➢ *Do-it-yourself Eco-tourist:* This particular category of eco-tourists tends to stay in a variety of accommodations and they are flexible to adjust with any natural settings. Regardless of their relative anonymity, the ability to have mobility to visit different ecotourism sites and willingness to have a high degree of flexibility are the two main characteristics of Do-it-yourself Eco-tourists.

- ➢ *Eco-tourists on Tours*: This type of eco-tourists wish to participate in the organized package tours with primary purpose of visiting exotic destinations like Amazon, Antarctica and. This group constitutes a small segment of total eco-tourists.

- ➢ *School Groups or Scientific Groups:* These groups of eco-tourists are generally involved in scientific research at a particular site for an extensive period of time. They have willingness and determination

to stay in any hostile environment as compared to other two groups of eco-tourists. For example, research scholars and students are sent to undertake study on an individual species or an ecosystem. Gulf of Mannar and Western Ghats in India are the two research sites for ecology students to study about the ecosystem and its complex functions.

On the other hand, **Lindberg (1991)** has considered three different aspects to classify the eco-tourists into four categories on the basis what tourists wish to experience from ecotourism, where they wish to travel, and how they wish to travel.

➢ *Hard-core nature tourists:* This type of eco-tourists is engaged in carrying out scientific research work as an individual research or a member of groups. The eco-tours are specifically designed for learning and acquiring new knowledge or for removing litters or wastes or similar purposes. For example,

➢ *Dedicated Nature Tourists: This group of eco-tourists wishes to take trips mainly to see protected areas to study and* understand local natural and cultural history. For example,

➢ *Mainstream Nature Tourists:* This category of eco-tourists is primarily interested for visiting the off-the-beaten-track ecotourism sites as an unusual trip to enjoy the nature and its beautiful scenery and landscape. For example, tourists wish to take a tour to the Amazan basin or to the Rwandan gorilla park.

➢ *Casual Nature Tourists:* This type of eco-tourists wishes to visit the beaten-track natural environment sites to experience nature incidentally as a part of a broader trip. The primary interest of casual nature tourists is to make tour in the natural environment without having any specific objective. But, when they come across certain incidences during the tour, they become happy and overjoyed.

Preferences & Satisfactions

A survey of US travelers has found that adventure and outdoor travelers are similar to the general population of travelers with respect to income, number of wage earners, education, occupation, household

size and region of origin. It may therefore be preference and motivation features that mainly differentiate eco-tourists from other. Ecotourism research has found that eco-tourists prefer more than the conventional hotel/motel options or camping. They desire more rustic, intimate, adventure-type roofed accommodations (such as, bed breakfasts, cabins, lodges, inns). Blamey and Hatch (1998) suggested the following four criteria for classification of nature-based visitors on the basis of their learning preferences.

- ➢ Seeing and observing animals, plants, landscapes
- ➢ Being provided with information about the biology/ ecology of species
- ➢ Cultural and /or historical aspects of the area
- ➢ Information about geology/landscapes

Satisfaction is strongly related to meeting visitor expectations, which are largely built on destination image. Images are partly connected with the landscape and partly with many other elements of the experience. Important services appear to be those that are related to learning and cultures, guides and interpretative education programmes. Knowledgeable guides and good education programmes or interpretive materials are critical. However, Blamey and Hatch, (1998) suggested that nature-based visitors can be distinguished by taking the following elements that determine the level of satisfaction with aspects of nature-based tours

- ➢ Information about the natural environment (plants, animals, geology, etc)
- ➢ Overall size of tour(numbers of participants)
- ➢ Number of guides on tour
- ➢ Value for money
- ➢ Time spent on sites
- ➢ Quality of site
- ➢ Friendliness/helpfulness of staff
- ➢ Food
- ➢ Measures to minimize environmental impacts of tours
- ➢ The whole tour

Table illustrates the varied activities that both experienced and general interest eco-tourists wish to take part and the customization of package elements for the eco-tourists by the eco-tour operators.

Experienced Eco-tourists	General Interest Eco-tourists	Travel Trade
Wilderness settings	Causal walking	Wilderness setting
Wildlife viewing	Wildlife viewing	Guides
Hiking/ trekking	Learn about other cultures	Outdoor activities
Visit national park/ other protected area	Visit national park/other proected areas	All Inclusive packages
Rafting/canoeing/ kayaking on river/lake	Wilderness setting	Parks/protected areas
Casual walking	Hiking/ trekking	Interpretive/educational programmes
Learn about other cultures	The importance of guides	Cultural experiences
Participate in physically challenging programmes	Interpretive education programmes	Communicate in client's language
The importance of guides	Cycling	
Interpretative education programmes	Participating in physically challenging programmes	

Ecotourism Activities and Services

Source: David B.Weaver (ed.), The Encyclopedia of Ecotourism, CABI Publishing, Wallingford.

Special Characteristics of Eco-Tourists

Eagles and Higgins (1998) estimated from anecdotal sources that the USA, the UK, Germany, Canada, France, Australia, the Netherlands, Sweden, Austria, New Zealand, Norway and Denmark. In addition, Japan, Southern Europe and the newly industrialized Asian countries have emerged as the source markets for ecotourism and majority of the people of those countries have shifted their preferences from the beaten-track destinations to the off-the-beaten track destinations.

There is an important conceptual distinction between FIT and Group eco-tourists. Eagles (1992) examined types of motivation for group tour eco-tourists, including attractions (related to desired features/ attractions of the destination) and social factors. Motivations of group tour eco-tourists (Eagles, 1992) include the followings;

- ➤ Wilderness and undisturbed nature
- ➤ Lakes and Streams
- ➤ Being physically active
- ➤ Mountains
- ➤ National or provincial parks
- ➤ Experiencing new lifestyles
- ➤ Rural areas
- ➤ Oceanside
- ➤ Meet people with similar interests

Crossley and Lee, 1994) and (Wight, 1996) differentiate eco-tourists from more mass travelers on the criterion of motivations that include

- ➤ Un-crowded locations
- ➤ Remote and wilderness areas
- ➤ Learning about wildlife and nature
- ➤ Learning about natives and cultures
- ➤ Community benefits
- ➤ Viewing plants and animals
- ➤ Physical challenge

All activities such as snorkeling, scuba, white water rafting, horse-racing/riding, rick-climbing/mountaineering, national parks, aboriginal sites, bush walking, outback safari tours, whale watching, etc can be undertaken by both FIT and group eco-tourists.

Table presents three different types of ecotourism market and behaviour of buyers of ecotourism packages.

Impulse Markets	Active Market	Personalized Market
Characteristics Nature-based day trips away from main tourist destinations Domestic and International	Young-mid aged professionals Usually book in advance Mainly domestic	Older professionals Expecting more comfort International, overnight bookings prior to arrival
Motivations Getaway from masses, small group Relax, fun, enjoyment Nature-based tour Best possible experience Convenient transport, no planning Realistic brochure information	Enjoy nature and scenic wonder Challenge and achievement No high comfort expectations Clear, good pre-trip information Social interaction Spontaneously and flexibility to individual needs	Interaction with environment Education and learning Quality accommodation and food with local produce Details associated with scheduled/ organized tour at premium price
Satisfaction Determinants See/experience as advertised Relax, fun, enjoyment Hassel-free day with pickup and drop-off	Accomplishment more significant the better known the attractions Escape from daily stresses Enhanced by environmental knowledge Learn how to contribute to ecologically sustainability	Desire to see/learn about enviornemnt, local histry, sense of special experience Maximum enjoyment for time available.

Ecotourism Markers and Different behaviour of Buyers of Ecotourism Packages

Source: David B.Weaver (ed.), The Encyclopedia of Ecotourism, CABI Publishing, Wallingford.

Summary

Ecotourism is a responsible travel to enjoy the nature and understand the culture of host community. The new-age visitors are more interested and stimulated for travelling to exotic places for experiencing the vacation or holiday that would give them some opportunities to learn and enjoy the nature and its peculiar relationships. In the late 1980s, ecotourism, as a form of non-commercial and unconventional tourism and as an instrument for nature conservation and economic well-being of local people, was strongly advocated in the western countries. In the subsequent decades, ecotourism has been considered as a means for checking

the pollutions and contaminations of biodiversity. Eco-tourists are those who are largely conscious of nature conservation and are committed to contributing to the management of ecotourism sites as a responsible visitor. Ecotourism is largely taken as a key to sustainable tourism by adhering to the principles of recycling, water conservation, solid waste management, energy efficiency, use of local products and manpower, social justice, etc. However, there is a clear gap between what is being preached or what is being practiced. As a result, many ecotourism destinations in Africa have become unsustainable due to the mismatch between the practices and principles. Nevertheless, ecotourism has become a marketing gimmicks to woo the customers in the name of eco-hotel, eco-tour, eco-camping along with local cuisine prepared from the organic products.

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Lesson 2.3 - Western Views of Ecotourism

Learning Objectives

After reading this chapter, you should be able to

➢ Trace the root of western thoughts and views on ecotourism

➢ Understand the reasons for the arguments of western countries for ecotourism

➢ Distinguish various views on the meaning, operations and benefits of ecotourism

➢ Realize the importance for the sustainability of ecotourism

Ecotourism was conceived and popularized across the world with the initiative of the developed countries in order to sensitize the developing and third-world countries to be more responsible and careful towards saving biodiversity. It is a western thought and approach to provide learning and enjoyable environment in the nature and to educate the people about the complex relationships of nature. Ecotourism, as an approach or paradigm, got originated from the developed countries after experiencing environmental pollutions and ecological imbalances. The western countries took the lead role to evolve the ways to get rid of the menace of pollutions by introducing many best sustainable practices. One such approach was ecotourism that was viewed in the early 1980s as a practical remedy to conserve the ecology and environment and to discourage and distract the people or community or organizations engaged in destroying them. This chapter gives detailed descriptions of fundamental views of western thinkers on ecotourism planning and programming.

Ecotourism- An Environment Friendly Tourism

The very basic idea came to the notice of researchers in the area of tourism or other related areas was how to save the exploitive or

consumptive form of tourism. Most of the western views have largely narrowed down to the concept of responsible travel, conservation of nature and culture, community well-being, visitor satisfaction, wildlife conservation, etc. Nonetheless, the core principle of ecotourism is to generate income and employment for the local people so that their direct dependence on the forest produce can be minimized. Many countries have established the Ecotourism Society to guide the ecotourism promoters and to certify the ecotourism sites for their good conducts and achievements in the conservation of nature by promoting responsible ecotourism. By and large, western views have been accepted across the world to save the vulnerable ecosystem by combining all the stakeholders. The research within the area of ecotourism still appears to be at its infancy stage. The definitional perspective of the concept is lacking both in terms of scope and criteria used, as well as in aspects of its planning and operation of the principles.

Ecotourism definitions usually depend on three common concepts, such as natural-based, educational, and sustainable. The activities of ecotourism vary between passive to active participation. It also includes economic and social aspect of the concepts. Both benefits and costs exist while adopting the ecotourism practices at the ecologically sensitive places. On the other hand, imbalance occurs in the costs of promoting ecotourism. Fundamentally, ecotourism could merit wider credibility, but the different actors involved should avoid over marketing and control the overuse of its products by consumers.

Western Thoughts on Ecotourism

Many ideas and thoughts got consolidated for the formation of a term namely ecotourism in the late 1980s. Serious debates and discussions on the practical aspect of ecotourism changed the perceptions of ecologists, environmentalists and biologists to support the movement for combining the conservation of nature with eco-friendly tourism. Certainly right, ecotourism gained worldwide patronization owning to the deeper realization of its long-term benefits for sustainable development. The global ecological practices mandated the adoption of sustainable practices that would be possible with the harmony of man and nature and their direct interaction and mutual support.

Ecotourism is one of the alternative forms of tourism that promotes special interest travel for small segment of tourists. In the last two decades, ecotourism generates a large volume of demand and has become a common subject taught in social, biological and ecological sciences. According to Jaakson (1997) and Diamantis (1998a), the literature on ecotourism is divided into two broad schools of thought.

➢ Firstly, case-studies based on a particular location by highlighting the issues related to the negative impacts of ecotourism

➢ Secondly, the thematic studies explaining issues regarding planning and development with the help of methodology

In both the cases, there are a few concrete studies evaluating the definitional perspective of ecotourism. Most of the studies dwell on two major themes.

➢ Definitional frameworks of ecotourism
➢ Natural-based, sustainable and educational components of ecotourism

According to Laarman & Durst, 1987, a variety of terms are introduced to describe ecotourism as nature travel, nature-orientated tourism, nature tourism, nature–based tourism, sustainable tourism, alternative tourism and special interest tourism.

According to Wight, (1993b), ecotourism includes supply and demand factors. The supply factors include nature and resilience of resources, cultural or local community preferences and types of accommodation and t he demand factors includes types of activities and experiences, degree of interest in natural or cultural resources and degree of physical effort. In most of the cases, ecotourism does not meet the growing demand due to over marketing. It further explains that the suppliers of ecotourism services create an artificial hype of nature travel and they use "eco" before the name of resort or hotel to attract the growing ecotourism lovers.

According to Steward & Sekartjakrarini (1994), the definitional structure of ecotourism is based on two approaches

> ➢ Activity-based perspective
> ➢ Industry-based perspective

The activity-based perspectives give importance to the role of eco-tourists, their activities, value-based ecotourism, minimum impact and local culture elements and respect to the nature, wildlife and culture.

The industry-based perspectives include the supply characteristics of ecotourism as a tool for conservation and development based on the interrelationship between the local community and tourism.

According to Orams (1995) the majority of ecotourism definitions fall between the passive and the active position as far as the responsibility towards the ecotourism destinations is concerned. The active participation of eco-tourists mainly emphasizes on the actions of protecting the environment and the behavioral intentions of eco-tourists. The passive participation stresses on ecotourism development without enhancing the antagonistic impacts. According to Wall (1994), ecotourism has been defined by taking four major dimensions, such as evolution, the characteristics of destinations, the motivations of its participants and the organizational characteristics of ecotourism trip.

Critical Views on Ceballos-Lascurain's Ecotourism Definition

Even though the concept of eco-friendly travel or eco travel or eco development were used before the word 'ecotourism' coined by Ceballos-Lascurain in 1987, the definition of ecotourism was first given by Ceballos-Lascurain with the primary purpose of integrating tourism with nature. Thus, ecotourism was first defined as travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas. (Ceballos-Lascurain,1987).

This definition may be viewed in the light of experiential and educational factors of the protected natural areas. Ecotourism is a multi-dimensional philosophical concept with basic components of eco-development and it requires planning based on strict guidelines and regulations to ensure the sustainable operation. He compared the behavior

and motivation of mass tourists and eco-tourists over the natural-based utilization. Both types of tourists are interested for visiting natural areas. However, eco-tourists have active role and responsibility than the mass tourists, who are concerned over nature or ecology at the time of participating in water sports, trekking and biking. Moreover, eco-tourists have a non-consumptive use of wildlife and natural resources, through activities such as nature photography, botanical studies, and observing wildlife.

According to Ziffer (1989), ecotourism highlights the conservation, natural-based, economic and cultural objects. Ecotourism changes the perspectives of travel and pattern of visiting the natural environment as it natures the ethical view of the natural environment by consuming the least possible resources. She emphasized that ecotourism projects or sites need systematic and well-defined planning or a management approach to ensure balances of economic, social and environmental goals. She differed that nature tourism cannot be ecotourism and the former is more consumer-based and no ecologically sound. Further, she suggested that ecotourism requires the destination to establish a programme based on a multi-faced conservation and development approach.

The debate is very intense and widespread in most of ecotourism literature that dwells on conservation of ecology and socio-economic development through promotion of ecotourism. After all, ecotourism aims at providing economic benefits directly to the local people along with preservation of natural resources leading to conservation and development.

According to Boo (1990), ecotourism encompasses the natural and conservation components, but also the economic and educational elements. It is quite similar to the definition of Ceballos-Lascurain and Ziffer's conservation and development approach. Boo suggests that effective planning strategies are required for conservation of resources to meet the sustainable management of physical resources. Boo emphasized that benefits from ecotourism destinations largely depend on the scale of tourism, the country size and the interconnected parts of their economies. Thus, ecotourism can be an add-on attraction that needs visitors to extend the duration of stay.

Boo's definition may fall in the active position towards the high responsibility pole as suggested by Orams (1995). The active participation is determined by the characteristics of destination, the natural settings and characteristics of trip and the motivations of participants

According to Ziffer (1989), The eco-tourist visits relatively undeveloped areas in the spirit of appreciation, participation and sensitivity by practicing a non-consumptive use of wildlife and natural resources. All these activities tend to contribute to the visited area through labor or financial means aimed at directly benefiting the conservation of the site and the economic well-being of the local residents.

Landmark Definitions

According to Boo (1991), ecotourism is a nature tourism that contributes to conservation, through generating funds for protected areas, creating employment opportunities for local communities, and offering environmental education.

According to Forestry Tasmania (1994), Nature-based tourism that is focused on provision of learning opportunities while providing local and regional benefits, while demonstrating environmental, social, cultural, and economic sustainability.

According to Richardson (1993), Ecologically sustainable tourism in natural areas that interprets local environment and cultures, furthers the tourists' understanding of them, fosters conservation and adds to the well-being of the local people.

According to Australia Department of Tourism (1994), nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable. This definition recognizes that natural environment includes cultural components, and that ecologically sustainable involves an appropriate return to the local community and long-term conservation of the resource.

Accordint to Figgis (1993), travel to remote or natural areas which aims to enhance understanding and appreciation of natural environment and cultural heritage, avoiding damage or deterioration of the "environment and the experience for others.

According to Tickell (1994), travel to enjoy the world's amazing diversity of natural life and human culture without causing damage to either.

Boyd & Butler (1993 & 1996), responsible nature travel experience, that contributes to the conservation of the ecosystem while respecting the integrity of host communities and, where possible, ensuring that activities are complementary, or at least compatible, with existing resource- based uses present at the ecosystem.

They also explain that ecotourism is a form of tourism which fosters environmental principles, with an emphasis on visiting and observing natural areas.

According to Goodwin, (1996), low impact nature tourism contributes to the maintenance of species and habitats either directly through a contribution to conservation and/or indirectly by providing revenue to the local community sufficient for local people, and therefore protect, their wildlife heritage area as a source of income.

According to Lindberg & McKercher (1997), ecotourism is tourism and recreation that is both nature-based and sustainable.

The International Ecotourism Society (1991), responsible travel that conserves the environment and sustains the well-being of local people.

According to Forestry Tasmania (1994), the Forestry Tasmania mainly emphasized the 'nature-based, educational, social and sustainability components of ecotourism' by distinguishing between ecotourism and nature-based tourism.

According to Orams (1995) and Wall (1994), ecotourism is a sub-component of the nature-based tourism which has been generally defined as a form of tourism which takes place in the natural environment.

According to Richardson (1993), the conservation, natural-based, sustainable and social and cultural components need to be emphasized. It is a small-based form of tourism involving people searching for conservational and educational activities.

According to The Australia Department of Tourism (1994), the natural-based, ecological and cultural sustainability, education and interpretation, and provision of local and regional benefits are the primary objectives of ecotourism.

Critical Views of Ecotourism

According to Blamey (1995) and (1997), Blamey's dimensions of ecotourism include nature-based, environmentally educated, sustainably managed and distance/time. The Blamey's definition includes the appreciation/ interpretation as important components of ecotourism in the same way suggested by Ceballos-Lascurain. In terms of the eco-tourists characteristics, it highlighted the distance/time dimension of 40 km from home and one ecotourism trip during vacation time, hence clarifying the characteristics of both destination and trip.

Similarly, Figgis's definition comprises the natural-based, cultural and social components of the concept by drawing the comparison between ecological sustainable development and ecotourism. It mainly emphasized the destinations characteristics and was situated on the passive position in terms of the continuum due to the lack of focus on the other impacts of ecotourism, except those regarding the minimization of environmental impacts.

Tickell's definition raised the issue of natural-based, cultural and non-damaging or conservation components of the concept. The ecosystem vulnerability and ecotourism should be seen as a form of tourism to preserve the natural and cultural components. This definition is situated on the passive position of the continuum illustrating mainly the characteristics of the trip and destinations

Boyd's and Butler's definition emphasized mainly the natural-based, conservation, social components with an emphasis on the minimization of the impacts of ecotourism over existing resource uses in the destination. They claimed that ecotourism must be an environmentally and socially responsible form of tourism with the primary focus on the intrinsic attributes of the natural environment. Ecotourism should mainly enhance the economic and social benefits as a form of development. It is an active stance of the continuum, illustrating the characteristics of the

destination. It further includes the natural-based and the sustainability components of the concept. They emphasized on resource preservation of the destination area as it is explicitly relevant to the assessment and planning of ecotourism development. It is located in passive position of the continuum, highlighting mainly the characteristics of the destination.

Goodwin's (1996) definition suggested the natural-based, conservation, social and economic components of the concept. It is closely related to Boo's approach addressing more the role of conservation through economic development. He further distinguished between the concept of nature tourism with ecotourism in that the former concerns enjoyment of nature, whereas the latter contains a conservation flavour. This definition is situated in the active pole of the continuum containing the elements of the destination.

Lindberg's and McKercher's (1997) definition highlights the natural-based and sustainability components of ecotourism. Their definition is based on the distinction that the natural-based component is descriptive, as it highlights the setting of ecotourism, and the sustainability component is prescriptive as it indicates the people's opinions regarding the nature of the activity.This viewpoint is located at a central or passive position of the continuum, acknowledging both the characteristics of the destination and the trip. The Ecotourism Society's definition recognized the 'conservation and social aspects of ecotourism.

Ecotourism is responsible travel to natural areas that conserves the environment and improves the well-being of local people. It is about uniting conservation, communities and sustainable travel. This means that those who implement and participate in ecotourism activities should follow the ecotourism principles such as minimization of impact, building environmental and cultural awareness and respect for providing positive experiences for both visitors and hosts, for providing direct financial benefits for conservation and for providing financial benefits and empowerment for local people and rising sensitivity to host countries' political, environmental and social climate (www.ecotourism.org, 2010).

In comparing the definitions of ecotourism, the majority of the examined definitions are situated between a passive and more active stance, mainly describing the characteristics of the destination and the trip. There

are few definitions, which are based on the motivational characteristics of the consumers, and as such illustrate the lack of attention paid to the perspective attesting consumer-selected attributes and/or consequences.

Natural-Based Component

All the ecotourism definitions regardless of their stance (active or passive) included the natural-based component. The inclusion of the natural-based component in the definition of ecotourism in a number of cases has not been equated with the sustainability element, as the current efforts focus on the former rather than the latter to operationalise the concept. This emphasis creates certain limitations on the estimates of the size of the ecotourism market, all suggesting that the current estimates of the market size of ecotourism actually refer to the size of the nature tourism market. Here, the destinations of developing nations such as Central and Latin America, the Caribbean as well as Australia, New Zealand, and Antarctica claimed to be associated with the natural-based component of ecotourism activities.

Sustainable Ecotourism through Alternative Tourism

Ecotourism is one of the forms of alternative tourism. Butler (1991) and Wight (1993) advocated for alternatives to mass tourism in the form of environmentally sensitive small-scale. Mowforth and Munt (2003) advocated for alternative tourism and it can be an umbrella term covering a range of new forms of tourism in response to the perceived costs of mass tourism. It has been described by using varying terms including soft and educational tourism (Krippendorf, 1982), co-operative tourism (Farrell, 1986), appropriate tourism (Ritcher, 1987), responsible tourism (Wheller, 1991), special-interest tourism (Hall and Weiler, 1992) and ecotourism (Boo, 1990 and Ceballous-Lascurain, 1991) and pro-poor tourism (DFID, 1999).

Butler (1991) suggested that alternative tourism may just be its vanguard to open up new and potentially more sensitive destinations to the development of mass tourism. Kiss (2004) outlined the role of Community-Based Ecotourism (CBE) as a popular tool for biodiversity conservation. It is based on the principle that biodiversity must pay for itself by generating economic benefits particularly for local people.

Stem et al., (2003) described that ecotourism's appeal as conservation and development tool rests in its potential to provide local economic benefits while maintaining ecological resource integrity through low-impact and non-consumptive resource use.

Garrod (2003) underscored in the study that ecotourism is increasingly being advanced as a strategy to help address economic and social problems in local community as an appropriate and effective tool of environmental conservation. However, the full and effective participation of local community in planning and management of ecotourism is rarely a feature of ecotourism project. At best, ecotourism projects aim for the involvement of local people, and at worst, ecotourism projects can ignore the issue of local participation completely. Such projects frequently fail after a relatively short period of time.

Ballantine and Eagles (1994) suggested that eco-tourists could be defined on the basis of an intention to learn about nature, an intention to visit undisturbed areas and a commitment of at least 33 per cent of their time to the first two criterions.

Fennel (1998) defines that ecotourism is a sustainable form of nature resource based tourism that focuses primarily on experiencing and learning about nature and it is ethically managed to be low impact, non- consumptive and locally oriented (control, benefits and scale). It typically occurs in natural areas and should contribute to the conservation or preservation of such areas.

Dolnicar (2004) undertook a study on *segmentation approach* which is an innovative market-driven way to successfully implement sustainable tourism in a destination. The effort was made to find a segment of tourists or potential tourists interested in the unique natural beauty of the destination and these groups of tourists must have willingness to preserve it. These segments of tourists are also highly attractive in terms of high expenditures, long stays, high return rate and high recommendation rate. Thus, the author did not find out a few studies which systematically searched for *eco*-segments or sustainable tourist groups. This study describes the group of summer tourists in Austria who care about maintaining the natural environment.

According to Williams et al., (2001) the prospects of ecotourism represent an emerging and promising option for many mountainous locations. Mountain ecotourism may be conceived as a form of tourism that hybridizes readily with allied products such as cultural and adventure tourism. Mountain ecotourism development provides a useful option for helping to diversify mountain economies while sustaining the resiliency of local community and their citizens.

The *Quebec Declaration* implicitly acknowledges that ecotourism is not the only a manifestation of sustainable tourism but many scholars have described ecotourism is one of the manifestations of sustainable tourism. Ecotourism promotes alternative, nature, adventure, cultural tourism (Fennell, 1998) and mass tourism (Weaver, 2001).

Cater (2004) presented that the endorsement of ecotourism by the UN via the designation of International Year of Ecotourism (IYR) bears testament to the internalization of the concept. Thus, the theme of the World Tourism Day in 2002 was *Ecotourism: A Key to Sustainable Tourism Development*. Ecotourism can make a positive contribution towards sustainable development. It may be but a small pebble cast into the murky waters of unsustainable human activity. Its ripple effects have the potential to facilitate an understanding and appreciation of the complex inter-linkages and interdependences.

Wallace and Pierce (1996) explained as ecotourism is a travel to relatively undisturbed natural areas for study, enjoyment, or volunteer assistance. It is a travel that concerns itself with the flora, fauna, geology and ecosystems of an area, as well as the people (caretakers) who live nearby, their needs, their culture and their relationship to the land. They suggested that ecotourism can be a perfect form of sustainable tourism if it addresses six principles

- ➢ Minimization of negative impact to the environment and to local people

- ➢ Increasing awareness and understanding of an area's natural and cultural systems

- ➢ The subsequent involvement of visitors in issues affecting those systems

- ➢ Contribution to the conservation and management of legally protected and other natural areas, early and long term participation of local people in the decision-making process,

- ➢ Direct economic and other benefits to local people

- ➢ Provision for special opportunities for local people and nature tourism employees.

Summary

Ecotourism is no doubt a western concept and philosophy to spread the message about the preservation and conservation of natural beauty, wildlife, forest, indigenous people & culture and natural resources across the world. It was Ceballos-Lascurain who propounded the concept of ecotourism followed by a couple of dozen ecotourism thinkers and researchers have carried out empirical and path-breaking research work on ecotourism. The concept gained momentum in the early 1980s as a practical remedy to conserve the ecology and environment in collaboration with community. This chapter highlighted on the nature of ecotourism and different critical views of western tinkers of ecotourism including Ceballos-Lascurain's Ecotourism and popular ecotourism definitions. It further focused on ecotourism as a key to sustainable development and alternative form of promoting tourism for environment conservation.

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Lesson 2.4 - Ecotourism Activities & Impacts

Learning Objectives

After reading this chapter, you should be able to

➢ Know the importance of ecotourism for promoting activity-based tourism

➢ Explain the meaning and distinguish the activities

➢ Find the homogeneity and heterogeneity of ecotourism activities

➢ Find out the positive and negative impacts of ecotourism activities

➢ Recommend for the low-impact tourism through sustainable practices

Ecotourism is a part of nature-based tourism and most of the activities of ecotourism are carried out in the natural environment. Nature is the primary element of ecotourism along with the people and culture of the place. The unique features of ecotourism include the direct interactions of the visitors with nature and culture for the purpose of enjoying, studying and admiring the natural beauty and its typical interdependences. Ecotourism activities are broadly divided into soft or hard, low-impact or high-impact, participatory or non-participatory, exploitive or active or passive, consumptive or non consumptive, and voluntary or non-voluntary. The involvement of eco-tourists in the various activities largely generate direct demand for the rooms, vehicles, guides, foods, handicrafts, etc and indirect demand for supporting services to meet the direct demand of eco-tourists. In this process, visitor expenditures induce the income of the local people and in turn, the local economy gets strengthened. Apart from the positive impacts, there are negative social, economic, cultural, environmental and ecological impacts. However, ecotourism activities create both positive and negative impacts for which maximum precautionary measures should be taken to ensure sustainable ecotourism development. This chapter presents to you the various categories of ecotourism activities and their direct and indirect impacts.

Nature-based Tourism Vs Ecotourism

The demand for visiting and interacting with nature and its beautiful organisms has been increasing over the years in the name of nature-based tourism or ecotourism. Nature-based tourism is a broad term that comprises several activities in the nature, but ecotourism is the main form of nature-based tourism. Travelling to nature for the purpose of undertaking some outdoor recreational activities is the key interest of nature tourists. Whereas ecotourism is a nature travel to the undisturbed and uncontaminated natural places for viewing wildlife and plants as well as learning and enjoying the cultural attractions that generally lead to providing environmental conservation and community well-being. All nature tourism activities do not fall under the category of ecotourism activities while all ecotourism activities fall under the nature-based tourism. Many activities of nature-based tourism are unfriendly to the ecology and environment. Ecotourism is travel that is based not only on nature but also on the 'people' (caretakers) who live nearby, their needs, their culture and their relationships to the land.

For example, if the viewing of folk dance performance by an indigenous group is considered to be an activities under the ecotourism. Human activities include sport, art, music, painting, singing, etc.

The natural or non-human environment is the prime attraction for the tourists. The basis of the attraction for the tourists is an inherent appreciations or educational interests in natural environment. In this backdrop, ecotourism incorporates such related activities as bird watching, nature observation, hiking and bushwalking, nature photography, outdoor education, stargazing and whale watching. These are activities are non-consumptive in nature. Whereas diving, snorkeling and scuba-diving are some of the consumptive activities. Nevertheless, trekking and wildlife safaris are some the hybrid forms of adventure tourism. Finally, ecotourism is considered as a subset of nature-based tourism.

Types of Ecotourism

Ecotourism is a form of alternative tourism which mostly attracts nature and wildlife lovers from the urban, industrial and city places. Mostly the industrialized and developed countries have earmarked special

budgetary and plan financial package for ecotourism projects. People of those industrialized countries are more motivated to visit the ecotourism places as the life in big cities becomes restless and stressful. There can be several types such as soft or hard, consumptive or non-consumptive, natural and unnatural and exploitive, passive and active for of ecotourism. You may find description of the types of ecotourism and their special features as given below.

Soft Vs Hard form of Ecotourism

Laarman and Durst (1987) have classified the ecotourism into hard and soft form of tourism by taking the level of interest and experience into consideration. Ecotourism is classified as hard and soft on the basis of the risk, strain, time and cost factor. The level of dedication and commitment of the eco-tourists to learn and acquire experience is mostly given emphasis in the ecotourism activities. An eco-tourist needs to have physical stamina, rigour and zeal along with willingness, interest and efforts to enjoy the hard or soft form of ecotourism in the natural areas. It may be rainforest, savanna, desert, mountain, hills, valleys, etc, but eco-tourists are those who wish to take risk of taking pleasure of ecotourism activities without having life risk.

Thus, hard-core eco-tourists have a deep level of interest and enthusiasm to take part in the activities like trekking, jungle walking, river rafting, rock climbing, wildlife and bird watching, etc. Those hard-core eco-tourists are experienced and expertise in the activities that they are inclined to participate and enjoy the climate, nature and activities. In addition, these eco-tourists have conflicting motivations and behaviour with regard to taking physical challenge and comfort at the ecotourism sites. Some of them stay shorter duration and majority of them prefer to stay for longer duration with basic facilities within wilderness to gain authentic experience.

Conversely, soft-core eco-tourists are less serious and unprepared to take high risk of participation in the ecotourism activities. They are usually casual in their interest, behaviour and disposition, but whishes to experience the activities on a more superficial and highly mediated level. As such, the soft-core eco-tourists are those who are less prepared to compromise with the level of comfort and mostly reluctant to take physical

hardship for pleasure or experience. Other characteristics of hard-core eco-tourists reveal that they spend more time in seeing the objects in interpretation centre along with other tourists. As compared to hard-core eco-tourists, the soft-core eco-tourists spend shorter duration along with interest in multi-purpose and multi-dimensional travel experience.

Natural-Unnatural Ecotourism

As viewed by Miller and Kaae (1993), all types of tourism including ecotourism create negative impacts on the natural settings. Ecotourism is more close to the natural form of ecotourism than unnatural form. Nature is the key endowment for ecotourism to sustain and grow for the benefits of local people and conservation of ecology through the funds generated through tourist expenditures. Whatever may be the innovations in saving the nature from the impacts of trampling of tourists and howsoever may be management approaches to deal with the negative impacts, it is proven to be a fact that there must be negative impacts due to the interventions of humans in the nature. As a result, it becomes unnatural form of ecotourism when the activities are not governed by the guidelines. With this argument, ecotourism cannot be sustainable as long as unnatural activities are not stopped and discouraged. Some schools of thoughts have represented the good conducts of humans as they are living-organisms or faunal species. Obviously, the human behaviours would be natural as they are in the natural processes of sustaining and growing the life. Therefore, ecotourism activities may not cause any damage to the ecology or ecosystem as they are the integral part of biodiversity. The views may be considered as unrealistic given the transformation in the modern society today.

Exploitive- Passive & Active Form of Ecotourism

Ecotourism activities are exploitive, passive and active in nature. When the facilities and amenities are developed to facilitate the operations of ecotourism, it directly utilizes the natural resources for meeting the requirements of visitors. Ecotourism may be viewed as an exploitative form of tourism that does not impose any restrictions or conditions to refrain the tourist service providers from the exploitation of natural resources. For example, the daily requirement of water for maintaining swimming pool or garden may be increased when the capacity of room

increases and activities are also added more to lengthen the stay of visitors at the destinations. Thus, operations of ecotourism activities when they are detracted from taking care of the quality of natural environment are generally termed as unsustainable, irresponsible, illegal, exploitive and consumptive form of tourism. Modifying the cultural attributes of ecotourism destinations to suit to the visitors may be termed as commoditization. Many ecotourism sites world over have resorted to the act of commoditizing the local culture for the satisfactions of visitors. It explains that ecotourism is tourist oriented and tourist driven, but it is conservation oriented or economic driven. That means it is as good as the mass tourism.

Conversely, ecotourism operations actively contribute to the improvement of the natural environment and this may be termed as positive and responsible contributions of ecotourism to sustain the community well-being and conservation. It is a direct form of tourism as revenue from tourist expenditures percolate down to the different layers of local economy, thereby enabling people to buy the essential products to sustain the life. For example, ecotourism in Thenmallai in Kerala is a award-winning site in India for its maximum direct impacts on the local community and the significant improvement in the community well-being. Nonetheless, there are negative impacts of the active ecotourism activities apart from the positive impacts. For example, the community members take active part in the decision-making process not only for their own benefits but also for the equitable distribution of revenue. Similarly, eco-tour operators, eco-hotels and restaurants and souvenir shops with eco-products (handicrafts, incense sticks, bathing soap, face wash, jute or cotton bag, cane-made and wood-made products, etc) are the direct beneficiaries of ecotourism activities. When a thing is right, that tends to preserve the integrity, stability and beauty of the biotic community.

Between the exploitive and active form of ecotourism, more neutral and passive form of ecotourism is seen in most of the ecotourism sites. Operations that simply seek to minimize their impacts on the natural environment. Ecotourism activities have indirect impacts on the local economy and ecology of the place. Passive way of providing support to the ecotourism occurs at the ecotourism sites where community members regardless of their proximity to the sites or benefits, they extend cooperation for making the ecotourism projects community centric and sustainable

oriented. The role of ecotourism operators and agencies vested with the responsibility of managing ecotourism should introduce the practices from less desirable to more desirable states along this continuum.

Consumptive & Non-consumptive Tourism

The consumptive and non-consumptive form of ecotourism has long been identified for the outdoor recreational activities. Ecotourism cannot be called as consumptive as the mass tourism because the outdoor recreational activities can cause huge ecological damage. Similarly, we may call ecotourism as non-consumptive form of ecotourism as the activities may have relatively less impacts. However, non-consumptive nature of ecotourism is known for offering opportunities to experience and learn the nature, wildlife and culture. Conversely, consumptive form of ecotourism activities include horse riding, camel riding, fishing, angling, boating, trekking, rowing, canoeing, etc. For example bird watching and viewing animals from the watch tower may term as non-consumptive activities. Thus, ecotourism is certain proven to be more consumptive in practice than non-consumptive in principles and nature. These are the following ways that ecotourism is regarded as consumptive.

➢ The consumption fossil fuels for using vehicles or boats to see wildlife and the consumption of food and other products for authentic experience.

➢ The purchase of material souvenirs can cause at least some degree of resource consumption.

➢ The gradual soil erosion, trampling of vegetation, other disturbance and establishment of facilities for wildlife observation is an unintended resource consumption

➢ The keeping of checklists of wildlife species as a type of score-keeping or consumption; that is once a species has been sighted. It is checked off and is no longer sought and is thus consumed.

Ecotourism Activities

Activities that minimize negative impact on the land and its communities are the best way to travel. Sustainable tour packages are

offered on nearly every continent in the world. Traveling closer to home will leave a smaller footprint than traveling halfway around the world; however, it is possible to tour in an eco-responsible manner no matter where you go. Contrary to belief, ecotourism is not just for the flower children or granola crunchers, either. People oriented community based and park centered ecotourism is the hallmark of Periyar Tiger Reserve. These programmes are conducted by locals who are responsible for the surveillance. By taking tourists along they not only interpret the values of Periyar and enhance the visitor experience but also add to the protection of the park and earn a livelihood out of it. Hence, when a visitor joins in all these programmes is directly contributing to the cause of conservation and community welfare.

Nature Walk

Ecotourism is better known for its priority for providing opportunities of jungle or forest walk. The walks along the forest trails with local nature guide offer wonderful opportunities of watching a range of birds, butterflies and wildlife habitats in the natural environs. In addition, nature lovers also see the trees, plants, creepers, etc to understand the rich biodiversity and its impacts on human existence. It is soft form of ecotourism activities conducted for shorter distance about four to five kilometers with a maximum number of five to seven persons. It is a regulated tour with well-designed programmes that include interaction with indigenous tribes and their occupational activities. The chirping of birds and nature's whispers along with sighs enhance the experience of nature walk.

Trekking

One of the most preferred activities of ecotourism is the participation of eco-tourists in the trekking. Trekking is a soft form of organized adventure activity that is programmed to provide services like camping, food, escort-cum-guide, binoculars, reading materials, torch lights, etc. The primary purpose of participating in trekking or hiking is to see, enjoy and admire the grasslands, evergreen, deciduous and riverine forests, wildlife and tribal hamlets. Professional ecotourism operators conduct trekking tours with varied durations and most of the ecotourism are all-inclusive packages. Activities of trekking include photography,

watching wild animals, taking bath in the hot-sulpher spring water, camp fire, watching folk dance, taste of local cuisine, paintings, etc.

Jungle Patrolling

Participation in the tiger or other endangered animals is an activity in the jungle patrolling. This activity involves younger visitors with physical stamina, good health, experience and commitment to contribute to the conservation of plants, wildlife and cultural resources of ecotourism sites. This jungle patrolling programme is conducted in the fringes of eco-development zones of the animal reserve and the visitors are accompanied by armed forest guards. Visitors are given some short training and tips to be alert in the night patrolling in the jungle. This is quite popular in Africa and it has been introduced in Periyar Tiger Reserve in Kerala.

Hiking

What hiking can provide experience that trekking cannot provide to the visitors as an important adventure activity. Unlike trekking, participants or eco-tourists need to have experience in doing hiking in different altitudes. Generally, the altitudinal ranges between 300 to 1,500m with many ups and downs in the hiking trails. The hikers or trekkers can have clear views of lofty mountain peaks, valleys, terrains, watersheds, waterfalls, rivers, gorges, animals, plants and people. More interestingly, meeting the local people, for example Sherpa of Nepal or Darjeeling and interacting with them add to the pleasant experience of the participants. It is neither a soft or hard form of ecotourism, but it is not less than hard-core adventure activity. Participants undergo several rounds of physical fitness test before they are included in the all-inclusive package tour. The adventure or eco-tour operators conducted the tours with the help of local porters and guides to carry belongings of eco-tourists.

Jungle Camp

Temporary huts and camps are pitched against the backdrop the hill terrains or in the bank of rivers and lakes or in the midst of farm land to provide off-the-beaten-track experience to the eco-tourists. This is a secondary type of tented accommodation that provides bed, attached toilet and bathroom, mosquito net and solar light. Food is served them

in the room or in the dinning. The activities include walking leisurely, viewing animals and birds, visiting local villages, viewing the traditional cultivation, boating or rafting, etc. Local community members are hired to serve in the jungle camp and guests are served local cuisine to have authentic tastes of local food. Camps can be accessed by the forest trails or river. It does not require any training for staying or participating in the jungle camp.

Wilderness

Hard-core eco-tourists with much interest in nature and wildlife do take part in the wilderness activities. This is clearly non-conventional activity that requires special permission from the authority to trek through the protected areas to study, understand, appreciate and enjoy the natural environs and its settings. For those eco-tourists who wish to show interest in experiencing the wilderness must be prepared to adjust with minimal facilities and foods in the jungle. These eco-tourists are dedicated and committed to see the undisturbed, uncontaminated and unpolluted deep forests to satisfy one's mission in the life.

Wildlife Viewing

Wildlife is a prime attraction and motivation of those nature tourists who are prepared to undertake wildlife or safari tour to view animals in forest. Wildlife viewing is an important ecotourism activity in the protected areas. Watch towers are erected at the key locations to view the grazing of deer, peacocks and other herbivore animals. For example, seeing the wild elephants taking the salts is an amazing view and experience for the wildlife lovers. Many hard-core wildlife tourists spend longer duration to follow the trails of animals and understand their behaviours. Many wildlife enthusiasts and activists participate in the tiger, elephant, crocodile and rhinoceros census with the wildlife officials in the protected areas in India. Wildlife tourists stay in the Forest Rest House (FRH) and enjoy the wildlife viewing from the tower and learn the natural ecosystem.

Thematic Attraction

Apart from creating opportunities for nature walk, trekking, wildlife viewing, photographing, etc, thematic attraction for the children

in the interpretation centre or in the amusement park in the manipulation zone of the protected areas. Thematic attractions include the erected objects made of stone, cement, bricks, etc to present the relationship of organisms in different ecosystem. For example, aquarium presents a wide range of marine species to make the visitors educated about the marine ecosystem. Similarly, sculpture garden in Thenmalai in Kerala showcases the relationship between humans and nature.

Soft Adventure Activities

Soft adventure activities include kayaking, canoeing, rowing, sailing, horseback riding, river rafting, scuba diving, angling, rock climbing, ropeways, river crossing with rope or swinging bridge, searching for wild orchids, etc. These activities offer more of fun and frolic than studying. Conversely, these activities have moderate impact on the ecosystems of lakes, rivers, soil, sea, etc. For example, angling or catching fish in the Kabini River in Karnataka.

Impacts of Ecotourism Activities

Ecotourism is an offspring of nature-based tourism with defined objectives of practicing sustainable development. Needless to say much of about the benefits of ecotourism as it is one the best means of managing the natural resources for the present and future generation. After examining all pros and cons of ecotourism's impact in the natural environment, the world leaders unanimously agreed upon the implementation of ecotourism objectives and principles to regulate the operations of activities. All those ecotourism activities have positive impacts for which more ecotourism sites are being created to empower the local community members. Ecotourism have more positive impacts than the negative impacts from the perspectives of community, visitors, government and tourism service providers perspectives.

Ecotourism activities are organized and conducted with due care and attention to the original settings of environment. There are several positive impacts of ecotourism that you can clearly understand after reading the following positive impacts.

Eco-Tourists Largely Get

- Free natural environment to spend quality time

- A peaceful and quiet environment for mental rejuvenation and physical invigoration

- An opportunity to heal the pains from the mental humdrum of life in the crowded city

- An open interaction with nature to understand the complex interrelationships

- An authentic and novelty experience of tasting local food and drinks to remember forever

- Ample scope for interactions with community members to learn their socio-cultural system and practices

- A sense of pride in sharing knowledge and experience in preserving biodiversity

- An opportunity to feel privileged in helping the indigenous people

Eco-Tour Operators Get

- An opportunity to operate the tour for environmentally conscious visitors

- Like-minded clients to provide services without any conflicts

- Focused clients for conducting the eco-tour activities

- A sense of pride in injecting the tourism revenue into the local economy

- A sense of social commitment to the host community

- A sense of responsibility towards the preservation of ecology and environment

- A greater responsibility in extending cooperation in sustainable development

Government Gets

- An opportunity to bring in sustainable socio-economic changes of local community in the backward areas

- An alternative livelihood to refrain the local people from cutting down the trees, clearing forest for cultivation, killing animals for domestic and commercial purpose and indulging in the ethnic violence or rival clash

- An opportunity to create sustained income for skilled, semi-skilled and unskilled workers

- Maximum time to alleviate poverty through ecotourism as known for pro-poor

- Maximum impetus to promote the local handicrafts for persevering the indigenous art and artisans' occupation.

Community Members Get

- Maximum benefits in terms of income and employment

- Adequate opportunities to know the guest culture

- Privilege in using the facilities like road, primary health, education, etc developed for ecotourism projects

- Empowerment in terms of participating in the decision-making process

- Sense of pride in serving the guests being a host

In addition to the positive benefits of ecotourism, there are some negative impacts due to the promotion of ecotourism activities. The impacts may include trampling of soil due to trekking, hiking and walking, disturbance to the animal breeding, disturbance to the aquatic species and contamination of water in the river and lakes, clearance of forest for road, building and public amenities, rise in essential commodity price, commoditization of culture, demonstration effect, etc. Similarly, community members in the due course of promotion of ecotourism express their irritations and apathetic behaviour to the visitors. All these negative impacts are expected to occur at the ecotourism sites when the stakeholders do not sincerely behave as responsible partner. However, these negative impacts can be minimized when all these stakeholders strictly follow the principles of ecotourism. The UNWTO, the Pacific Asia Travel Association (PATA), the UNEP and other international and national apex bodies have produced soft and hard publicity materials for the visitors, service providers, community members, government and NGOs.

Notes

Summary

Ecotourism is a form nature travel that is based on several activities related to the nature, indigenous people & culture of the place. Eco-tourists or nature traveler are primarily interested for enjoying, studying and admiring the natural beauty and cultural heritage of primitive or rural people. Ecotourism activities can be as soft as walking, bird watching and painting the nature and can be as hard as trekking, rock climbing, river rafting, scuba diving, etc. Apart from this, this chapter describes other important forms of ecotourism like low-impact or high-impact, participatory or non-participatory, exploitive or active or passive, consumptive or non consumptive, and voluntary or non-voluntary forms of ecotourism activities.

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Lesson 2.5 - Ecotourism Guidelines

Learning Objectives

After reading this chapter, you should be able to

➢ Know the need for guidelines for effective management of ecotourism sites

➢ Be familiar with the Kyoto protocol and its consequences on ecotourism

➢ Be acquainted with the Oslo declarations on Ecotourism

➢ Be enlightened with the Quebec declarations

➢ Give your own view on the implementation of these declarations

Ecotourism is a western concept of protecting the nature while enjoying, studying and admiring the complex relationship. Even though the ecotourism is well appreciated and recognized as an important low-impact and non-consumptive form of tourism, the involvement of tourism service providers like resorts, hotels, tour operators, etc largely ignore the basic duties to be performed at the ecotourism sites due to their primary motive of profit maximization. In most cases, ecotourism has become a marketing gimmick to entice the high-end visitors to spend more money for the sake of enjoying the nature through various activities. As one of the principles of ecotourism is to encourage and motivate the visitors to buy organic and locally made products to help save the nature and culture of the locality.

With the growing attention towards the emerging ecotourism destinations by the visitors and service providers, many well-preserved and prize-winning ecotourism sites appear to face the increasing visitors footfalls. As a result, this has led to create several issues at the ecotourism sites and these issues have posed permanent threeat to the ecotourism sites. In order to create the worldwide attention and awareness towards the nature and natural scenic places of tourist interest, the UN took a lead role

in observing the International Year of Ecotourism and Mountaineering in 2002. Many conferences and summit at the national global level were organized to discuss and deliberate upon the sustainable ecotourism through certain declarations. Thus chapter will provide enough insights on the important of Kyoto protocol on climate change and its impacts, Quebec declarations and Oslo declarations on sustainable ecotourism.

Kyoto Protocol

The Kyoto Protocol sets the rules in the United Nations Framework Convention on Climate Change (UNFCCC or FCCC) and it aimed at fighting global warming. The UNFCCC is an international environmental treaty with the goal of achieving the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The main aim of the Protocol is to contain emissions of the main anthropogenic (i.e., human-emitted) greenhouse gases (GHGs) in ways that reflect underlying national differences in GHG emissions, wealth, and capacity to make the reductions. The ultimate objective of the convention is to ensure the stability in greenhouse gas concentrations in the atmosphere at such a level so that anthropogenic interference can be prevented. Carbon dioxide (CO_2) is the most important anthropogenic GHG. Stabilizing the concentration of CO_2 in the atmosphere would ultimately require the effective elimination of anthropogenic CO_2 emissions.

Under the Protocol, 37 countries have committed to take part in the reduction of four greenhouse gases (GHG) (carbon dioxide, methane, nitrous oxide & sulphur hexafluoride) and two groups of gases (hydro fluorocarbons & per fluorocarbons). The Intergovernmental Panel on Climate Change (IPCC) has set a range of projections for the future increase in global mean temperature.

Five Important Concepts of Kyoto Protocol

➢ Establishing commitments for the reduction of greenhouse gases based on the Berlin Mandate as a part of UNFCCC negotiations.

➢ Apart from reducing greenhouse gases in their respective countries, the absorption of these gases and utilize all mechanisms such as

joint implementation, the clean development mechanism and emissions trading, in order to be rewarded with credits.

➢ Establishing an adaptation fund minimizing impacts on developing countries

➢ Accounting, Reporting and Review to ensure the integrity of the Protocol.

➢ Establishing a Compliance Committee to enforce compliance with the commitments under the Protocol.

The flexibility mechanisms are International Emissions Trading (IET), the Clean Development Mechanism (CDM), and Joint Implementation (JI). The design of the European Union Emissions Trading Scheme (EU-ETS) implicitly allows for trade of national Kyoto obligations to occur between participating countries. The Green Investment Scheme (GIS), a mechanism in the framework of International Emissions Trading (IET), is designed to achieve greater flexibility in reaching the targets of the Kyoto Protocol while preserving environmental integrity of IET.

World Summit on Sustainable Development

The World Summit on Sustainable Development (WSSD) at the Sandton Convention Centre in Johannesburg, South Africa was held in 2002 with 21,340 participants from 191 governments, intergovernmental and non-governmental organizations, the private sector, civil society, academia and the scientific community. The WSSD also negotiated and adopted two main documents: the Plan of Implementation and the Johannesburg Declaration on Sustainable Development. Major areas of disagreement included: time bound targets for sanitation, renewable energy, energy subsidies, chemicals and health, natural resource degradation, biodiversity loss and fish stocks; Rio Principles 7 (common but differentiated responsibilities) and 15 (precautionary approach); governance; trade, finance and globalization; the Kyoto Protocol; and health and human rights.

The Plan of Implementation is designed as a framework for action to implement the commitments originally agreed at UNCED and includes eleven chapters: an introduction; poverty eradication; consumption and production; the natural resource base; health; small island developing States

(SIDS); Africa; other regional initiatives; means of implementation; and institutional framework. The Johannesburg Declaration outlines the path taken from UNCED to the WSSD, highlights present challenges, expresses a commitment to sustainable development, underscores the importance of multilateralism and emphasizes the need for implementation.

The preliminary report on WSSD is intended for donor agencies and civil society organizations with the objective of providing a critical perspective on the WSSD process. Throughout this process For example, Ford Foundation, provided periodic updates on WSSD processes with the specific intention of enhancing the impact of civil society organizations, particularly those representing poor and excluded constituencies worldwide. The successes of the official summit include decisions on a sanitation target, the recognition of the rights and roles of communities in natural resources management, the promotion of greater corporate responsibility and accountability, the reaffirmation of the principle of access, the incorporation of ethics into the implementation of Agenda 21, the acceptance of the need to delink economic growth from environmental degradation, and the launching of key initiatives and partnerships on sustainable development.

The Johannesburg Declaration on Sustainable Development, approved by governments on the last day of the official meeting, is based on the Plan of Implementation. The Plan of Implementation, negotiated over a period of eight months and eventually adopte principal sections. These are as follows;

➢ Poverty eradication
➢ Changing unsustainable patterns of consumption and production
➢ Protecting and managing the natural resource base of economic and social development
➢ Sustainable development in a globalizing world
➢ Health and sustainable development
➢ Sustainable development of small island developing states
➢ Sustainable development for Africa
➢ Other regional initiatives
➢ Means of implementation
➢ Institutional framework for sustainable development

Qubec Declaration 2002

The year 2002 was celebrated as the International Year of Ecotourism and Mountaineering by the United Nations. As a constituent organization of the UNs, the UNWTO observed the same year as the International Year of Ecotourism with a theme "Ecotourism- A key to sustainable development".

To discuss and deliberate on the problems, prospects and strategies for promoting sustainable ecotourism, about 3,000 delegates from 132 countries gathered in the World Ecotourism Summit between 19 and 22 May, 2002 in Quebec, Canada. The Summit was organized by the Tourisme Quebec and the Canadian Tourism jointly. There were representatives from the public, private and non-governmental sectors to contribute their valuable inputs and thoughts. The objective of the Summit was focused on the setting the preliminary agenda and a set of recommendations to bring in orderly operation of ecotourism activities.

The participants to the World Ecotourism Summit (WES) were fully aware of the limitations of this consultative process to incorporate the inputs of ecotourism stakeholders, including non-governmental organizations (NGOs) and local and indigenous communities. Finally, it was resolved to practice the Quebec declaration on Ecotourism and all the stakeholders are bound to be governed by the declarations for the sustainable development of the local areas in which ecotourism projects are implemented. The outcomes of the summit have produced certain declarations that all the participants

➢ Acknowledge tourism as a significant and complex social, economic and environmental phenomenon with its direct and indirect implications on these four aspects.

➢ Consider the growing interest of people in traveling to natural areas to study, enjoy, admire, experience, participate and disseminate richness of natural beauty and its ecosystem.

➢ Emphasize on the benefits of ecotourism like improvement of economic well-being, conservation of nature and culture and sensitization of nature travelers, thus making the functioning of the overall tourism industry more sustainable.

➢ Recognize the preservation of cultural diversities like traditional knowledge, uses and practices of local communities associated with natural areas over the centuries.

➢ Reiterate the funding for the conservation and management of biodiversity and culturally rich protected areas.

➢ Recognize the importance of sustainable tourism as a leading source of revenue for protected areas.

➢ Recognize the opportunity for genuine socio-economic development in protected areas as the home to rural people often living in poverty, malnourishment, lack of primary health care, primary education, communication system, and basic facilities.

➢ Affirm for promotion of ecotourism along with other forms of tourism for gainful economic opportunity and careful use of natural and cultural resources for future generations if managed in a sustainable manner.

➢ Emphasize the prevention of the deterioration of natural landscapes, threats to wildlife and biodiversity, poor water quality, poverty, displacement of indigenous and local communities, and the erosion of cultural traditions when the natural and rural areas planned, developed and managed systematically.

➢ Acknowledge the significant contributions of ecotourism for extending recognition and respect to the land rights of indigenous and local communities, including their protected, sensitive and sacred sites.

➢ Stress to achieve equitable social, economic and environmental benefits from the benefits of ecotourism and other forms of tourism in natural areas in order to minimize or avoid potential negative impacts through participative planning mechanisms.

➢ Note that small and micro businesses working in a competitive environment and meeting social and environmental objectives do not provide suitable financial and marketing support for this specialized new market.

(a) In order to overcome the practical difficulties, market research is essentially required to indentifying the problems in the prevailing issues of the operation of ecotourism ventures at the micro level.

(b) In order to make ecotourism as a tool for sustainable development, specialized credit instruments, grants for external costs, incentives for the use of renewable energy and innovative technical solutions.

(c) In order to increase capacities of the people working in the ecotourism ventures, training programmes are essentially important for increasing skills and changing the attitudes.

In light of the above, the participants of the Summit produced a series of recommendations to governments, the private sector, non-governmental organizations, community-based associations, academic and research institutions, inter-governmental organizations, international financial institutions, development assistance agencies, and indigenous and local communities.

Oslo Declaration 2007

The Oslo Declarations of Ecotourism have furthered the efforts of private and public organizations at the international and national level to reinforce the commitments towards the practices of principles of sustainable tourism at the ecotourism sites. The Global Ecotourism Conference or GEC07 was jointly organized by the International Ecotourism Society (TIES), Ecotourism Norway and the United Nations Environment Programme (UNEP). The Conference could witness the overwhelming presence of 450 delegates from as many as 70 countries. being an organizer of the GEC07, the TIES put forward several recommendations to further reinforce the global ecotourism community's commitment to improving sustainable practices.

The Quebec Declarations spelt out the potential and challenges of ecotourism in contributing to sustainable development, and made recommendations to governments, the private sector, NGOs, international agencies and local and Indigenous communities. The role of TIES has been re-emphasized to educate and positively influence tourists, tourism

professionals and the industry at large through continuous dissemination of information, soft and hard copies of ecotourism principles and practices, current trends of ecotourism and adoption of sustainable tourism practices. Further, the TIES is committed to promoting and assisting new and existing national and regional ecotourism associations for the development of ecotourism networks worldwide. This efforts will channel the resources to move to the most needed countries where there are huge potentials of ecotourism.

Objectives of GEC07

The main objective was to assess the achievements and challenges in the field of ecotourism between 2002 and 2007. The objectives of GEC07 are framed

- ➢ To bring together national and regional ecotourism associations and ecotourism professionals and practitioners from around the world; and

- ➢ To build commitment to policies and actions to strengthen the unique contribution of ecotourism to conservation and sustainable development.

Recommendations from GEC07

These are the following four broad recommendations of the members of the conference for best sustainable practices for ecotourism activities.

- ➢ Recognize the valuable role that ecotourism plays in local sustainable development

- ➢ Maximize the potential of well-managed ecotourism as a key economic force for the conservation of tangible and intangible natural and cultural heritage.

- ➢ Support the viability and performance of ecotourism enterprises and activities through effective marketing, education and training.

- ➢ Address some of the critical issues facing ecotourism in strengthening its sustainability

The first recommendation highlights on the valuable role of ecotourism is making local sustainable development. As such, ecotourism sites are situated in the rural and remote areas. Those areas are by and large affected by malnourishment, poverty, unemployment, etc and ecotourism can act as a savior of those people who are deprived of basic facilities. The revenue can further increase the buying power and increase the scope for nature conservation. Efforts need to be taken to encourage for the sound business practices and provide easy accessibility to market areas if the pattern of business is economically sustainable. Local and Indigenous communities should be allowed to take the front sheet in the planning, decision-making, benefits, etc as like other stakeholders at the ecotourism sites. The first recommendation has suggested for some actions to be taken to make ecotourism more sustainable. These are the following actions given below;

➢ To develop strategies to engage and empower local and Indigenous communities in planning, decision making and enterprise ownership for the sustainable management of tourism through stronger cross-sectoral partnerships.

➢ To ensure for more benefits available to poor people through employment policies, the local supply chain, assistance with enterprise formation, and support for local services and infrastructure.

➢ To stimulate sustainable farming and livestock practices to support mutual economic advantage by encouraging creative links between ecotourism and other forms of innovative land use, such as sustainable agriculture and agro-forestry.

➢ To encourage for product innovation & development and fair trade through strengthening links with the arts, handicrafts, and local and Indigenous heritage, and integrate the principles of fair trade into the working definition of ecotourism and operational guidelines.

➢ To promote sustainable partnerships between private and public sectors to address the role of tourism as a development tool, and the need for international organizations, governments and development agencies to support natural and cultural heritage sites so that they can meet the challenge from an increasing growth in tourism worldwide.

The second recommendation has dwelled on the potential of ecotourism in providing financial support for the conservation of natural and cultural heritage. The core resources for ecotourism to be a finest piece of nature attractions include landscapes, scenic beauty, valleys, meadows, wildlife, forest, indigenous people and their culture, etc. When these resources are transformed into the attractions that bring the visitors and generate revenue for the economic well-being and support for conservation of natural and cultural heritage, the positive impacts of ecotourism get optimized and the negative impacts get minimized. These are the following suggested actions to be undertaken for making ecotourism a powerful economic force for conservation of natural and heritage conservation.

- To strengthen the knowledge, skills and resources of protected area authorities in developing and managing ecotourism, in order to help deliver benefits to local and Indigenous communities, raise visitors' awareness of conservation issues, and encourage sustainable financial contribution to conservation.

- To strengthen research and monitoring programs for coastal areas and oceans, recognizing their special needs owing to their sensitive habitats, scarce resources, popularity for tourism, and the changing pressures on their communities.

- To promote innovative approaches and mechanisms of using ecotourism to finance conservation initiatives and research projects monitoring the impacts on wildlife, and to support socially, culturally and environmentally sustainable development of destinations.

- To engage local communities and utilize local design forms and materials to build ecotourism facilities in total harmony with their surroundings both aesthetically and culturally, leaving minimal footprints, and combining the forces of creativity and new environmental technology with sustainable economic development strategies.

- To increase efforts to implement the Convention on Biological Diversity (CBD) Guidelines on Biodiversity and Tourism Development globally, by addressing sensitively the direct interaction between visitors, local inhabitants and wildlife, and by seeking a net gain to conservation.

The third recommendation of GEC07 emphasized on ethical marketing, education and training to support the feasibility of ecotourism enterprises and activities and enhance their capabilities to perform more effectively. It is certainly a fact that ecotourism business is very sensitive, vulnerable and fragile as its interaction with the environment is extremely more. Obviously, the micro or small enterprises engaged in providing tourism services at the remote and backward places do not have requisite knowledgeable about the trends of ecotourism markets and professional way of handling the visitors. They are not even experienced in managing financial dimensions of their small business. Keeping the fundamental difficulty of small entrepreneurs in handling some key aspects, they should be motivated and encouraged to help each other for enhancing capacity building. The recommendation came out with the following action plans that should be implemented.

➢ To increase access to practical and high quality training and education in ecotourism, whether delivered locally or remotely, to provide individuals and businesses with fair opportunities to enhance key business skills and sustainable business management performance.

➢ To make up-to-date information and research available about ecotourism markets, and strengthen access to them through the most effective channels, including websites, online forums and groups, mailing lists, web media, and in more remote areas, radio broadcasting.

➢ To establish sound environmental and cultural interpretation as a key component of high quality, authentic ecotourism by increasing innovation and funding for education centers and training programs, whose effectiveness should be assessed based on visitor numbers and desired experience.

➢ To cooperate with the media and utilize its role as an effective educational tool for promoting accurate and informative reporting of ecotourism, avoiding green-washing, raising the profile of the sector, and encouraging adherence to the principles of ecotourism.

➢ To strengthen local, national and regional ecotourism associations, and their links to TIES, in order to create an even stronger network that will serve as the nucleus of the global ecotourism community.

The last or fourth recommendation of GEC07 has laid emphasis on addressing the critical issues that the authorities of ecotourism sites need to look into serious for strengthening its scope for more sustainability. When most of the ecotourism definitions defined by the great researchers and institutions about its maximum positive benefits on the local community and the environment, it is obviously important to ensure the implementation of principles of ecotourism and become a role model for others to practice with sincerely and devotion. The current trends of ecotourism and the new opportunities of income and employment creation through ecotourism have appeared to pose challenges to the governments and ecotourism enterprises. In this backdrop, the conference has suggested for taking the following actions plans to help address the critical issues to strengthen the sustainability aspect of ecotourism.

➢ To promote adherence to recognized, linked and audited certification schemes and industry guidelines that help enhance environmental management, assist in minimal impact operations, protect cultural sites and intangible culture, and provide for land management strategies.

➢ To harness new trends towards corporate social and environmental responsibility by making business measurable according to approved standards that support and empower local and Indigenous communities, increase conservation efforts, and minimize ecological footprints.

➢ To actively address and combat tourism's impact on climate change by encouraging adapted travel patterns (e.g. increase length of stay per trip), promoting more energy-efficient, alternative or non-motorized transport options, utilizing reduced and zero-emission operation technologies, and increasing participation in reliable high-quality carbon offsetting schemes.

➢ To promote adherence to sustainability principles in other parts of the tourism industry by enhancing ecotourism's role in changing the attitudes and practices of the mainstream tourism sector, and encouraging synergetic efforts to positively influence tourism stakeholders.

➢ To encourage the ecotourism industry to operate with integrity to protect and promote tangible and intangible cultural heritage

and living cultures, and to preserve and celebrate the multitude of unique cultural, social, religious and spiritual elements of local and Indigenous communities around the world.

Summary

Ecotourism is an approach for protecting the nature while providing the scope for enjoying, studying and admiring the nature and culture in the undisturbed and uncontaminated places.. Even though ecotourism a low-impact and non-consumptive form of tourism, the tourism service providers tend to break the rules for over satisfying the clients and profit maximization. Ecotourism is a marketing gimmick to make the visitors spend more on ecotourism activities and revenue generated from ecotourism projects does not percolate to the local community. Thus, UNs and UNWTO have taken several steps in convening the global leaders from different areas to find the lasting solutions for sustainable ecotourism. This chapter has presented the landmark rules and regulations for sustainable tourism development by explaining about the significance of World Summit on Sustainable Development, Quebec and Oslo declarations, the GEC07 convention and its recommendations.

Self Assessment Questions

1. Discuss the evolution, meaning and characteristics of mass tourism.

2. Explain different types of mass tourism

3. How does mass tourism act as a polluter and find the remedial measures for regulating mass tourism impacts.

4. Explain the advantages and disadvantages of mass tourism.

5. Find the differences between the mass tourism and ecotourism.

6. Explain the concept of ecotourism and how is significant in conserving ecology and environment?

7. Explain the objectives and different types of eco-tourists.

8. What are the principles of ecotourism and how can these be implemented?

9. Which are the special characteristics of eco-tourists? and which are their preferences and satisfactions?

10. Is ecotourism an environment friendly tourism? discuss and give your comments.

11. Is ecotourism a western concept or philosophy? Discuss.

12. Compare and contrast the various definition of ecotourism.

13. Which are the nature-based components of ecotourism?

14. How can sustainable ecotourism be promoted as an alternative form of tourism for the preservation of ecology and environment?

15. Differentiate between nature-based tourism an ecotourism.

16. What are the types of ecotourism? Explain each of them with examples.

17. Differentiate passive and active form of ecotourism.

18. Differentiate consumptive and non-consumptive Tourism.

19. Explain the various ecotourism activities.

20. What are the guidelines of Kyoto protocol? Critically evaluate these guidelines

21. What are the outcomes of World summit on sustainable development?

22. Discuss about the Qubec declaration 2002 on Ecotourism.

23. Discuss about the Oslo declaration 2007 on Ecotourism.

24. What are the objectives of GEC07 and which are the recommendations of GEC07?

CASE STUDY

Jungle Lodges & Resorts In Karnataka – A True Symbol Of Eco-Lodges

Jungle Lodges and Resorts was India's first State Undertaking eco-lodge namely the Jungle Lodges and Resorts (JLR) in 1987. Mr. Gundu Rao, the then Tourism Minister of Karnataka   in 1978 brought the idea from the Royal Chitwan National Park in Nepal for creating eco-lodges in the national parks and wildlife sanctuaries in Karnataka. It has become a huge brand since Kabini Lodge was established in 1984. The objective of the Forest Department, the custodian and caretaker of the eco-lodges and

resorts is to provide outdoor tourism activities like trekking, camping, wildlife safari, hill climbing, sport fishing, river rafting and boating along with wildlife tourism. Conservation and development of wildlife and improvement of environment are two key activities that Jungle Lodges & Resorts have also become successful in maintaining a perfect harmony.

However, the root of the concept of eco-lodges near the Kabini River may be traced from the establishment of joint venture between Tiger Tops Jungle Lodge and Jungle Lodges & Resorts in 1980. Subsequently, the Government of Karnataka bought the share of Tiger Tops Jungle Lodges. The Kabini River Lodge was the first property of Jungle Lodges and Resorts Tiger Tops Jungle Lodge in 1984. It has become the premium property located in the Bandipur and Nagarhole National Parks. As many as 12 properties are located at several protected areas in Karnataka. Further, the JLR will add five more properties. This property received the Best Ecotourism Organization from Ministry of Tourism, Government of India for the year 1997-98. In 1995, the Tatler's Travel guide rated one of the top wildlife resorts in the world. The CNBC AWAAZ awarded the JLR for its best Eco-tourism practices in 2008. Over and above the other accolades, the State Government itself has adjudged JLR as the Best Performing State Public Sector Enterprise and received the Rathna Award" for the year 2009-10. Indian The ecotourism practices of The JLR have become an important benchmark for other ecotourism sits in India and the Indian Forest Service (IFS) Offices take training at the JLR. The Govt. of Andaman & Nicobar has signed MoU with the JLR for managing wildlife and ecotourism sites.

The growth of tourism around the protected area in Karnataka has become a cause of concern as energy efficiency and waste disposal in the ecotourism projects and partnership of private operators in conservation of forest and wildlife is a huge challenge before the Forest Department. It is learnt that the ecotourism in Karnataka has generated a turnover of around Rs. 100 crore with Jungle Lodges and Resorts alone contributing about Rs. 42 crore. With eco-tourism growing, the JLR reported an increase in the number of tourists during 2006-2007 to more than 62,000 from around 30,000 in the year 2001-2002. It constituted 25 per cent foreign visitors. It is however reported that a huge challenge before the Department of Forest is to clean the 'Use & Throw' of plastic articles. Wildlife watching is a key attraction at the places where JLR properties are located.

There is need for regulations to prevent ecotourism initiatives from affecting forests and wildlife.

Tourists staying at JLR properties mindlessly and carelessly throw plastic carry bags, plates, cups / tumblers, spoons, forks and straws. This has created the problem of pollution and contamination of water. The non-biodegradable and accumulation of plastic article largely block drains and porosity of the soil and disturbs soil microbial activity. Water gets contaminated due to clogging of drains and soil quality gets severely affected. Moreover, the underground plastic prevents percolation of rainwater naturally and also creates further obstruction of ground water recharge. It is a concern that wildlife consumes thin plastic along with foodstuffs that leads to the death.

On the other hand, the Jungle Lodges & Resorts Limited, Bangalore have been taking all necessary steps to ban carry bags (irrespective of thickness and size), plates, cups/tumblers, spoons, forks and straws. Biodegradable materials like paper, wood, pressed leaf, jute and cotton are to be used. As a result of which, employment and revenue to local inhabitants has increased.

Questions

- ➢ Trace the origin of the JLR in Karnataka.
- ➢ What are the key achievements of the JLR?
- ➢ Which are the ecotourism activities that the JLR is promoting since it was established in 1980?
- ➢ How it has become a benchmark eco-lodge in India?
- ➢ What are the negative impacts of tourism on ecosystem?
- ➢ How the JLR is regulating the impacts?

UNIT - III

Unit Structure

Lesson 3.1 - Alternative & Responsible Tourism

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the meaning and significance of responsible tourism

➢ Know the practices of responsible travel for sustainable ecotourism

➢ Explain the objectives and principles of responsible tourism

➢ Explain various approaches of responsible tourism

➢ Find the burning issues and challenges of responsible tourism

Ecotourism is a key form of sustainable tourism with primary purpose of promoting responsible travel in the natural scenic places endowed with wildlife, forests and indigenous people. Apart from giving novelty and activity-based experiences for guests, ecotourism as a subset of nature-based tourism gives importance on the eco-friendly accommodations, transportation, green energy, recycling, solid waste management, use of local products, sale of local crafts, eradication of poverty and unemployment, etc. In this regard, responsible tourism has been adopted as an approach to ensure the overwhelming cooperation and support of local communities for dynamic economic linkages.

Whether it is community or tourists or accommodation operators or tour operators or local souvenir shops, each ought to work as a responsible partner to preserve the pristine beauty of ecotourism sites by adhering to the ethical practices and each must be conscious of their duties and responsibilities in contributing to the local area development. Moreover, illegal trade practices, exploitation of women and children, leakages of revenue, etc are some of the prevailing issues that put black scars on the ecotourism and all of these socio-economic issues make ecotourism as a form of mass tourism. In this chapter, you will get enough descriptions on the responsible tourism as a mechanism for ecotourism to be sustainable for the present and as well as future.

Evolution of Responsible Tourism

The origin of the concept of responsible tourism may be traced back to the submission of the Brundtland Report namely "Our Common Future" in 1987. The need for responsible tourism practices was understood seriously when the negative impacts of mass tourism caused critical damages to the ecosystem around the tourism destination. The United Nations Conference on Environment and Development in 1992 recognized Tourism as a key catalyst for community development. It was a major landmark in introducing the responsible or ethical aspects in tourism development. Subsequently, a White Paper on "Development and Promotion of Tourism in South Africa" was presented in 1996 with special emphasis on the introduction and practices of responsible tourism. Furthermore, the Responsible Tourism Manual for South Africa (RTMSA) and the Responsible Tourism Guidelines were prepared to regulate the negative impacts of tourism in the country. Prior to the commencement of the World Summit on Sustainable Development in Johannesburg in 2002, the 'Cape Town Declaration' was prepared with the outcomes of the first conference on "Responsible Tourism" in Cape Town to intensify the efforts of changing the attitudes and behaviour of all the users of tourism resources at the destination.

As a global effort to review the progress in the responsible tourism practices, the Second International Conference on Responsible Tourism in Destinations in Kerala was organized in 2008. The conference highlighted the need for increased government and private sector commitment to responsible tourism implementation and identified the lack of good

measurement systems for tourism impact assessment. Thus, there is a fundamental need to discuss and deliberate to understand the implicit and explicit problems in addressing responsible tourism practices in a more strategic rather than moralistic manner.

One of the objectives is equity or intergenerational equality that needs to be achieved with the practice of principles of sustainable tourism. It is essential to have equitable distribution of benefits across the local people. This can only be possible only when the impacts of economic activity are taken into consideration. The following approach was evolved to promote responsible tourism.

➢ Tourism development should increase the quality of life for surrounding communities.
➢ It should create better business opportunities
➢ It should improve experiences for tourists

The core principle of responsible tourism is to practice these three approaches with the help and support of local community members and tourism service providers. It was a laudable attempt of the South African government to compile the responsible tourism guidelines. Ecotourism is not a philosophy rather a responsible form of tourism to ensure sustainable tourism development. However, ecotourism, responsible tourism and sustainable tourism must be used interchangeably as each one has its own specific principles for addressing the negative effects of social, cultural, economic, ecological and environmental impacts. The efforts are made to maximize positive effects of tourism development for all the beneficiaries.

Meaning &Definitions of Responsible Tourism

Responsible Tourism is about providing better holiday experiences for guests and good business opportunities to enjoy better quality of life through increased socio-economic benefits and improved natural resource management (Spenceley et al., 2002). Thus, the responsible tourism aims at

➢ Developing a competitive advantage of tourist destination for sustained inflow of tourists;

- ➢ Assessing the magnitude of tourism development taking the resource into consideration;

- ➢ Providing opportunities for the local community members to get connected with various multiplier economic linkages;

- ➢ Respecting the natural, economic, social and cultural diversity;

- ➢ Promoting the sale of local products; and

- ➢ Encouraging the sustainable use of local resources.

Need For Responsible Tourism

Of late, the world leaders unanimously responded to the call of the UN for introducing the responsible tourism practices and it has been recognized as a practical remedy for dealing with the threats of climate change, erratic behavior of climate, poverty, unemployment and inequalities. When tourism has become an important means for economic development, tourism companies and government have much greater role to assess and monitor the impacts of tourism on the natural, social and economic environments. Many profit-making tourism companies do have any obligations to the environment and they are doing anything for customer satisfaction. The present trend has led to an increased availability and demand for socially, environmentally and economically responsible products.

Corporate Social Responsibility

According to WTTC (2006), CSR is defined as the means of adopting open and transparent business practices on ethical values. It is an ethical and moral approach to manage the various aspects of operations of tourism development in order to reduce the negative impacts on the surrounding environment. CSR aims to provide maximum return or value to society at large along with shareholders. The society around the destinations needs to benefit from tourism development.

Moreover, social responsibility is an action of tourism industry towards the judicious and sustainable use of natural resources. It is a global effort to imbibe seriousness in the policy guidelines of tourism companies to give back maximum to the community development. Hotels, resorts, airlines, transport and travel companies need to contribute for the

socio-economic development along with the conservation of ecology and environment. According to WTTC, the principles of the CSR in tourism sector focuses on

> ➢ Overwhelming and direct community involvement in decision-making process;

> ➢ Building mutually beneficial partnerships with larger section of communities to retain tourism revenue;

> ➢ Promoting local industries and products for saving the destination from economic leakages;

> ➢ Providing employment opportunities for skilled, semi-skilled and unskilled workers;

> ➢ Initiating continuous dialogues with industry partners, investors with regard to policies and programmes;

> ➢ Eliminating corrupt practices by making the copy annual turnover and other welfare measures open and transparent;

> ➢ Taking all possible measures to comply with governmental regulations; and

> ➢ Giving much priority to compensate the loss that occurs to the ecology and environment

Surprisingly, tourism sector is passive to respond to the principles of corporate social responsibility (CSR). It is reported that the CSR is not practiced across the tourism service providers. Only two per cent of tourism business firms globally have adopted the responsible tourism or CSR initiatives such as the Global Compact.

Responsible Tourism Management

Responsible tourism management (RTM) is an attempt to apply all functional areas of management. It aims at providing maximum benefits to its local community, natural and business environment and itself. The RTM has been developed on the theme of corporate social responsibility (CSR). It is seen in the last two decades that tourism companies around the globe take business strategies to do more for the improvement of social and economic development along with making profit maximization.

As its objective to provide social and economic empowerment, direct tourism service providers like hotel, resort, airlines, tour operators, travel agents and transport agencies work for plantations. Promoting local products is one of the main objectives of responsible tourism that each tourism service provider is committed to achieving through the CSR values and principles. These objectives include employment creation, using local service providers and purchasing local products.

Forms of Alternative Tourism

Sustainable Tourism

The guidelines and management practices for sustainable tourism development are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established among these three dimensions to guarantee its long-term sustainability

Ethical Tourism

It is one of the forms of alternative tourism that makes tourists and tourism service providers to obey ethical and moral standards. It explains the equitable distribution in the tourism decision-making process. It brings about the changes of behaviour and attitudes of community members along with other stakeholders. It

➢ Provides for environmental conservation
➢ Includes meaningful community participation
➢ Is profitable and can sustain itself

Pro-Poor tourism:

It is an approach or means for providing income to poor people. The objective is to manage tourism resources for eradication of poverty. Tourism development is pro poor and pro community oriented that rural

artisans and other member of local community can benefit from the tourist expenditures. According to Goodwin & Francis, 2003, pro-poor tourism can improve the livelihoods of poor people in three main different ways.

- ➢ Improvement of economic conditions through employment and small micro-enterprises

- ➢ Provision of basic facilities and amenities such as roads, water, electricity, telecommunications, educational institutions and waste treatment

- ➢ Involvement of the people in decision-making process

Concepts of Responsible Tourism

The practices of global tourism have undergone several changes due to illegitimate practices by tourism service providers for the sake of maximizing profits. Many international destinations have faced serious socio-economic and cultural challenges like child exploitation, drug trafficking, sex trade, etc. In this context, the responsible tourism has been recognized worldwide as an approach to counter these unlawful and immoral practices around the destinations. The demand for local products by the visitors is increasing and the new age travelers want their travel to be less invasive and more beneficial to host community locals and environs. At the same time, they want to understand the culture and realities of the places

Responsible tourism is however based on ethics and human rights for protection of service workers and labour rights. It also protects women and children in tourism prostitution and campaigns against tourist trade in endangered species. Responsible tourism provides direct income and employment to local community members and it promotes the community-based tourism. For example, home stays, guest cottages, ethno-museums, and educational programmes are conducted under the community-based tourism to provide make use of local facilities and amenities. For instance, tea garden tour, spice garden visit, orchid garden visit, etc can be conducted with the direct help and cooperation of community members.

Other forms include volunteer-tourism, anti-poverty tourism and ecotourism. Fair trade tourism has an ethical framework to provide fair wages and long-term benefits for local people. The concept is increasingly

being promoted by activists, farmers, business people, and even rockers ensuring that the people whose land, natural resources, labor, knowledge, and culture are used for tourism activities actually benefit from tourism.

Objectives of Responsible Tourism

➢ To generate greater economic benefits for local people and enhances the well-being of host communities

➢ To improve working conditions and access to the industry

➢ To involve local people in decisions that affect their lives and life chances

➢ To make positive contributions to the conservation of natural and cultural heritage, to the maintenance of the world's diversity

➢ To provide more enjoyable experiences for tourists through more meaningful connections with local people, and a greater understanding of local cultural, social and environmental issues

➢ To minimize negative economic, environmental, and social impacts

➢ To foster harmony and relationships between tourists and hosts

➢ To build local pride and confidence

Responsible tourism simply means holidays that care about local communities & culture as well as wildlife conservation & the environment.

Stages of Executing Responsible Tourism Plan

➢ Critically review the responsible tourism guidelines that are enforceable.

➢ Cautiously select objectives and targets that are implementable.

➢ Regularly use Responsible Tourism handbook to refer the guidelines that are controllable.

➢ Passionately use clear benchmarks to measure the progress that are sustainable.

➢ Transparently work with national and international tourism, travel and hospitality associations, local people, NGOs and government that are social accountable.

➢ Effectively use responsible tourism as part of marketing strategy that must be socially oriented.

➢ Openly enlighten the stakeholders about the progress of responsible tourism practices that must be embedded in the vision and mission of companies.

Guidelines for Responsible Tourism

The principles of responsible tourism are based on the fulfillment of economic, social, or environmental objectives. Guidelines for the practice of responsible tourism need to be followed as per the management certification schemes of ISO 14001 or Green Globe 21.

Hiring the people locally for hotel and other tourism establishments and buying local products falls in the category of economic principles of responsible tourism. The economic guidelines for responsible tourism are as follows;

➢ To make critical assessment of economic impacts before taking policy decisions to develop tourism destination

➢ To give high priority for maximizing the percolation of local economic benefits by increasing multiple linkages and reducing unnecessary leakages

➢ To provide maximum freedom to local communities to enjoy the benefits of tourism development

➢ To assist with local marketing and tourism product development

➢ To take all possible measures to promote equitable business and practice of fair prices to the customers

Respecting local people and their various cultural practices can be termed as a way forward to create better host-guest relations. These are the following social guidelines for responsible tourism.

➢ To preserve social custom and tradition
➢ To educate local people by helping the primary schools
➢ To allow local community to share their traditional knowledge and experience in planning and decision making

- ➢ To reduce negative social impacts of tourism activities
- ➢ To respect social and cultural diversity
- ➢ To be more sensitive towards the host culture

The principle of environmental sustainability from responsible tourism perspectives emphasizes on protection of natural areas and efficient use of resources. For example, use of green technology to save the use of water and electricity is the way to protect out natural resources. These are the following environmental guidelines to be practiced for responsible tourism.

- ➢ To reduce carbon emission and greenhouse effects
- ➢ To encourage for recycling the wastes
- ➢ To use green energy or renewable energy
- ➢ To create green brigade to protect the forest
- ➢ To involve local school children in the afforesting or water harvesting programme
- ➢ To stop using plastic and other solid wastes
- ➢ To create awareness among local people to plant more trees

Triple Bottom Line (People, Planet & Profit)

The concept of Triple Bottom Line has been quite popular across the world for its emphasis on three Ps (people, Planet & Profit). The impacts of tourism development are assessed economically, socially and environmentally sustainable. The global tourism initiatives to introduce the Global Code of Ethics for Tourism and Tour Operators Initiative by the UNWTO reinforces the efforts towards the responsible tourism. The Tour Operators Initiative is supported by the United Nations Environment Programme (UNEP), the United Nations Educational, Scientific and Cultural Organisation (UNESCO) and the UNWTO.

Responsible environmental practice has other benefits by reducing energy and water bills, sewage treatment and waste disposal costs. Good environmental management also improves the quality of a tourism operation's surroundings, enhancing the overall experience for guests.

Alternative Tourism – Meaning & Importance

The Bruntland Report "Our Common Future" laid the basic foundation of providing alternative forms of tourism to the negative impacts mass tourism, causing irreparable damage to the ecosystem. Alternative tourism is one of the broadest concepts coined to help safeguard the fragile ecology and environment of destinations heading towards the mass tourism. Increasingly inflow of visitor arrivals to natural areas demands for facilities, amenities and connectivity for safe travel and comfortable stay. Alternative sustainable tourism development is advocated for economic use of all resources in such a way that it can fulfill economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes and biological diversity and life support systems.

Alternative Tourism is contrary to the nature of mass tourism. The former is concerned for ecological conservation and the later is destructive to the flora and fauna. Alternative tourism is seen in the practices of small or medium companies, created and operated by families, friends, and local communities. There is every possibility of more contact with the communities and there is a respect for the natural and cultural environment.

According to Smith & Eadington, (1992), alternative tourism gives emphasis to the contact and understanding between the local community and the tourist, as well as the natural environment. It is also a form of tourism that is in consistent with the natural, social and community values. Alternative tourism includes micro and small companies of local inhabitants' property Other characteristics of alternative tourism are smaller impacts in the natural and social environments, links with other sectors of local economy and retention of earnings in the region.

Scientific tourism, bio-tourism, academic tourism, farm and ranch tourism, nature or environmental tourism, ecotourism, community-based tourism, sustainable tourism, green tourism and village tourism are regarded as the firms of special interest tourism. One of the special interest tourism that is one of the alternative to ecotourism or nature-based tourism'. It is linked with gaining the economic advantages of tourism development and minimal environmental impact. Among the alternative

forms of tourism, sustainable ecotourism has played significant role in minimizing environmental impact, respecting host cultures, maximizing the benefits to local people, and maximizing tourist satisfaction across the world.

Thus, the alternative tourism is further classified into four categories: nature, culture, event and others. The nature tourism offers adventure activities and viewing of natural landscape and wildlife. Ecotourism promotes educative and conservative supporting elements which are alternative tourism with less negative impacts while providing positive economic effects to the society.

Summary

Ecotourism is a key form of promoting responsible travel in the natural scenic places gifted with wildlife, forests and indigenous people. Responsible tourism educates the judicious use of resources and emphasizes on green energy, recycling, solid waste management, use of local products, sale of local crafts, eradication of poverty and unemployment. Thus, responsible tourism is an approach for establishing sustainable relationship between local communities for dynamic economic linkages. Responsible tourism can stop illegal practices, women and children harassment, leakages of revenue, etc. This chapter has described on the meaning and evolution of the responsible tourism along with its objectives for sustainable tourism development. In addition, this chapter has also explained the significance of CSR and responsible tourism management along with steps ad guidelines for promoting responsible tourism. The most important part of the chapter is triple bottom line that describes about people, planet and profit along with a brief description on alternative tourism.

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Lesson 3.2 - Sustainable Ecotourism

Learning Objectives

After reading this chapter, you should be able to

➢ Define the meaning of sustainable tourism

➢ Explain the need for sustainable ecotourism

➢ Understand the principles of sustainable tourism

➢ Know the impacts of ecotourism development

➢ Find the various ways of making resource management

Ecotourism is a key to sustainable development. This is the primary purpose for which all the protected areas in India have embraced the model or approach of ecotourism to provide maximum support for conservation and community well-being. Promoting ecotourism without the objectives of preservation, visitor satisfaction and socio-economic improvement may untimely be unsustainable and unviable. Even the impacts of ecotourism would be much more than the mass tourism when it does not go by the principles of sustainable development. The perspectives of ecotourism underwent significant changes after the Quebec declarations in 2002. The world leaders unanimously accepted the declarations to permit ecotourism activities in the protected areas and other nature places to meet four major objectives, such as conservation of biodiversity, empowerment of community, responsible operations by tourism enterprises and enrichment of visitor experience.

In addition, activities of ecotourism are usually designed after making through examination of the capacities of physical, social and cultural resources. In this context, management approach is needed to make use of the resources without having any waste or recycling, solid waste management and green energy technology are some the mechanisms for ecotourism sites to sustain for the present as well as future. The use of prefix " sustainable" before ecotourism gives sufficient indication that

ecotourism is not free from all negative impacts of mass tourism. In this chapter, you will find the descriptions of sustainable tourism, objectives and principles of sustainable ecotourism, management ecotourism development, resource management and socio-economic development.

Evolution of the Concept of Sustainable Development

The evolution of the concept of sustainable tourism may be traced back to the literature before it was acknowledged as a principle or philosophy by the governments. hunting and maintenance of recreational areas in nature reserves in Mesopotamia may be referred as the earliest example of steps towards the preservation of nature. A report titled The Limits to Growth was released by the Club of Rome in 1972 to challenge the traditional assumptions and discourses that the natural environment provided an infinite resource support for population and economic growth. The term sustainable development was evolved as an umbrella concept in the literature between the 1960s and 1970s as a very common research subject (Bramwell and Lane, 1993).

The debates and discussions on the sustainable development during the United Nations' Stockholm Conference on Humans and the Environment in 1972 laid the foundation of concept of eco-development with special emphasis on cultural, social and ecological aspects along with tourism development. According to Dasmann et al., (1973), the ecological principles for economic development must be linked to the environment with economic development. The symbiotic harmony between preservation of ecology and economic development was wholeheartedly supported by signatory countries of the World Conservation Strategy (IUCN, 1980).

The primary objective of sustainable tourism was focused on the conservation vision which was propounded in the early stage of the evolution of the concept of sustainable development even though there are other two objectives like community vision and economic theory as three facets of sustainable development was implicitly embedded in the practices in good old days.

The Globe'90 Conference in Vancouver, Canada discussed the challenge of implementing the broad principles of sustainable development in the tourism sector. The World Conference on the theme Sustainable

Tourism in 1995 in Lanzarote in Spain deliberated on the implementation of Agenda 21. The conference resolved to create a Charter for Sustainable Tourism that was endorsed by the UN General Assembly.

The Charter has since been using a number of principles and objectives for the implementation of sustainable tourism, including the need for integrated planning, consultation of stakeholders and improvement in the quality of life of the host population (WCST, 1995). The same principles were also outlined in the Bali and Male Declaration on Sustainable Tourism Development and the principles were also adopted at the UNWTO forum in 1996 and 1997 respectively. The Berlin Declaration adopted the same principles for sustainable tourism management at the International Conference of Environment Ministers on Biodiversity and Tourism in 1997.

The formal foundation of the meaning of sustainable development was laid by the Brundtland's Report titled Our Common Future. The Report elaborated on some common challenges and recommendations to include

- Conservation outside the protected areas
- Wildlife-based tourism
- The role of small scale
- Culturally and environmentally sensitive tourism by involving local aboriginal people

A formal and well-conceived definition of sustainable development has been defined in the Report " Our Common Future". The Report emphasized on the two key concepts:

- The concept of needs
- Subjective well-being

The Chapter 11 of the Agenda 21 recommends that government should promote ecotourism as a method to enhance sustainable forest management and planning (UNCED, 1992). The WTTC, the UNWTO and the Earth Council formulated the Agenda 21 for the Travel and Tourism Industry in 1995 to sensitize tourism companies involved in the business directly.

Bramwell and Lane, (1993) focused on

> ➢ The holistic planning and strategy-making;
> ➢ The preservation of essential ecological processes; and
> ➢ The protection of both human heritage and biodiversity.

Concept of Sustainable Development

The Brundtland Commission defines

> **"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".**

Sustainable development reaffirms on economic growth, environmental protection and social equality. Thus, sustainable development is otherwise called as the provision of basic needs for present and future generation. This highlights on the needs and the ability to meet present and future needs. It may be further explained that the basic needs of poor, destitute, homeless, etc include food, water, shelter, clothing, etc. All these primary needs must be made available as each of them has the rights to enjoy the development. Thus, it is the sincere duty of governments to ensure the availability of basic needs. Furthermore, the use the technology must be encouraged after assessment of impacts and development must not lead to take away the needs of future generation.

The term sustainable tourism may be understood as different things to different people. The private tourism industry takes it as a marketing myopia to entice customers for maximizing profits. The local community members mean it as socio-economic benefits and cultural preservation. The Non-Governmental Organizations (NGOs) consider it a regulatory framework to preserve ecological and it is a tool for environmental awareness. Thus, it may be inferred that Sustainable Tourism Development can be applicable to all forms of tourism in all types of destinations, including mass tourism and the niche tourism segments. Therefore, various forms of sustainable tourism like ecotourism, green tourism, responsible tourism and fair trade and ethical tourism have been coined to support the principles of sustainable tourism.

The concept of sustainability itself is filled with ambiguity and the haziness of the meaning is yet to be clarified. According to Weaver (2001), the core objectives of sustainability adhere to the construct of ecotourism. Ecotourism and alternative tourism fall under the broad scope of sustainable tourism. Butler (1993) defined the concept of sustainable tourism in this context as

> **" tourism which is in a form that can maintain its viability in an area for an indefinite period of time".**

Hunter and Green (1996) defined sustainable tourism development as

> **"development that seeks to maintain and enhance the quality of the tourist experience at destination areas through the promotion of tourism"**

Muller (1994) identified the limited views of sustainable tourism and called for a balance of all the components of the tourism industry in order to achieve the objectives of sustainable tourism. Middleton and Hawkins (1998) highlighted that the balances between environmental quality and tourism activity in each of these linked concepts are never static. Hunter (1997) called for sustainable tourism to be seen as an adaptive paradigm where multiple positions can be seen as promoting sustainability but determined by the circumstances and needs of the destinations.

The UNWTO (1996) defines sustainable tourism as follows:

> **"sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future".**

At the March 2004 meeting of its Committee on Sustainable Development of Tourism, the UNWTO agreed to revise its definition to clearly reflect the sustainability issues on tourism as per the recommendation from the World Summit on Sustainable Development (WSSD). Thus, the current definition of sustainable development of tourism explains that

> **"sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism**

and the various niche tourism segments. Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established among these three dimensions to guarantee its long-term sustainability".

The new conceptual definition emphasizes on the balance between environmental, social and economic aspects of tourism and the need to implement sustainability principles in all segments of tourism in order to eradicate poverty and hunger. Therefore, the UNWTO rephrased the definition of sustainable tourism in 2004 as

"sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, and biological diversity and life support systems".

According to Weaver and Lawton (2000) sustainable tourism development must protect and restore ecological systems, must improve economic efficiency and must enhance the well-being of the population. The concept urges for the informed participation of all relevant stakeholders as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process and it needs constant monitoring of impact, introducing the necessary preventive and/or corrective measures whenever necessary. Thus, sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability and promoting sustainable tourism practices.

Dimensions of Sustainable Tourism Development

Liu (2003) explored six issues of sustainable tourism development and these issues are:

➢ The role of tourism demand
➢ The nature of tourism resources
➢ The imperative of intra-generational equity

- The role of tourism in promoting socio-cultural progress
- The measurement of sustainability
- Forms of sustainable development

Bramwell (1996) suggested that sustainable tourism has seven dimensions such as

- Environmental
- Cultural
- Political
- Economic
- Social
- Managerial
- Governmental

The fourth institutional dimension gives importance to the participatory decision-making processes such as public participation and involvement. Achieving a balance among these three classic dimensions of sustainable tourism is difficult to realize, however, without an institutional perspective to manage, mediate and facilitate growth. Institutions represent organizations within a system of rules governing interaction among members. The institutional dimension calls for strengthening people's participation in political governance. Thus, the dimension of sustainable tourism development is broadly classified into four categories such as ecological, social, cultural and economic sustainability.

Ecological Sustainability

It consists of human actions that maintain the capacity of ecosystems to produce the range of goods and services upon which all life depends.

Social Sustainability

It refers to the ability of a community, whether local or national, to absorb inputs such as extra people for short or long period of time and to continue functioning either without the creation of social disharmony as a result of these inputs or by adapting its function and relationships so that the disharmony created can be alleviated.

Cultural Sustainability

It refers to the ability of people to retain or adapt elements of their culture which distinguishes them from other people.

Economic Sustainability

It refers to economic development that translates long-term plans and policies into achieving financial well-being and economic stability at a national and a household level.

Principles of Sustainable Tourism

➢ Tourism development must be designed, planned and managed to respect the maximum capacity or limits of environment in order to give much importance to long-term planning for the judicious use of natural and human resources for the future.

➢ The conservation and use of natural, social and cultural resources is essential to achieve sustainable use redevelopment.

➢ Tourism planning and development must be integrated into local, region and national level sustainable development strategies.

➢ Planners and policymakers must take into the capacity of land, resource and socio-cultural factors while planning for tourism development.

➢ Tourism industry should sincerely use the local products for the benefits of local economy

➢ Tourism revenue should overshadow the economic base of an area for which environmental costs and benefits should be assessed.

➢ Local community members should be given pivotal role in decision-making process, planning and implementation.

➢ Local communities must act as a custodian of tourism resources as well as touristic facilities.

➢ As an objective of equity and social justice, indigenous people, women and minority groups should be empowered economically and socially to take part in the tourism development.

➢   All efforts should be directed towards the fair equitable distribution of the benefits of tourism.

➢   The cultural value, social system, economic system, the way of life, local environment and political setup should be preserved and respected.

➢   All the partners of tourism should be sensitized to respect the sustainable forms of tourism.

➢   Efforts for continuous staff training, awareness, marketing, publicity, empowerment, etc should be taken up without having any prejudice for the benefits of host communities and other stakeholders.

➢   Research should be encouraged at all levels of tourism development and operation in order to find solutions

➢   Helping each other and extending cooperation to tackle the negative consequences of tourism should be the motto of all individual and organizations involved in tourism business.

➢   Promoting energy saving measures through renewable ways should be adopted for increasing the efficiency

➢   Reducing consumption of high-quality drinking water supplied from rainwater/grey water must be practiced.

➢   Reducing domestic consumption with water management system is the best way to save water and save energy used for pumping and supplying water.

➢   Selecting the use of renewable materials must be done to help reduce the waste and save the natural resources.

➢   Making the use and design of land for a long-term development must be figured in the destination planning documents.

➢   Preserving the cultural heritage must be the objective.

➢   Alleviating poverty and malnourishment should be taken seriously.

➢   Reducing the consumption of fossil fuels can curb the green house gas emission.

➢   Taking steps for preservation of existing endangered species for biodiversity must be welcomed.

Agenda 21

The Agenda 21 in the International Convention on Environment Development or Earth Summit at Rio de **Jenrio**, Brazil in 1992 was discussed on the global action plan for sustainable development to protect the environment while simultaneously experiencing growth. It has created platform for global partnership and cooperation among nations. The Agenda comprising 40 chapters in 4 Sections is a non-binding programme of action adopted by more than 178 Governments to address the human activity impacts upon the environment.

The Chapter 11 of the Agenda 21 has recommended to the governments to promote ecotourism as a method to enhance sustainable forest management and planning. The WTTC, the UNWTO and the Earth Council formulated the Agenda 21 for the Travel and Tourism Industry in 1995 to sensitize tourism companies involved in the business directly. The Agenda 21 has laid emphasis on 10 priority areas for action. These areas include

- ➢ Waste minimization
- ➢ Re-use and recycling
- ➢ Energy efficiency
- ➢ Conservation and management
- ➢ Management of freshwater resources
- ➢ Waste water treatment
- ➢ Hazardous substances
- ➢ Transport, land-use planning and management
- ➢ Staff involvement
- ➢ Customers and community members in environmental issues and design and partnership for sustainability

Sustainable Ecotourism

Ecotourism must do more than create a series of activities to attract visitors, offering them an opportunity to interact with nature in such a way as to make it possible to preserve or enhance the special qualities of

the site and its flora and fauna, while allowing local inhabitants and future visitors to continue to enjoy these qualities. They must also establish a durable productive base to allow the local inhabitants and eco-tourist service providers to enjoy a sustainable standard of living while offering these service.

Resource Management

➤ Improve natural resource management (NRM) through increased community participation in natural resource use decision-making and to ensure access and sharing of the associated economic benefits.

➤ Initiate wildlife ecotourism activities in the Srepok Wilderness Area (SWA) and provide a model for the development of sustainable ecotourism activities elsewhere in Cambodia.

➤ Establish community-based monitoring of indicator species in order to track the progress of wildlife restoration and inform about natural resource management efforts.

Summary

Sustainable Tourism minimizes environmental damage, maintains resource diversity, renewability and productivity over time and seeks to mitigate the inevitable negative effects of tourism on local, regional and global levels.Thus, sustainable tourism should also maintain a high level of tourist satisfaction and ensure a meaningful experience to the tourists, raising their awareness about sustainability and promoting sustainable tourism practices. The new version of sustainable tourism states that sustainability should be sought in all landscapes, whether urban or rural, in traditional resort or eco-camp, community acceptance, engagement and benefit are critical and the uniqueness of place is protected to the fullest extent feasible.

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Lesson 3.3 - Ecotourism Policy & Planning

Learning Objectives

After reading this chapter, you should be able to

➢ Know the need for planning and policies for ecotourism

➢ Explain the steps or processes in formulating policy and planning

➢ Find the hindrances in the implementation of policy and planning

➢ Be familiar with the eco-friendly facilities and amenities

Tourism policy gives the detailed outline of various schemes for the investors along with terms and conditions. The larger objective of the policy is to make investment friendly atmosphere. The objective of ecotourism policy is to encourage for inclusive development in the destination region. On the other hand, planning helps the organization achieve the objectives in an effective manner and it is the ecotourism policy which extends support to the governments for the formulation and successful implementation of the plan objectives. Planning provides a broad roadmap for future course of action Planning is however a tool for ensuring equitable distribution and responsible practices with due adherence to the ecological fragility of the destination region.. The objectives of ecotourism plan guide the government in executing them for balanced development. Tourism planning intends to achieve specific or well-defined goals in a definite time period. Tourism planning is drawn on the basis of the assessment of the availability of resources and readiness of the country's political system to develop the resources. Tourism planning focuses on the demand of the tourism industry. In this chapter, a description will be given on need, significance and stages of formulating ecotourism planning and policy guidelines.

Need For Ecotourism Policy

Unlike the common tourism policy, ecotourism policy is significantly different in its approach and implementation. This is more closed to the preservation of ecology and environment. The

formulation and implementation of ecotourism policy is carried out after comprehensive analysis of socio-economic, cultural, demographic and ecological aspects. Ecotourism is a conservation approach for wildlife and plants to be used for learning and experiencing purposes. Governments promote ecotourism for preservation of indigenous cultural heritage and improvement of economic well-being. All those ecotourism activities are largely based on the natural beauty and participation of local people in varied ecotourism activities. The natural ecosystem in which ecotourism is linked to offer educative and interactive learning experience and rewarding experience is very sensitive and fragile to the tourism development. In addition, ecosystem is so vulnerable that even a small disturbance may cause harmful and hazardous effects on the biodiversity. It is however necessary to have a careful and responsible travel to protect the fragility of ecosystem and processes. Impact is unavoidable and unstoppable as some alterations must take place in the process of developing facilities and amenities.

No matter what is the quantum of the negative impacts, but it may be little or too much. Even the small the impact would be sufficient to make permanent loss to the animal and plant diversities. Thus, conflicts on the common interest are very much expected as it is interchangeably used as ecotourism, eco-friendly tourism and nature-based tourism to provide holistic development by involving all the key stakeholders. Keeping this fragility and sensitiveness of ecosystem into consideration, a well-defined ecotourism planning and policy document is required to be designed to make ecotourism projects free from conflicts. Thus, both planning and policy are guided by the vision, mission, objectives and principles of ecotourism projects.

Concept of Tourism Policy

A tourism policy is a set of guidelines or a framework within which tourism development is undertaken through collective and individual decisions. A tourism policy broadly explains the procedures, stipulations, and eligibility criteria needed for the development of tourism in a particular period. The policy clarifies procedures of land acquisition, types of taxation, sources and terms of finance, safety and security, communication facilities, environmental practices, and relationship with the local community. Any policy is required to be flexible in nature, but not

comprising with the basic philosophies and objectives. It is a social process linking wider section of people in a variety of different activities. It sets a basic framework and course of actions for systematic implementation of the guidelines of the policy. These linkages are established through continuous discussions and the duration of implementation of policy and plan approaches are largely short, medium, and long-term in nature.

Ecotourism policy considers issues like high mobility, cutting-edge information technologies, ageing population, and sustainability of the destination during the formulation of the policy. At the same time, tourism contributes the much needed income to the local population and acts as a continuous link between the environment and the future economic sustainability of the local area. Maintaining the environment requires the tourism service providers to responsibly follow the policy guidelines to maintain ecological resources. It is essential for tourism operators and the community to coexist for mutual benefits and interest.

For example, the identification of Bekal Beach in Kerala as a Special Tourism Area (STA) brought about socio-economic development. It has become possible due to the declaration of policy. The government has spent twenty lakh for development of basic infrastructure in Bekal. Anegundi and Banavasi in North Karnataka are being developed as model rural tourism sites in direct partnership with United Nations Development Programme (UNDP). The project has sought an amount of ₹ 55 lakh for developing tourist clubs for information, transport system, improvement of roads, illumination of villages, signage, construction of amphitheatre and solid waste management. For example Hodka in Gujarat and Raghurajpur in Odisha earned ₹ 8 lakh and ₹ 15 lakh respectively from varied tourism activities.

Remedial measures are taken to minimize the negative impacts on the ecology and environment. Thus, ecotourism can be beneficial if it is developed as per the policy guides. These are some of the following possible direct positive impacts of ecotourism in the host destination.

➢ To generate direct employment for local people

➢ To earn foreign exchange from stay, entry fees and sightseeing of foreign visitors

➢ To generate revenue to local economy through sales taxes

- To facilitate the entrepreneurs to build eco-hotel, resort, restaurants, etc
- To promote local arts and handicraft
- To provide direct employment to eco-guides
- To indirectly induce the demand of agriculture, animal husbandry, horticulture, forest, and dairy products
- To improve the quality of life of the host community
- To create recreational facilities for local community • members
- To preserve archaeological sites, historic, and heritage buildings
- To promote waste management and recycling of garbage and solid waste
- To promote a sensitization programme for the preservation of the environment

However, ecotourism can also create inflation of essential commodities during the tourist peak season and increase property values. It may also affect the quality of amenity services due to over-use by day visitors. It can create litter, vandalism, overcrowding and traffic congestion and crime in the host community. Finally, there will be a big change in the demographic structure of the local population. There is every possibility to damage the protected monuments due to large-scale footfalls, thus creating aesthetic beauty of the tourism sites. It causes litter, erosion, over taxation, sewage and waste management problem

Objectives Ecotourism Policy

A policy also contains strategic steps and actions to attain the desired results. It emphasizes on a planned and logical course of actions. The expected outcomes of tourism depend on the government's priorities on ecological and environmental conservation, poverty alleviation and generation of foreign exchange. It also prescribes operational guidelines for the key players such as the government, the tourism industry, NGOs, and local community members to operate the tourism business.

It has some basic principles such as resolving conflicts, ensuring carrying capacity and fostering the need for responsible behaviour for

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tourism operators. Thus, all these principles can be properly put in practice with the involvement of local community members. The policy intends to proclaim how integrated development of the area can be undertaken. It explains about the principles, uninterrupted monitoring and enforcement of codes of conduct for visitors. It is to bring the guidelines into action by including institutional support, monitoring mechanism, incentives, and regulations. Tourism is a sector with impact on the socio-ecological condition. It is fundamentally necessary to make the use of policy guidelines to ensure equity, fair trade and the ethical tourism practices. Formulation of policy needs continuous dialogue and consensus through bottom-up approach, decentralized governance and redressed mechanisms. This initiates are undertaken by the planners and policymakers.

These are the following objectives of ecotourism policy

- ➢ To make ecotourism destinations more community and ecological friendly
- ➢ To empower local population with facilities for primary education
- ➢ To create a conducive environment to motivate private investors to ecotourism sites
- ➢ To encourage young population to contribute more ecotourism
- ➢ To look into the human development in the local area
- ➢ To prevent leakages and reduce regional disparity
- ➢ To preserve the historical and cultural heritage in its original form and style
- ➢ To create minimum facilities with less impacts on ecosystem
- ➢ To offer incentives to local residents for setting up business ventures
- ➢ To give priority and encouragement to the traditional handicraft sector and the interest of artisans
- ➢ To prepare a legislative framework to regulate tourism trade and industry
- ➢ To establish effective linkages with the Department of Forest, Wildlife and Environment

Process of Ecotourism Policy Formulation

The process consists of a series of policy decisions and actions in a methodical manner to make the government expenditures for fruitful. It plays an important role in making plans and policies to become realistic in practice. The process of implementation is certainly associated with planning, organizing, coordinating, communicating, and controlling the goals. These processes may start as per the order given below in order to obtain a progressive, pro-ecotourism and pro-poor tourism policy.

➢ Adopting both bottom-up approach and top-down approach

➢ Interest of stakeholders: tourists, community, tourism organizations, and NGOs

➢ Use of local resources sincerely

➢ Employment for local people on top priority

➢ Conservation of culture and ecology and environment

➢ Consolidation of bottom-up and top-down approach

➢ Study of feasibility of approaches

➢ Constitution of task force and collection of reports

➢ Participation in the decision-making process and expression of grievances

➢ Monitoring, review and announcement of policy

➢ Expert group interview

➢ Field visit for feasibility study

The process of tourism policy includes inter, intra-departmental and public–private sector interactions and interface at different levels for consolidation of ideas and thoughts for developing a robust ecotourism policy. Implementing agencies are generally responsible for setting and executing plans by establishing relationship with conflicting groups through negotiations. Planners and executing bodies undertake various tactics and strategies to implement the policy and programmes in a systematic and time bound manner.

Linkage Between Ecotourism Policy & Planning

A linkage is essential between planning and policy to achieve the pre-determined objective for ensuring sustainable development. Regulating ecotourism activities is beneficial for sustaining tourism development and for successful development and management of tourism resources. Thus, tourism planning is formulated for pro-poor tourism and pro-people tourism. Planning can effectively be drafted by well-structured experts. The tourism policy is a set of guidelines offering a practical structure which helps undertake tourism development through collective and individual decisions. The tourism policy broadly explains the guidelines, eligibility criteria, and procedures to develop tourism. The policy clarifies about procedures of land acquisition, development types and modes of taxation, sources and terms of funding, law and order establishments, communication facilities, environmental practices, and relationship with the local community. For example, the National Tourism Policy-2002 is an important indicator for the Tenth and Eleventh Five-Year Plans in India.

The plan outlays have significantly been increased in both plan periods to execute the target set in the policy document. The tourism policy enlarges the scope for tourism development and it sets a code of conduct for investors and operators to conveniently get an entry into the business. The exhibit illustrates the creation of new tourism circuits and management of these circuits in India. Thus, allocation of funds depends on the nature and scope of the tourism policy. In brief, policy and planning are complementary to each other in laying a solid foundation of tourism development in any country.

Ecotourism planning is intended to achieve the goals in a systematic manner and in a specified time period. The objective is to prevent the loss of natural resources and maximize the benefits in the least environmental cost. It is essential to formulate planning for ecotourism projects to be executed to bring in socio-economic changes. Governments at the regional level draw long-term plan aligned with the vision and mission of ecotourism projects. A well-defined and methodical planning for ecotourism projects can remove many negative impacts and increase more positive effects. One of the positive impacts is economic development. Thus, the process of planning is taken at various stages.

Ecotourism Policy Guidelines

It is important to involve all stakeholders when ecotourism guidelines are fully implemented. It is however essential to have synergy and collaboration among the tourism and allied organizations for successfully implementation of ecotourism policy guidelines.

➢ Wilderness conservation in ecologically sensitive landscapes

➢ Local community participation and benefit-sharing

➢ Sound environmental design and use of locally produced and sustainable materials

➢ Conservation education and training

➢ Adequate monitoring and evaluation of the impact of ecotourism activities

➢ Capacity building of local communities in planning, providing and managing ecotourism facilities

The ecotourism guidelines suggest that adequate provisions must be made to provide purely inclusive tourism with the direct help of local communities in compliance with the Wildlife (Protection) Act, 1972. It is the State Governments to evolve the ways of keeping the revenue collected from the entry fees of visitors into the tiger reserve or sanctuary to be spent for local area development. However, the State Forest Department should be the arbiter for resolving the disputes. As suggested, the Chief Wildlife Warden must look into that each Protected Area must prepare an ecotourism plan in accordance with the management plan/annual plan of operation/ tiger conservation plan. A site-specific Ecotourism Plan for each Protected Area must be prepared and approved. The Warden shall develop a monitoring mechanism for carrying capacity, designated tourism zones by evolving scientific criteria.

Functioning of Ecotourism Sites in PAs

A State Level Steering Committee is generally constituted to review and suggest for Ecotourism Strategy. A Local Advisory Committee (LAC) is constituted for each Protected Area with the following mandate. The Committee is to review the strategy formulated by the State Governments for promoting Ecotourism. It is to ensure that the corridor value of Pas

must be protected through imposing certain stringent restrictions in on buildings and infrastructures in private areas. It is to offer timely advise to the government and local bodies to be careful of ecotourism in the ecologically sensitive places and advises to promote ecotourism in non-forest areas. It is essentially to enforce rules and regulations for monitoring facilities within five km from a protected area. The committee can look into the mitigation related to measures environmental clearance, area of coverage, ownership, type of construction, number of employees etc,

For example, the Tiger Task Force Report in 2005 recommended that hotels within a radius of five km from the boundary of the tiger reserve must contribute 30 per cent of turnover to meeting the cost of conservation of reserve. At the same time, hotels can be allowed to claim 100 percent income tax benefit for the same. The national ecotourism policy in India has also suggested for the formation of traditional village councils equivalent to Panchayat Members. The Tiger Conservation Foundation should be the overseeing authority and should include members that are not represented in the Tiger Conservation Foundation.

The ecotourism policy helps in achieving a projected growth rate and formulates new strategies to increase the participation of responsible partner. It develops infrastructure at the destination areas through the public–private partnership (PPP). Regional disparity can be eliminated with the development. The ecotourism policy provides clear-cut description of to be responsible towards the ecosystem and its processes as tourism is an important element of an ecosystem in a destination place. The policy documents enforce rules and regulations for eco-resorts and tourism operators to be careful and accountable to the environment. Thus, management of ecotourism policy contributes to the ecological and environmental impact, thereby reducing solid wastage and promoting sustainability after giving due regard to resource management.

Summary

Tourism policy gives the detailed outline of various schemes to attract more investment for inclusive development in the destination region. The ecotourism policy helps in achieving a projected growth rate and formulates new strategies to increase the participation of responsible partner. It develops infrastructure with the help of the public–private

partnership (PPP in an effective manner. Thus, the ecotourism policy simplifies the processes of investment and development. Planning gives a holistic and integrated roadmap for future course of action for equitable distribution and responsible practices. The objectives of ecotourism plan is to achieve balanced development. This chapter has highlighted on the need for ecotourism policy and objectives and processes for formulating ecotourism policy along with linkages between policy and planning. Ecotourism guidelines and operation of ecotourism in the protected areas have also been presented in the chapter.

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Lesson 3.4 - Carrying Capacity for Ecotourism

Learning Objectives

After reading this chapter, you should be able to

➢ Know the meaning of carrying capacity
➢ Explain the concept of carrying capacity
➢ Find the significance of carrying capacity at the ecotourism sites
➢ Be familiar with the methods of calculating carrying capacity

Carrying capacity is a widely used mechanism for measuring the impacts of development. It is a well-defined concept giving an indication of maximum limit that a place can withstand before the place reaches at a stage of wear and tear. That means the capacity of land, resources like land, water, energy and manpower should be measured in such a manner that the ecology and environment must not be damaged. Mass tourism as contrary to ecotourism activities generally creates maximum losses to the biodiversity and ecological processes. The loss can be averted or conservation measures can be initiated after evaluating the capacity of tourism destinations. Whenever any destination bears brunt of sporadic tourism activities, actions are usually taken to measure the impacts of physical, social, ecological, economical and psychological dimensions.

There is every possibility that alternative tourism or ecotourism destinations may not be free from such impacts if there are no mechanisms of estimating the impacts of tourism. As such, ecotourism is a low-impact and green tourism that fosters conservation of natural and cultural resources and inculcates a sense of responsibility in tourists, service providers and community members. Many identified ecotourism sites are on the verge of being mass tourism destinations due to lack of enforcement of principles. Further, ecotourism is a responsible nature travel in the fragile ecosystem. Thus, this chapter will give you a detailed discussions and descriptions about the meaning, concept and evolution of carrying capacity with reference to tourism, importance and types of carrying capacity.

Evolution of Carrying Capacity

The evolution of concept of carrying capacity was figured in the research work before the term carrying capacity was officially recognized across the world. The carrying capacity calculation method was first evolved in 1820 by William Godwin to estimate the capacity of world to hold number of humans in the future. According to Karl Zimmerer (1994), the concept was first established in laboratory experiments with cultured microorganisms during the 19th century. Thomas Malthus in 1798 first published the concept of carrying capacity to find the limitation of growth population and economic. Further, it was used to measure for "poundage" then it was replaced by the "tonnage" measurement of shipping industry.

In 1870, carrying capacity was first applied to living organism and natural system. illam Gabb in 1870 applied the concept of carrying capacity in rivers and the winds for hunting practices of natives' people of Santo Domigo. Carrying capacity measurement was used to find about how much meat the natives 'pack could carry back from the mountain at the end of season. In 1887, a study related to bees and pollen of specific flowers was incorporated in the Botanical Gazette. Later a Corpusclum was fastened to every available process and the carrying capacity of lag was indefinitely increased during the study. McCool and Lime, (2001) have given one of the earliest studies of the evolution of Appraisal and Application of carrying capacity in the recreational tourism sites during the 18th Century. Nathan (2007) has mentioned about the usage of carrying capacity calculation for various subjects, such as Wildlife Management, Chemistry, Medicine, Economics, Engineering and Population Biology.

Meaning of Carrying Capacity

The word "Carrying Capacity" was first proposed by Verhulst in 1838 to study the population growth. It is now applied to a wide range of disciplines including biology, ecology, anthropology, geography and tourism and business management. However, Tourism Carrying Capacity (TCC) is explained in terms of environmental and experiential impacts of tourism at a particular location. Later, it was used in the USA in 1845 for the purpose of changes and modifications in the commercial systems of foreign nations.

Definitions of Carrying Capacity

In population ecology, the carrying capacity at which the population growth rate equals to zero. It is constrained by food availability, competition with other species and interactions with predators and diseases. When the population size is smaller than the carrying capacity, the population growth rate is positive, the population increase in size. When population size is larger than the carrying capacity, the population growth rate is negative. So that population growth decreases in size. Eventually, these populations will either increase or decrease in size until the population size equals to the carrying capacity at which time the growth of the population will stop. The carrying capacity represents a stable equilibrium of population size.

The concept of carrying capacity is difficult to apply to human populations because humans can change environmental constraints through technological innovation. Furthermore, Ecological Footprint Analysis is an attempt to compute human carrying capacity on a global basis.

According to Athens's Final Report (2001), the numbers of tourists per unit of time or density of tourist spot are important factors for tourism development at a particular tourism spot. Further, it indicates that carrying capacity is one of the authoritative methods for calculating the physical capacity of places.

According to the UNWTO, 1997, the concept of carrying capacity is "the maximum number of people that may visit a tourist destination at the same time without causing destruction of the physical, economic and socio-cultural environment and an unacceptable decrease in the quality of the visitors' satisfaction.

According to Mathieson and Wall (1982), the maximum number of people who can use a recreational environment without an unacceptable decline in quality of recreational experience.

According to Manning (2007), an alternative definition for measuring numerical carrying capacity on the basis of the level and type of recreation use that can be accommodated in a park or related area without violating standards for relevant indicator variables. It focuses on the level of usages rather than tourism impacts.

According to Papageorgiou and Brotherton (1999),, carrying capacity is the idea of maintenance of the integrity of the resource-base and the provision of a high-quality recreation experience to users from a recreational context. The notion of a quantitative frequentation limit related to a given surface area and to a degree of satisfaction. The core objective of maintaining the natural resources is to ensure the outdoor recreational activity for the visitor satisfaction and the preservation of the flora and fauna.

According to Buckley (1999) the number of visitors that produce no measurable or at least no irreparable ecological change to the ecosystems in an area, or the maximum level of recreational use in terms of numbers and activities that can be accommodated by an area or an ecosystem before an unacceptable or irreversible decline in ecological values occurs.

According to Steele (1995), different dimensions can measure the TCC. The amount of tourism damage that a site can assimilate without long-term damage can be measured against the total number of tourists visiting the site to determine whether the social optimum is exceeded and the site is over used or over utilized.

For example, the stretch of Backwater Tourism in Kerala between Thiruvanthapuram and Housdurg with the help of Digraph Model to measure the TCC. The study has found that 11 factors generally influence the Environmental Carrying Capacity (ECCc) in the area (Sanal & Nandamohan (1999). After using n/ modeling based in graph theory.

Seven factors influencing the carrying capacity such as

- ➢ Land availability
- ➢ Freshwater & population
- ➢ Infrastructure facilities
- ➢ Pollution
- ➢ Ecological sensitivity and socio-economic of the region

Carrying capacity of the stretch of backwater depends on the relationship between population growth and infrastructure development, more inflows of tourists and the natural environment. For example,

impacts of visitors on Litchfield Park in the Northern Territory of Australia with regard to the maintenance of carrying capacity and sustainable development.

The study has developed five clusters of visitors such as

- ➤ Day-visitors
- ➤ Hedonists
- ➤ Generalists
- ➤ Four-wheel drive enthusiasts
- ➤ Information seekers

The study found the steps of the park authority to limit commercial activities within the park. It suggested that the Parks and Wildlife Commission should give publicity for specific usage patterns rather than simply regard each park as an isolated unit.

For example, the carrying capacity of a hill resort town refers to the threshold elements of the natural environment and infrastructure, emerging out of lifecycle, population growth, land use succession, ecosystem and ecological process for sustaining the urban development load. The TCC is the maximum number of people that use tourism site without unacceptable effect on environmental resources while meeting the demand of tourists.

Application of Carrying Capacity in Tourism

The carrying capacity is used for studying the impacts from the ecological, socio-cultural and visitor satisfaction perspectives. However, the existing relationship cannot always be quantified adequately, but an understanding of the same can help maintain the carrying capacity better. It emphasized on the awareness for the carrying capacity that is essentially important for the tourism industry in order to plan for maintaining sustainable tourism. The design and management of tourism destinations guide the visitors in order to reduce the damage of environment without manipulating the design. They suggested that visitors ultimately would get educated and experienced to be conscious and cautious towards the environment and ecology.

Increasing interests in embracing sustainable tourism development as a viable mechanism for estimating the carrying capacity of mass tourism destinations and protected areas are now figured in the contemporary studies. Tourism development is determined by the Recreational Carrying Capacity or simply Tourism Carrying Capacity (TCC). According to Williams 1994, the carrying capacity is determined by only one of these three dimensions such as physical, social and economic carrying capacity.

Determinants of Carrying Capacity

According to Getz (1987), there are six different approaches of determining the carrying capacity in order to tactfully tackle the problem. These approaches include

- ➢ Tangible resource limits
- ➢ Tolerance by the host population
- ➢ Visitor satisfaction
- ➢ Excessive rate of growth of change
- ➢ Cost benefit based on the capacity-based evaluation
- ➢ Capacity-based system approach

Apart from these approaches as suggested by Getz, there are other modern approaches such as Management by Objective (MBO) for estimating the Visitor Impact Management (VIM) Limits to Acceptable Change (LAC) and Visitor Experience Resource Protection Frameworks (RPF) in the place of tourism carrying capacity.

The concept of a tourism carrying capacity or recreation carrying capacity is evolved from a Neo-Malthusian perspective of resource limitations. A variety of planning frameworks such as Visitor Experience and Resource Protection (VERP) and the LAC were developed to address the issues of visitor impacts. The interest on carrying capacity has shifted from an "objectively" assessed threshold to policy useful- desired conditions providing more advantages to planning and decision-making.

Tourism Carrying Capacity (TCC) is a part of sustainable management of tourism development. Increased interest in the sustainability of tourism development initiatives has triggered expanding concerns about the capability of both tourism destinations and protected areas to accom-

modate recreational use. In many cases, planners and scientists turned to the concept of tourism or the Real Carrying Capacity (RCC) as a way of formulating problem of definitions and management actions.

Protected Area Visitor Impact Management

Protected Area Visitor Management Framework for ecotourism and protected area visitation in Central and South America helps the managers address the issue of the management of ecotourism in the protected areas by employing VIM frameworks. The Protected Area Visitor Impact Management (PAVIM) framework is an alternative to carrying capacity and Limit to Acceptable Change. Positive attributes of PAVIM include

➢ Simplicity
➢ Flexibility
➢ Cost effectiveness
➢ Timeliness
➢ Incorporating input from stakeholders and local residents

However, negative attributes include diminished objectivity and cultural sensitivity issues.

For instance, Chen et al., (2004) conducted a study using the Environmental Sciences Research Institute (ESRI), Arc Geographic Information Systems (AGIS) to integrate with various island policies, traffic flows, island characteristics, resources allocations, and/or spatial spread functions to demonstrate the value of AGIS for decision-makers and planners in the Island.

For example, Jennings (2004) carried out landscape sensitivity and its relationship with tourism development with regard to the carrying capacity. He found that carrying capacity is not the most effective way to analyze the relationship between the natural environment and tourism pressure. These concepts are embedded within Geomorphology, namely

➢ Lag Time
➢ Environmental Thresholds
➢ Dynamic Metastable Equilibrium

However, the study differed in the use of LAC as a way of managing the interplay between tourism and the environment.

Types of Carrying Capacity

Hunter, (1995) distinguished four different types of Carrying Capacity.

- ➤ Physical Carrying Capacity (PCC): It is the limit of a site beyond which wear and tear starts taking place or environmental problems arise.

- ➤ Psychological (Or Perceptual) Carrying Capacity (PCC): It is the lowest degree of enjoyment that tourists are prepared to accept before they start seeking alternative destinations.

- ➤ Social Carrying Capacity (SCC): It is the level of tolerance of the host population for the presence of tourists and their behaviours in the destination area and/or the degree of crowding users (tourists) are prepared to accept by others (other tourists).

- ➤ Economic Carrying Capacity (ECC): It is the ability to absorb tourism activities without displacing or disrupting desirable local economic activities.

Maldonado et al., (1992) found four types of carrying capacity: physical, economical, ecological and recreational.

- ➤ **PCC:** It deals with quantitative measures of the number of people or usage at a site that can primarily be determined by design of the site.

- ➤ **ECC:** It is basically concerned with multiple uses of resources, particularly its compatibility with the site and wider management objectives for a site.

- ➤ **Ecological Carrying Capacity (ECC):** It is primarily concerned with the maximum level of recreational use in terms of number of activities that are accommodated by an area or ecosystem before an unacceptable or irreversible decline in ecological values occur.

- ➤ **Recreational Carrying Capacity (RCC):** It is also referred to tourism and visitor carrying capacity and the maximum level of

recreational use in terms of number of activities, above which there is a decline in the quality of the recreation experience from the ability of individuals and groups to tolerate others and their activities and the level of acceptability. Even then, many of the destinations have been exceeding the tourism (recreational) carrying capacity limits.

➢ **Effective Carrying Capacity (ECC):** It can be determined in natural areas by clearly defining the indicators and quality standards.

Approaches for Effective Carrying Capacity Management

Carrying capacity can be effectively managed and maintained by the creation of various zones at the tourist destinations. Zoning the national and public park is one of the key planning and management tools for ensuring the carrying capacity management. Zones are established on the basis of natural resources and their needs for protection and capacity to absorb recreational involvement. Zones are meant for special preservation of wilderness, natural environment, and outdoor recreation and park services. Zoning is primarily based on natural resource and does not define the types or levels of recreational opportunities that can occur within the regions of the park.

Nelson, (1991) suggested that there are 11 different types of zones to manage the carrying capacity for conservation management. These zones are as follows:

➢ Category I- scientific reserve/ strict nature reserve

➢ Category II- national park

➢ Category III - national monument/ natural landmark

➢ Category IV- Nature conservation reserve / managed nature reserve/ wildlife sanctuary

➢ Category V - protected landscape or seascape

➢ Category VI- resource reserve (interim conservation unit)

➢ Category VII-natural biotic area/ anthropological reserve

➢ Category VIII- multiple use management area/ managed resource area

➢ Category IX- Biosphere reserve

➢ Category X -World heritage site

➢ Category XI -Wetlands of International Importance

Hindrances to Carrying Capacity

According to Lindberg et al. (1997), there are three major limitations to calculate numerical carrying capacity.

➢ It lacks specific criteria that account for the objective or desired condition.

➢ It is considered to be a scientific and objective concept, but it is actually subjective in nature.

➢ It focuses on the use levels, which differ from the MBO to maintain desired conditions.

For example, the negative impacts of the Mountain Tourism Impact in Annapurna Conservation Area (ACA) include

➢ Erratic land use pattern
➢ Litter and Garbage
➢ Air and noise pollution
➢ Visual Pollutions
➢ Deforestation
➢ Demonstration Effects
➢ Displacement
➢ Income & Employment
➢ Unplanned use of land
➢ Non-biodegradable Rubbish

The degradation of forests and local culture has occurred due to irresponsible tourist behavior as well as the operational flaws of tourist lodges and hotels. At the same time, the socio-cultural changes have direct fallout on the local people's behavior, dress, lifestyle, family and social structure.

Employment opportunity in the mountain areas, generally jobs like porters, kitchen boys and guides have been provided by the tourism industries to the local people. The aggressive tourism activities in such areas without proper management of mountain resources have created serious environmental threats. The result of this study reveals that the ACA has already crossed TCC limit beyond its sustainable level.

For example, the reason for landslides in Nilgiri district include rainfall, human intervention, deforestation and monoculture of tea plantation are the prime causes for the landslides. There is a drastic reduction in forest cover and human interventions in the form of unplanned tea estates, resulted in the loss of natural ecosystem of Nilgiris, which is causing massive and frequent landslides.

Summary

Thus, carrying capacity is a burning issue reflecting upon the management of natural resources for sustainable tourism development in hill stations. Zoning the destinations can provide ways and means to measure the PCC that leads to making perceptual, economic, social and economic carrying capacity. Hence, the concept of carrying capacity is no longer confined to the academic discussions and it is now an integral part of planning and development for long-term tourism growth.

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Lesson 3.5 - Ecotourism Programming

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the meaning and significance of ecotourism programming

➢ Explain the objectives of programming for eco-tourists

➢ Know the operation of eco-tour activities in a planned and organized manner

➢ Make out the quality of learning and experiencing through programming

➢ Identify the need for programming for carrying capacity management and visitor satisfaction

Programming is a logical way of organizing the activities to help participants utilize best of their time and money. The use of programming in ecotourism adds lots of value to meet expectations of visitors. As such, ecotourism encourages local business enterprises to be careful enough towards the quality of services that largely determine the experience of visitors at ecotourism sites. Eco-tour operators conduct the outdoor tourism activities like nature walk, wildlife viewing, bird watching, trekking, hiking, horse riding, etc in systematic ways whiling taking interest, motivations, physical fitness, time, distance, weather, group size, parking space, traffic, availability of instructors, porters and guides and code of conducts into considerations. Importance is given in developing elaborate programme to minimize negative impacts and maximize positive impacts. Adequate scope is given for learning and experiencing eco-tour as time is proportionately distributed across places of interest. Photography, wildlife and bird watching, participation in local festivals, tasting local cuisine and home stay are programmed in such a manner that visitors can maximize their enjoyments and learning. In this chapter, you will read about the importance of programming in ecotourism activities.

Meaning &Concept of Programming

Programming is a planned way of implementing principles and satisfying visitors or eco-tourists. This is an approach in providing guidance to tour operators or eco-resorts to contribute for sustainable development. It further regulates the operation of organized tours and evaluates the state of accountability towards the use of resources, capital, and effective use of time and behaviour of employees or clients. At the same time, programming is the process of organizing resources and opportunities for visitors to satisfy leisure needs. There can be educational, cognitive, affective and social needs that can enable individuals to become more healthier and happier after undertaking the nature travel or responsible travel to ecotourism destinations.

A systematic programming approach has been used to satisfy recreation for many years. However, it has altered significantly over time due to the change in disposable income leading to influence the lifestyle. The interest for outdoor recreational activities has undergone significant changes. Camping, sports and games, arts and crafts, swimming and nature studies were some of the traditional recreational activities that people used to participate during the vacation. It is now presented in a more innovative way that includes special interests, personality development and living skills, health and fitness, family and gender-related concerns, travel and tourism, adventure and 'risk' activities, performing arts, and special services for those with physical, mental and social disabilities. Above all, all these activity-based ecotourism attractions engage participants.

Recreation Programming

People involve in leisure pursuits spontaneously as an urge to participate when they get mental humdrum. In most of time, recreational programmes are relatively unstructured due to less time to plan. It requires a great deal of structured or prearrangement. Thus, planning makes programs to happen in a more organized and systematic way. Organized travel includes the arrangement of a swim class, a dance class, a scuba-diving course, a rock climbing training, etc. When an individual visitor does not have resources or ability to organize structured recreational programmes, the onus for generating recreational satisfaction obviously switches from the individual to the responsibility of tour operators for presenting the programmes while taking time, cost and interest of participants.

Individual is the most central part of ecotourism activities. It requires the recreational programming approach to enhance the quality of activities. People involved in delivering services must be trained and groomed to take care of participants. As a consequence, eco-tour operators and resorts devote much of time to improve the service quality by giving continuous training to the personnel. As it is a part of responsibility, service providers at ecotourism destinations must look into the interests and demand of visitors. Hence, service providers must take all possible efforts to organize and plan nature-based tourism activities for the purpose of maximizing participants' enjoyment and experiences. This becomes possible with the help of recreational programming approach. Ecotourism programmes can better be structured with the well-defined policy and programmes that help guide destination promoters. At the same time, the approach of ecotourism must be undertaken in four different stages such as philosophy, planning, implementation and evaluation.

The integration of programme planning may be presented in five major phases of an outdoor recreation experience, as developed by Clawson and Knetsch (1978). Tourists have different perceptions during the anticipation, travel to site, on-site, travel home from site and reflection stages of the trip. Anticipation or expectation is one of the phases during which an individual develops belongingness on the basis of his/her cognitive image for which information related to people, nature, culture, climate, etc is gathered from various sources. After going through other three stages like undertaking travel to site, staying and moving in site and return home, a person reflects upon the activities that he/she undertakes during the trip. The reflection of tour to the nature-based sites can demonstrate the level of satisfaction and enjoyment. Recreational programming is organized in four stages such as need assessment, planning, implementation and evaluation. The systematic nature of this procedure provides the needed clarity in addressing many critical steps which must be satisfied to develop successful programmes.

Programme Objectives for Ecotourism

➢ To increase awareness of the endangered species within the community

➢ To allow a 10 per cent increase in the number of participants in the programme

➢ To encourage participants to identify animals list as the most threatened

➢ To organize more outdoor component of the field trip and interactions

➢ To make service providers aware of certain types of performance objectives

As travelling and seeking enjoyment through ecotourism activities is a part of Social Exchange Theory, Searle and Brayley (1993) explain that people enter into recreation and tourism programmes through social relationships. It leads to create situations that influence the amount of experience of visitors at ecotourism sites. These relationships can be sustained when rewards are valued and costs do not exceed benefits. It may be explained that when participants do not receive value for their money, they tend to discontinue relationship with service providers. The success of ecotourism philosophy or approach depends on the provision of ensuring quality service and accreditation and certification from many national and international agencies. The collaboration is essentially required to provide guide training, environmental education and facilitation to local community members to participate wholeheartedly.

Programming for Motivation

The principles of ecotourism are meant for service providers, community and tourists to respect responsibly at ecotourism sites. These principles are framed after examining the place of ecotourism with reference to the environment, the nature of human activity, the nature of human nature and the nature of human relationships. Ecotourism activities must satisfy travel motivations. According to Kahle (1983), ecotourism sites need to be preserved with the help of stakeholders and all of them are connected with certain fundamental values such as fun and enjoyment in life and excitement, self-respect, warm relationships with others, sense of accomplishment, self-fulfillment, security, sense of belonging and being well respected. These are universally accepted and respected. The first six motivational aspects are internally motivated values. However, the first two motivations are related to hedonistic type of tourists. while the last three are externally motivated ones. These may include reducing/ reusing/recycling, harmony, exploration and multiculturalism, preservation of landscapes, biodiversity conservation, integrity, learning, service and knowledge.

Optimal arousal is defined as a psychological construct explaining the level of mental stimulation at which physical performance; learning or temporary feelings of well-being are maximized. Physical performance is linked with levels of arousal and it increases performance. However, too much arousal (stress) leads to decreasing performance, just as too little arousal stifles performance (boredom). People seek an optimal state of arousal in their participation in order to maintain a state of sensoristasis or homeostasis.

According to Ewert (1985), experienced mountain climbers are motivated by intrinsic factors such as exhilaration, challenge, personal testing, decision making and locus of control; whereas, inexperienced climbers participate in the same activities due to extrinsic reasons, including recognition, escape and social motives.

Programming For Meeting Personality Needs

Personality is the sum of the unique psychological qualities of an individual that influence a variety of characteristic behavior patterns in relatively consistent ways across different situations and over time. Behaviour is a result of the psychological qualities of a person which remain fairly consistent over time. There are five main personality factors such as extroversion, agreeableness, conscientiousness, neuroticism and openness to experience. The first and fifth factors seem to have the most applicability to ecotourism and tourism in general. Plog's (1972) found that allocentric tourists are those travellers who seek novel, adventurous and unstructured experiences and they can be compared to extroversion. According to Zuckerman's (1979) sensation-seeking scale may be compared to allocentric tourists. This identifies a personality trait matching for novel, varied, complex and risky experiences.

Programming Strategies

➢ **Trickle-down Effect:** It is a strategy at the highest level trickling down to the consumer.

➢ **Hedonist/Individualistic Nature**: It is a type of programming that gives stress on the pursuit of pleasure and promotion of individual forms of creative expression rather than stereotyped activities

- ➤ **Programming by Objectives:** It defines objectives for implementation and evaluation.

- ➤ **Programming by Desires of Participants**: It is an approach connecting from the actual expressed desires of participants to actual services

- ➤ **Programming by Perceived Needs of Participants**: It is approach to understand anticipated needs of participants without seeking inputs from participants.

- ➤ **Programming by Cafeteria Style**: It presents and creates provision of several different activities/services for customers to choose from alternatives.

- ➤ **Programming by External Requirements**: It is developed to evaluate programmes.

Programming by objectives and Programming by external requirements are some of the approaches to appeal tourism service providers at ecotourism sites.

Guidelines for Good Ecotourism Programming

- ➤ **Placing Needs of Participant:** It is a committed efforts of tourism service providers to go by the goals.

- ➤ **Commitment to the Ideals of Ecotourism:** Tourism entrepreneurs should be consistent with the values and ethics of ecotourism.

- ➤ **Protection of Participant's Rights:** The relationship be based on trust, respect and confidence to sustain the mutual benefits.

- ➤ **Acquisition of Adequate and Appropriate Knowledge:** Tourism service providers should provide enough scope to their professionals or employees to acquire sufficient education or work experience to take the responsibilities of the job.

- ➤ **Practice Highest Standards of Professional Service:** Service providers should be consistent in delivering uncompromising services day in and day out.

- ➤ **Continuously Upgrading Professional Knowledge, Skill and Ability:** The programmer must be motivated to pursue learning and advancement to keep abreast of current trends and concerns.

> **Ethically and Equitably Operating Tourism Establishments:** There must be transparency and honesty with the client in order to avoid of being coerced and bribed.

> **Maintaining a Collaborative Relationship:** It is essential to maintain a two-way dialogue between the provider and participant rather than subordinate relationship

> **Self-regulation:** It is the responsibility to establish performance guidelines/standards. Operators must regulate their behaviour accordingly.

> Contributing to development of profession: Professional ecotourism operators must make all attempts unselfishly to share knowledge, skills and abilities for the welfare of community in particular and other stakeholders in general.

These guidelines stand for imbibing more ethical and humanistic values in the delivery of services. More importantly, customers must be valued as more than simply a means to a financial end. Valuing and practicing equity, high standards, collaboration with others must be given highest priority in the ecotourism.

Role of Eco-Tour Operators

According to the Saskatchewan Tourism Education Council (1997), a tourism small business operator is an individual who is:

> Accountable for planning, decision making and management of day-to-day and long-term operations

> Operates a business in one or more of eight identified sectors of the tourism industry.

According to Weaver and Oppermann (1999), the primary role of a tour operator is to provide a package of services such as room, food, transport, guide, reading room, etc. Tour operators combine these services from several service providers either directly or indirectly. According to Mitchell, (1992), responsibilities of tour operators is circulate informative brochures, confirmation of services, issuing tour vouchers, paying commissions, handling financial transactions, coordinating all passenger

manifests, as well as advertising, sales, promotions and other operations. Ecotourism service providers may operate a business in one or more of the sectors, depending on the focus of the business enterprise.

Benefits of Eco-Package Tour

For the perspectives of consumer, the benefits of eco-package tour to ecotourism places may include

➢ Elimination of a great deal of involvement and transactions

➢ Minimization of costs, time, costs and risks

For the perspectives of operator, benefits of eco-package tour include

➢ Expansion opportunity to expand the market base and region

➢ Enhancement of ability to maintain a consistent quality on each trip

➢ Reduction of risk through the development of stable and structured systems

For example, in a specialized tourism and travel market, ecotourism operators target a niche market to entice potential buyers of package tour for wildlife viewing, bird watching, trekking, ethic tour. As such, specialized tour operations have many more advantages over the operations of tour for common interest package tours. The specialized eco-tour operators generally book smaller hotels adjacent to protected areas. Arrangements around transportation, accommodation, and food services can be made in situations which warrant such changes.

According to Swarbrooke (1999), the smaller tour operators can survive by taking the following strategies.

➢ Selling holidays at prices that generate a higher profit margin per customer than mass-market vacations

➢ Relying heavily on repeat purchases by loyal customers

➢ Offering high levels of personal service

➢ Providing niche market, specialized products that are not offered by the mass-market Operator

Step-By Step Progamming for Reception Upon Arrivals

➢ Greet visitors with traditional reception upon arrival (Namskar and Bonjour)

➢ Smile and be friendly with visitors

➢ Get to know the names of group members

➢ Introduce you and your company and greet everyone spread your attention around

➢ Size up the group and ensure meeting the needs of guests

➢ Make sure formalities to be done along with settlement of payments

➢ Introduce guide or tour manager

➢ Introduce the objectives and principles of ecotourism

➢ Arouse interest and enthusiasm towards ecotourism activities by giving brochures

➢ Make announcement of itinerary

➢ Make repeat announcement of information about the degree of difficulty, equipment, clothes in the tour

➢ Make time for a last minute restroom break

➢ Incorporate an ice-breaking activity or other activities/discussion to make the guests alert

➢ Orient audience to theme by distributing information packets or describing routes

➢ Ensure the return of each member to the coach

➢ Give people something to look for or think about between stops

➢ Look for or capitalize on teachable moments at every opportunity

For example, the Professional Guide Institute (PGI) provides training in the areas of wild lands heritage, backcountry leadership, interpretation and outfitter operation with the mission to identify, enhance and disseminate the natural interpretive and educational resource of the outfitting industry so that outfitters and guides can offer the highest quality of experience to the public.

Ecotourism operators would include elements of positive affect in their programmes. This may include

- Some freedom to make choices about activities
- Time spent involved in these activities
- Some control over the amount of free time, instead of being continuously directed from one facility or attraction to another.

Programming the service is concerned with generating positive experiences for participants through an array of services. The operator make all endeavours to increase the chances of success of eco-package tour by

- Tapping into the anticipation stage through effective advertising
- Ensuring comfortable and enjoyable stay during travel to the site
- Exceeding the eco-tourist's expectations on site through a variety of educationally based experiences
- Ensuring safe and enjoyable rerun home
- Providing follow-up literature on the attractions of the trip for reflections to return to
- Continue travelling as an eco-tourist to other sites

Conscientious Tourism

It is an abstract for of tourism that entails traveling with one's conscience and connecting with others in a particular place. This form of eco-travel provides opportunities to the visitors to have a deeper understanding about people, place, culture and nature. Eco-tourists take this much of pain and careful steps for preservation of ecosystem and culture. Social and environmental footprint is a core value of the conscientious traveler as their visits must not lead to loss of biodiversity and erosion of cultural values. Thus, ecotourism programming can inculcate the following principles for promoting conscientious tourism.

- Environmental conservation
- Community participation
- Profitability

Environmental Management System through Programming

Programming refers to the setting of a formal agenda for action. This includes:

➢ Assessing current environmental management

➢ Establishing and implementing a programme for an environmental management system;

➢ Prioritizing significant impacts

➢ Setting environmental targets

➢ Establishing a programme to achieve environmental targets

Summary

Programming fine tunes the activities for participants to feel and experience more gains that what they spend. Planning and programming are two important dimensions of ecotourism. The value of visiting ecotourism sites can better be promoted with systematic planning. Recreational or outdoor experiences can be programmed in such a manner that eco-tourists can learn, admire and enjoy the beauty of nature and its important elements that can related from the stage of anticipation to the reflections of site visit on return to home. This is the way tour operators are engaged in designing packages for larger benefits of visitors and community. Programming can minimize negative impacts and maximize positive impacts at a particular ecotourism sites as visitors would be guided by the step-by-step conduct of tour.

Thus, each ecotourism site aims to attract visitors to offer learning experience that can be possible with the help of programming. This chapter has however described on meaning and concept of programming along with objectives and programming for motivations and personality needs. This chapter has also presented the programming strategies and guidelines for effective ecotourism programming. Role of tour operators and benefits of package tour to ecotourism destinations along with steps for organizing the best programming for the eco-tourists have also be discussed in this chapter. Conscientious tourism and environmental management system through programming have further simplified the understanding of the concept of programming.

Self Assessment Questions

1. Explain the meaning and evolution of responsible tourism.

2. Why there is a need for responsible tourism? what are the social responsibilities of tourism industry?

3. What are the forms of alternative tourism?

4. What are the objectives of responsible tourism? and explain the stages of executing responsible tourism plan.

5. What are the guidelines for responsible tourism? and explain the significance of triple bottom line for promoting responsible tourism.

6. Trace the evolution of concept of sustainable development?

7. Explain different dimensions of sustainable tourism development.

8. Which are the principles of sustainable tourism?

9. Explain the significance of Agenda 21.

10. Explain the significance of sustainable ecotourism and resource management.

11. Explain the concept of tourism policy and justify why there is a need for ecotourism policy?

12. Explain the objectives of ecotourism policy and how the process of ecotourism is formulated?

13. How can the linkages between ecotourism policy and planning be established?

14. Which are the ecotourism policy guidelines for the Protected Areas?

15. Explain the meaning and evolution of carrying capacity.

16. Which are the types of carrying capacity? how can these determinants of carrying capacity be applied for managing tourism development?

17. How can the visitor impact management be maintained in Protected Areas? Explain.

18. Which are the approaches and hindrances of carrying capacity management?

19. Explain the meaning and concept of programming and recreation programming.

20. Which are the programme objectives for ecotourism? How can the programming for motivation and meeting personality needs be satisfied?

21. Explain the guidelines for good ecotourism programming.

22. Explain the roles of eco-tour operator and benefits of eco-package tour.

23. Present the step-by step prorgamming for reception upon arrivals.

24. Explain how can the environmental management system through programming be carried out?

CASE STUDY

Community Based Ecotourism (Cbet) In Sikkim

The natural scenic beauty of Sikkim is unique and appealing. The wild orchids and the majestic view of Kanchenjunga have made Sikkim a finest and preferred destination for nature lovers. Ecotourism is apt for Sikkim to capitalize for employment creation than venturing to any other forms of tourism that may cause havoc to the natural ecosystem. As such, the mainstay of economy of Sikkim is Tourism and tourism is a sector that can generate income and employment for the people. The Mountain Institute, USA, and the GB Pant Institute for Himalayan Environment and development studied the potential of Ecotourism in Sikkim on a pilot basis in 1996.

The name of the pilot project was the Sikkim Biodiversity and Ecotourism Project. The pilot study suggested for the formation of NGO namely the Kanchenjunga Conservation Committee (KCC) in Yuksom in West Sikkim. It implements good practices in the severely overused Dzongri trail leading to the foot of the Mt. Kanchenjunga. A study has estimated that each ecotourism project may need about Rs. 30 lakh to run and sustain and it will create Rs. 800 social capital in the process of percolation. The number of livelihoods directly and indirectly as estimated will be in the order of about 5.5 lakh.

Community Based Ecotourism (CBET) in Sikkim is an approach to promote Participatory Forestry Management for sustainable development. The objective is to find a perfect balance between people, environment, conservation and development. This concept of 'community based-ecotourism aims to reduce the dependence of local community upon the natural resources. It gives importance to conservation of local traditions, culture & heritage and environ. Community members in Sikkim appreciate and reciprocate ecotourism as they play central role in the conservation of natural resources. The Quebec declarations of International Year of Mountaineering and Ecotourism have been adopted to make Sikkim as a sustainable ecotourism destination. Hence, Ecotourism & Conservation Society of Sikkim (ECOSS) was formed in 2001 after having taken the constructive views of civil society members. The society has been actively spearheading the work for reducing tourism impacts on the fragile eco-system and biodiversity Sikkim. The members of civil society were very much concerned to find alternative developmental model that can be sustainable and community beneficial and oriented. Thus, the primary mandate of ECOSS is to build awareness and help formulate an eco-tourism business model for pro-poor. The ECOSS in partnership with The International Ecotourism Society (TIES) and the Ford Foundation organized the first International Conference on Ecotourism for South Asia in Sikkim in January 2002 to discuss prospects, issues and challenges of ecotourism. The primary function of ECOSS is to create awarenss among the ecotourism stakeholders and undertake study on ecotourism in Sikkim. ECOSS has three running Community-based Ecotourism Projects located in North Sikkim in Dzongu, in East Sikkim in Pastanga, in West Sikkim in Yuksom and in South Sikkim in Kewzing.

Questions

1. What are the main attractions of ecotourism in Sikkim?
2. Why did the Government of Sikkim take lead role in implementing ecotourism projects?
3. What are the roles of the KCC and ECOSS in Sikkim?
4. What is about the three pilot projects?

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UNIT - IV

Unit Structure

Lesson 4.1 - Ecotourism Trends, Issues & Challenges

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the prospects of promoting ecotourism

➢ Know the obstacles to make ecotourism sustainable and feasible

➢ Find the fundamental issues preventing ecotourism from meeting expectations of stakeholders

➢ Be familiar with the growing challenges of ecotourism projects

➢ Think about the remedial measures of the issues and challenges of ecotourism

Ecotourism is an alternative to mass tourism that underscores the importance of maximum percolation of tourism revenue into the community. The demand for visiting ecotourism attractions is growing significantly and the nature travel has become a major segment of international travel. Ecotourism organizations go for using green travel, eco-travel and eco-tour, eco-hotel, eco-vacation, etc to entice the nature

lovers and admirers to satisfy their demands. The more would be the number of tourist arrivals, the better would be the prospects of generating profits. Most of the ecotourism sites are suffering of the chronic issues like carrying capacity, lack of natural resource management, overuse of ground water for maintenance of swimming pool, golf course, garden, kitchen and guest use, deforestation, soil erosion, trampling, contamination of running water, unequal distribution of tourism revenue, commoditization of culture, tokenism, apathetic and antagonistic behaviour of community, green travel experience and novelty experience to the tourists, etc.

In addition, ecotourism sites have many challenges, such as seeking overwhelming cooperation and participation of community members, adoption of energy saving mechanisms, management of solid waste and recycling of the wastes, compensatory plantation, eco-labeling and eco-certification, etc. Thus, ecotourism cannot be a key to sustainable development if these issues and challenges are not addressed by the governments and service providers. In this lesson, you will read about the ecotourism trends along with issues and challenges of ecotourism.

Ecotourism Trends

Tourism is one of the most dynamic economic factors in the 21st century. The main objective of tourism development is to achieve economic development. The estimate of World Travel and Tourism Council (WTTC) indicated a 4.5 per cent per annum increase in the total amount of tourism and travel economic activity between 2002 & 2012. The earning from global tourism contributes 10.7 per cent of global Gross Domestic Product (GDP) and 8.2 per cent of global employment.

The World Tourism Organization (WTO) estimated in 1997 on Nature Travel that eco tourism generated about seven per cent of all international level expenditure and the global spending on ecotourism is expected to register a 20 per cent annual growth and it is five times more than the average rate of growth in the tourism industry as a whole. Moreover, the volume of ecotourism market in developing counties is estimated to be the range of 5 to 10 billion annually.

According to the International Ecotourism Society (IETS) in 1995, the numbers of nature tourists constituted 40 to 60 per cent of all

international tourists, out of which 20- 40 per cent were wildlife tourists. In the UK, the growth of tourist arrivals for ecotourism activities was around 20 per cent per annum during the same time.

For example, it is estimated that each lion is worth US$ 27,000 per year in Kenya and each elephant heard is US$ 610,000 in terms of visitor revenue per year. Further, each hectare of the park is estimated to yield profits that are 50 tones more than the net profits expected from the land used for agriculture products.

The new global environment movement has created mass campaign against mass tourism activities as a form of development tool since 1970. Thus, a new form of tourism has emerged as Ecotourism to support the development without causing harms to the environment. Especially in 1990s, ecotourism was identified as the fastest- growing sector with 20 per cent to 34 per cent growth in a year. With declaration of the International Year of Ecotourism in 2002 several fundamental changes of perceptions and approaches of ecotourism have happened in different countries. As a result, ecotourism and nature-based tourism are growing three- time faster than mass tourism.

Regardless of the natural scenic places and beauties, countries have resorted to ecotourism for conservation of ecosystem and economic well-being of local people. Leading countries which have made significant work on ecotourism include Costa Rica, Galapagos Island, Sri Lanka, Tanzania, Kenya, Zimbabwe, Nepal, Australia and United States of America. These countries have created a dynamic system to take care of non-consumptive aspects of ecotourism. As a result, these countries are immensely benefited from the ecotourism projects.

Trends for Participating in Ecotourism Activities

According to Filion et al. in 1994 and the USTC, 1993, the Global Estimates revealed that 32 per cent of visitors search for the scenery, wild plants and wildlife viewing in Australia and New Zealand, whereas 80 per cent of tourists visited Africa continent for viewing and joining in the wildlife safari as wildlife as a primary motivation. Similarly, 69-88 per cent of the European and Japanese travelers found wildlife and bird watching as most attracting things for them in North America. About 50-79 per

cent of visitors preferred to visit the protected areas in South America. In the USA, over 100 million people participated in wildlife activities, of which 76.5 million were involved in wildlife viewing and 24.7 million were interested in bird watching activities and it generated over $20 billion in economic activity It was estimated that tourism in the natural and wildlife settings accounted for 20-40 per cent of international tourism receipts.

According to Ziffer (1989) pointed out that the overall number of nature-based tourists grew at about 20 per cent annually that could also result in the increase of operators offering nature tours. The World Tourism Organization (WTO) in the early 1990s predicted an annual growth rate of 10-15 per cent in the demand for ecotourism.

According to Starmer and Smith (1991) found that the number of tourists taking ecotourism holidays grew three times faster than those who chose mainstream holidays. Ecotourism will represent 5 per cent of the global holiday market by 2024. The global estimate revealed that, 32 per cent of visitors search for the scenery, wild plants, and wildlife as a part of their trip in Australia and New Zealand. In Africa, 80 per cent of tourists who visited the countries in this continent named wildlife as a primary motivational attribute. In North America, 69-88 per cent of the European and Japanese travelers considered wildlife and bird watching to be the most important motivations. In Latin America, 50-79 per cent of the visitors advocated for nature-based tourism which represented an important factor in choosing such destinations. In America, it was claimed that over 100 million people participated in the wildlife activities, of which 76.5 million were related to viewing wildlife, and 24.7 evinced interested in bird watching.

According to Filion et al. (1993) uncovered that ecotourism generated more than US$ 20 billion by the way of economic activities with an estimated growth of 30 per cent per year. Cater (1993) found that annual tourist arrivals during 1980s in certain ecotourism destinations were reported to be more than double while in the case of Belize, tourist receipts were reported to witness ten-fold increase. It was estimated that tourism in the natural and wildlife settings accounted for a total of 20-40 per cent of the international tourism receipts while it will increase by 20-50 per cent per year.

According to Animon et al. (1997) found that most of the protected areas, which would have been converted into ecotourism destinations, are unnoticed and ignored by the domestic and international tourists due to lack of basic facilities. They emphasized that ecotourism plays a major role in planning and policymaking and brings employment opportunities to the local community living in and around the parks.

According to Rodgers et al. (2000) suggested that the Protected Area Network of India can be enhanced to 160 National Parks and 698 Wildlife Sanctuaries accounting for about 5.69 per cent of the total geographical area. For instance, Kerala forms an important part of Western Ghats with 324 kms protected areas covering six per cent of the total geographical area of the state. About 26.6 per cent of the total geographic area of the state is under forest cover as compared to 19.4 per cent for India. Tourists with interest in visiting ecotourism places largely pay their visit to Periyar Tiger Reserve (PTR) and more than 2, 38,047 tourists visited the Tiger Reserve in 1991-92 that accounted for 8.4 per cent of the total tourist arrivals. Furthermore, it was reported that 216,621 visitors in 1995 and 476,824 visitors in 2009 visited the sanctuary respectively. It is reported to be 45.49 per cent growth between 1995 and 2009.

Issues of Ecotourism

Environmental

Ecotourism is otherwise named as environment friendly tourism. The primary purpose of ecotourism is to contribute towards the preservation of environment around which it operates. On the contrary, many ecotourism destinations become common destination to attract visitors with lack of knowledge on the preservation of nature and culture. These types of visitors expect more from the nature than what they can contribute to the conservation of nature. Nature has limited resources and tourism demand has to be satisfied with the availability of resources. When the destination does not have any mechanisms to regulate to inflow of visitors, the place becomes overcrowded with tourist footfalls and the demand exceeds the physical capacity of resources. Ecotourism destinations now face the problem of drinking water and clean air due to the lack of regulatory steps by the government.

Ecological

Ecotourism is for the ecology, by the ecology and of the ecology. Leaving ecology behind the identification of ecotourism will be seriously questioned or it may not be called as ecotourism. All the activities of ecotourism must be friendly to the ecosystem and its living and non-living organisms. As it is found from the various ecotourism sites or projects in India or elsewhere in the world, tourists and service providers largely break the rules and regulations for the sake of personal comfort and enjoyment without looking into the flora and fauna. Ecotourism sites cannot stop the gross disobedience of visitors and service providers as both aim to maximize more than what they spend for. Many ecotourism sites are just symbolic in nature and mechanisms to assess the impacts of ecotourism are not strictly used. Thus, the objective of preserving ecology by promoting ecotourism may not be fulfilled when ecotourism does not contribute for increasing number of endangered species and plants. Several other ecological issues like water contamination, noise for animal breeding, clearance of forest, erosion of soil, exploration of heavy ground water for golf course and linen, lack of solid waste management, lack of sewerage treatment, etc.

Social

The social aspect of ecotourism explains the type and scale of social change that can happen at the ecotourism site. It is a form of social development that helps local community people move from stage of life to another stage of life with the privilege for enjoying all opportunities. As such, ecotourism sites are located in the backward and protected area and tribes, semi-tribes and village people do generally get opportunities of dignified income and employment. It is the ecotourism that provides income and employment while taking the skill and knowledge of people from the local community. Local people are happy with the ecotourism projects as they do consider it as a burden to them rather it is a benefit for the while community. It is reported that many ecotourism sites face several social issues like prostitutions, child labour, anti-social activity, tokenism, antagonism, conflicts, harassment, etc. The host community is more prone to these types of social issues as majority of community members are not educated and aware of the consequences of development.

Cultural

Along with the nature, culture is an important component of attraction of ecotourism and eco-tourists wish to learn and experience the local culture that is largely unique in nature. Folk dance and music, cuisine, marriage, festivals, etc are those cultural elements that entice visitors to stay for longer tome to understand while interacting and participating with these events. However, it is reported that tour operators organize folk dance programmes for two reasons: one is to present the cultural object to the guest and another is to preserve the folk dance through participation of community members. Many folk dances have been commercialized and commoditized due to the uncontrollable growth of tourism activities in the ecotourism sites. The host community has started remixing the western dance with folk dance in order to satisfy the visitors. Touristic culture has almost dominated the ecotourism destinations and the local indigenous culture is affected by the confluence of tourists from different cultural backgrounds. More importantly, tour operators and accommodation operators are highly irresponsible in doing several activities to satisfy visitors without having any commitments towards the preservation of local culture.

Economic

One of the fundamental objectives of ecotourism is to provide economic benefits that can encourage local people to participate in the decision-making process. Economic empowerment is an ultimate objective that can enable people to earn sufficiently to meet physiological needs in the rural areas. When ecotourism is identified as an important means for providing food, shelter and clothing as basic necessities, the issue of hunger, malnourishment, undernourished, poverty, unemployment, etc can easily be solved. It is however difficult task to find the practical solutions of these issues through ecotourism as majorities of ecotourism sites employs non-local people and procure non-local products for which local economy remains to be unchanged.

Legal

Ecotourism is an alternative form of tourism that has low negative impact on the nature and culture of host community. Rules and

regulations are framed for all the stakeholders to perform their duties and responsibilities. Even though laws have been enacted to punish the indiscipline behaviour of tourists, service providers and community members, these are not enforced seriously due to the laxity and leniency of the government or ecotourism society. Thus, this has become a serious issue of checking the illegal and irresponsible activities.

Challenges of Ecotourism

Maintaining Carrying Capacity

Carrying capacity must be maintained in an ecotourism destination and many environmental elements are vulnerable to the sudden rise of tourism activities and development. Physical, social, economic, perceptual and aesthetic carrying capacity tend to face the excess pressure directly or indirectly due to the inflow of tourists along with tourist vehicles. It is a fundamental point to be discussed and debated to ensure the threshold limit of tourism development in an ecotourism destination. Thus, it is a challenge for government and tourism service providers along with the Ecotourism Society must assess the impacts and review of the ecotourism development.

Seeking Community Participation

Community participation is an important objective of ecotourism and it is different from other forms tourism for its concern for economic well-being of local people. It is found to be a challenging task to make community happy with the development through ecotourism activities. Community members may be reactive and antagonistic due to lack of awareness and knowledge of their roles and contributions. Governments and ecotourism operators find it difficulty in convincing the local people about the benefits of ecotourism as community members are generally biased towards the tourism.

Seeking Supports from All Stakeholders: It is not alone community that plays pivotal role in ecotourism projects that other stakeholders like tour operators, accommodation operators, food suppliers, shopkeepers, government, NGOs and tourists have also much greater role in developing and maintaining ecotourism sites. The problem is to bring to one fold

and convince them with the policy and programmes to be implemented. There are conflicting interests and contradictions in accepting and rejecting tourism development in the locality. Thus, it has become a huge challenge before the government to coordinate with all the members as the present of each stakeholder is mandatory for sustainable ecotourism development.

Promoting Responsible Ecotourism: Responsible tourism aims to sensitize the tourists and service providers along with community members on do's and do not's to be followed at the ecotourism sites. Fair distribution of revenue and responsibility is the ultimate objective of responsible tourism. It is not an attraction unlike ecotourism, but it is an ethical approach to ensure the discipline in the process of promotion of ecotourism. Thus, it is not an ordinary challenge to make each stakeholder to be responsible ethically and morally towards the preservation of culture and heritage and conservation of nature.

Promoting Sustainable Ecotourism

The sole of objective of ecotourism is to preserve the resources that can meet the present and future tourists and host region without having reduction in the quality of resources. It is certainly a challenging task before the government to implement the principles of sustainable development for ecotourism to grow in an environment that can be self-sufficient. More specially, local resources should be utilized optimally and local people should be hired for working in tourism establishments. This is way, the objective of sustainable ecotourism can be realized.

Alleviating Poverty and Unemployment: Ecotourism should be pro poor and maximum benefits should go to the people in the bottom of society economically and socially. Poverty alleviation though promotion of ecotourism in a backward area is certainly possible provided there must be well-defined plan and policy to empower the local people economically. Poverty is a function of ability to buy foods with calories for human body.

Thus ecotourism can alleviate poverty by providing direct and indirect source of income and people can not only meet the basic needs like food, shelter and clothing but also meet the other human needs as they start earning more income. Unemployment is a serious concern

in the developing and third work countries and ecotourism can solve the problem of unemployment. This is a very big challenge before the authorities of ecotourism to eradicate poverty and unemployment as it is an issue connected with the economic and industrial policy of the country.

Maintaining Equity

Ecotourism is otherwise called as tourism for equity in the society as it aims to provide equitable benefits and rights to enjoy the facilities and amenities. It is a challenge to remove prejudices that stand as barriers to the equitable distribution of income. This is not free from political control and manipulation. People are largely not aware of their rights and privileges.

Integrating with Forest Department

All the ecotourism sites are located in the nature that includes forested area and wildlife. These forest areas come under the direct control of the Forest Department for which permission is sought to start ecotourism project. Forest Departments are conservative and rigid in allowing tourism activities to grow in the natural environment. Many potential ecotourism projects are untapped due to the rigid rules of Forest Department. Thus, it is a challenge to integrate the Department for indentifying and maintaining ecotourism in the protected sites.

Implementing Government Policy and Programmes

Ecotourism is promoted in a very fragile environment. Any negligent acts of ecotourism may cause irreparable loss to the biodiversity. Governments are concerned for the policy and programmes to be formulated and implemented at the ecotourism sites. Most of the objectives and guidelines of policy do not allow tourism operators to operate in the ecotourism sites. Many prorgammes related to preservation of forest and animal with the direct participation of community, tourism service providers and government are not implemented due to lack of political patronization.

Monitoring the Ecotourism Projects

Implementation of ecotourism projects is not the end of ecotourism projects rather monitoring the progress of ecotourism activities is more important. It is observed that many ecotourism projects are not being maintained as per the standards or code of conducts of the UNWTO or TIES.

Issues of Wildlife Tourism

As wildlife is one of the primary motives of eco-tourists and one of the activities of ecotourism, Page and Dowling (2002) came out with a more recent estimate of wildlife-related tourism that represented up to 40 per cent of international travel. These are the following issues of ecotourism.

➢ Many of the world's natural areas remain under threat and there will be heavy loss of biodiversity and resources as conservation remains to be inadequate.

➢ Alarming climate change has increasingly become a major threat affecting the very resource base that supports ecotourism, natural areas and indigenous communities.

➢ Poverty alleviation through the promotion of pro-poor tourism has been recognized as a key responsibility of the tourism service providers and government administration.

➢ TIES continues to act as a global source of knowledge and advocacy uniting conservation, communities and sustainable travel among members in over 90 countries and affiliations with over 40 national and regional ecotourism associations.

Ecotourism has achieved a great deal of success since the IYE was celebrated worldwide. However, the following challenges need to be addressed.

➢ Interest in visiting natural areas, experiencing authentic local living and observing wildlife has continued to grow, bringing opportunities but also pressures, and the increasing need for best practice management.

➢ The term ecotourism is more widely recognized and used, but it is also abused, as it is not sufficiently anchored to the definition. The ecotourism community, therefore, continues to face significant challenges in awareness building and education and actively working against green- washing within the tourism industry.

➢ More governments have developed ecotourism strategies, but not all have been well integrated into mainstream tourism and environmental policies, or supported by action.

➢ Increasing numbers of projects around the world have striven to establish ecotourism enterprises as a means of enhancing sustainable livelihoods and contributing to conservation, yet many remain economically fragile and lack adequate access to markets.

➢ Stronger leadership and strategies are needed in order to substantially decrease ecotourism's carbon footprint generated from multiple sources including facility operations and transport-related greenhouse gas emissions. The importance of carbon management strategies needs to be integrated into operational guidelines for ecotourism, including TIES Code of Conduct.(ii)

➢ Many countries now have national and regional ecotourism associations. Their role in providing links between governments, NGOs, businesses and citizens and strengthening ecotourism globally must be recognized, and more support needs to be provided for their work.

➢ The ecotourism community is expected to be more inclusive of innovative and socially equitable approaches. This innovative approach must include the active mobilization of Indigenous communities, women, and local professionals and designers as recognized and equal business and sustainable development leaders.

➢ As a leading international organization serving as a global network of industry practitioners, institutions and individuals, TIES must continue to acquire and disseminate practical and innovative tools.

Summary

The demand for ecotourism is growing and nature travel is an important segment of international travel. There are new trends such as green travel, eco-travel, eco-tour, eco-hotel, eco-vacation, etc. More visitors wish to spend the vacations in the serene and scenic beauty of hills, mountains, deserts, rivers, lakes and sea. The present trend of ecotourism gives vacation with wellness facility rather than offering nature-based activities. Hotels and resorts are also committed for providing facilities and amenities as per the availability of natural resources. Educational institutions organize the eco-travel to national parks and wildlife sanctuary for the students to understand and appreciate the natural beauty and its piousness. This lesson has presented the current and past trends of ecotourism along with issues and challenges of ecotourism and issues of wildlife tourism.

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Lesson 4.2 - Community Participation in Ecotourism

Learning Objectives

After reading this chapter, you should be able to

➢ Explain the meaning and significance of community participation

➢ Describe the various types community participation

➢ Understand the relationship between community participation and ecotourism

➢ Know about the benefits of ecotourism percolated to local community

➢ Know the roles and functions of community in sustaining ecotourism projects

Ecotourism is a community-oriented and community-driven approach to provide maximum autonomy to the community members to take decisions and manage the facilities and amenities. Along with conservation of nature and visitor satisfaction, ecotourism projects focus on the roles of community to take decisions for distribution of benefits from the tourist expenditures. It is a means of providing equal opportunities in enjoying the privileges, like skilled, unskilled and semi-skilled jobs in their own localities. Research on ecotourism has so far outlined the decisive role of community members to enjoy the benefits that would alleviate poverty and malnutrition. As such, all those ecotourism sites are located at the backward regions and people are economically poor and socially backward in improving their well-being.

Governments in the least developed or third-world countries have embraced ecotourism as social and economical maladies to offer income opportunities to maintain dignified life. Surprisingly, many ecotourism sites are symbolic in nature and there are no well-defined objectives to manage the ecotourism resources. As a result, ecotourism destinations have been transformed to become the mass tourism destinations with

much damage to the ecology and environment. Mere decision-making of community does not give permanent solutions to the ecotourism sites as ecotourism has certain impacts on the nature.

It is proven at the places where community members are given the central role to play in hosting the guests, maintaining the facilities, sharing the benefits and contributing their self-less efforts in conserving the nature and its resources. In this chapter, you will find the roles of community in the ecotourism projects.

Origin of Concept "Community" and "Community Participation"

The word *community* has been used in an aggregated sense to represent a group of citizens in a given geographical space. Godde (1998) defines that community is based on shared profession, religion and geographical location and interest in tourism or on the interactions and relationships between the many groups.

Moreover, Community-Based Tourism (CBT) is planned and managed by a group of individuals/households comprising the community with the ability to undertake enterprising ventures. It is mostly managed by a private entrepreneur whose activity is set by community and is accountable to it.

The initiative for the creation of protected areas was taken almost 125 years ago for preservation of wildlife and forest resources. The declaration and demarcation of protected areas and their boundaries in the developing countries has resulted in the conflicts between local community members and protected areas authorities. In the last four to five decades, huge loss of animal and human life was reported in the developing countries due to the encroachment of human habitation into the animal habitation. The fundamental cause for this unnatural conflict is the developmental approach that brings benefits to the people and poses permanent threats to the ecosystems. Hence, protected area authorities have embraced the approach of integrating the local population into the conservation of forests and wildlife in a more dignified way.

Taking this objective in mind, the concept of community-based ecotourism was started with an aim for supporting biodiversity

conservation, particularly in the developing countries linking conservation and local livelihoods to alleviate rural poverty and achieve the objectives of sustainability. Local communities must be given a great role in the decision-making capacity and must be actively involved in the protected area policies and planning. It is reported that a majority of the local people suffer in one way or other from tourism related developments in the protected areas.

Benefits of Community Participation

Protected areas in the North Western Territory in Canada generated CAD$ 12.86 million in the form of labour income while creating employment to 488 persons. Similarly, tourism generated annually about US$ 7,00,000 in a year in Rwanda's Parc National des Volcanoes (WTO/ UNEP 1992). Wells (1994) found that receipts from entry to parks and from trekking permit for those parks generally exceed one million US dollar in Nepal.

But, it is found that people who are benefited while a vast majority of the local people have been displaced due to the declaration of protected areas. For example, the non-locals get menial jobs due to the lack of skills and knowledge for which tourism stakeholders hire skilled tourism professionals from the outside at the Royal Chitwan National Park. The park is a protected area promoting ecotourism in Nepal.

For instance, local people hardly get any benefits from the nature-based tourism activities in the protected areas in Belize, Costa Rica, Dominica, Ecuador and Mexico. In order to make more community involvement in protected areas, the Zimbabwean CAMPFIRE (Communal Area Management Programme for Indigenous Resources) and the Nepalese ACAP (The Annapurna Conservation Project) work for the sensitization of community about their roles and responsibilities towards the protected areas. Community participation can be more effective with the provision of direct benefits when conservation and local livelihood issues are to be resolved in a much better way.

For example, protected areas may face serious challenge in the future whenever local people remain impoverished and are denied access to needed resources inside" Ecotourism projects have become ineffective

in La Gamba due to the lack of community participation. It is reported that there is no much change in demand for local products due to the rise in hotel business. Hotels and restaurants should procure the local products and ecotourism operators should work towards better interaction between tourists and local residents through the cultural tours to the villages.

Types of Community Participation

According to Ap (1990), the Social Exchange Theory is a concept to explain the understanding of community. It is a concept to find to what extent residents generally receive something from tourism development. This also clarifies the way that people adopt the inherent power imbalances of development. There are three types of community participation.

According to Karlsen et al. (2005), citizen participation is regarded as very essential to make the planning process more effective, equitable and legitimate as long as participation is representative in nature with clear focus on collective interest as well as for their own groups.

According to Murphy (1985,p.171), "inputs from the concerned community groups could provide a balance to the sustainable tourism objectives of the business sector and possibly encourage greater variation and local flavor in future projects", while Simmons(1994,p.98) asserts that "residents of the destination areas are seen increasingly as the nucleus of the tourism product". Catley (1999) stressed that the motive behind community development is to educate and remove the stigma of charity and involve local people in the decision-making process.

➢ **Functional Participation:** It is a type of community involvement to facilitate the successful resolution of the project. This type of involvement may include decision making, when it is necessary to achieve project goals.

➢ **Interactive Participation:** It is a type of involvement for intrinsic reasons, wide involvement of stakeholders and openness to find the need for appropriate institutions and structures.

➢ **Self-mobilization:** It is a form of participation where expert advices are collected to help and inform community members in taking decisions

According to Keshav (2005), there are two types of community development namely general and ad-hoc. The general community development programme is mostly social in nature with a long-term perspective. The ad-hoc type of programme is problem specific with a short-term perspective.

Community participation is often regarded as one of the most essential tools, if tourism is to make a substantial contribution to the national development of a country. Tosun (2000) commented that community participation is seen as a useful tool for educating locals about their rights and laws and political good sense. Therefore, it is very important for public education through the host-guest relationships. Grossman and Tosun (2000) emphasized that community participation is a tool whose aim is to readjust the balance of power and to modify the local community views against those of the developers or the local authority. Participation lessens opposition to development, minimizes negative impacts and revitalizes economies.

According to Tosun (2006), community participation gives better opportunities for local people to gain benefits from the diverse tourism activities in their localities with positive local attitudes and conservation of local resources. The WCED (1987) has been promoting community participation for the protection and improvement of the quality of life of communities influenced by the tourism development. France (1998) mentioned that local participation includes the empowerment and involvement of communities in decision making, implementation and identifying local problems.

Arnstein (1971) has classified eight types of community participation like

- ➢ Manipulation
- ➢ Therapy
- ➢ Informing
- ➢ Consultation
- ➢ Placation
- ➢ Partnership
- ➢ Delegated Power
- ➢ Citizen Control

Pretty's (1995) has classified seven types of community participations

- ➢ Manipulative Participation
- ➢ Passive Participation
- ➢ Participation by Consultation
- ➢ Participation for Material Incentives
- ➢ Functional Participation
- ➢ Interactive Participation
- ➢ Self-Mobilization

Tosun (1999) gives a more precise typology of community participation

- ➢ **Coercive Participation:** The participation is mostly indirect, formal, participation in implementation but not necessarily sharing benefits, paternalism, non-participation, high degree of tokenism and manipulation.

- ➢ **Induced Participation:** It is a top down, passive, formal, mostly indirect, degree of tokenism, manipulation, pseudo participation, participation in implementation and sharing benefits, choice between proposed alternatives and feedback.

- ➢ **Spontaneous Participation:** It includes bottom-up active participation, direct participation in decision-making, authentic participation and self-planning.

Community Empowerment

Community empowerment is an important dimension of sustainable ecotourism and it is one of the objectives of ecotourism that governments largely assign the task to the local people to extend cooperation to the hotels, restaurants, tour operators, etc in the ecotourism sites. Empowerment is the means to achieve the goals of ecotourism as people largely get freedom for participating and sharing their ideas and thoughts for the ecotourism projects to sustain for long without having any adverse impacts to the ecology and environment.

It is one of the ways for transferring power and authority to take their own decisions and manage the resources for their own benefits and

benefits of all those connected with the ecotourism projects. If the revenue of ecotourism does not get accrued to national parks systems or local communities, there will be little economic incentive for investment in the recurring costs of conservation activities.

Community Participation for Sustainable Development

The success of ecotourism can be achieved effectively if community members are involved in the planning process from the beginning. Moreover, further likelihood of conflict and misinformation can be reduced to a large extent if local community members are actively involved in ecotourism planning. Planning must be done with the help of local community rather than involving outsiders to design plan for ecotourism development.

Robinson (1999) suggests three ways to achieve sustainable community participation.

- ➢ Collaboration
- ➢ Partnership
- ➢ Co-management

These three methods can include the host community and culture as a part of the wider sustainable development agenda.

According to Mallya (2006), the success of community-based ecotourism depends on local governance structure, inter-community relationship and partnership with NGOs and tour operators. Thus, community-based enterprises often take the form of a structural cooperation to play very active roles in providing accommodation, food, crafts, transportation and guide service directly to the visitors. Thus, community participation gives warning system to the service providers for violation of guidelines and helps managers avoid or plan for decisions.

Dixey (1975) described stages of irritation through community members around the tourism destination. The attitude of community is expressed as *euphoric, enmity, annoyance and antagonism.* This change of attitude occurs when community considers tourism is a *destroyer of socio-cultural* milieu. It so happens that the influx of tourists and the quantum of

development make the tourist destination unsustainable. The community attitudes have been elucidated more in the Dogan's and Butler's model. There is a radical change in the attitudes of community members from the first stage to the last stage in those models.

Dogan (1989) suggested for five stages of strategies for adjustment to tourism by residents model that includes

➢ Resistance
➢ Retreatism
➢ Boundary maintenance
➢ Revitalization
➢ Adoption

Community Participation in Tourism Development

According to Lisa & Treves in 2000, ensuring local support for protected areas is increasingly viewed as an important element of biodiversity conservation. Lack of local participation in the implementation of tourism in the national parks may lead to widespread killing of the animals in the park and causing security problems for tourists and others. Conflict between wildlife and people can erode local support for conservation. Wildlife-based benefits are intended to offset costs and encourage tolerance or stewardship. Human-wildlife conflict impedes local support for national park.

It has highly been recommended that the Park-Community relationship as the social and economic vitality of adjacent communities is recognized significantly for the success of conservation. Local planners must encourage community participation from the early stages of planning. Management strategies for visitor-impact alleviation should focus on community-based planning where the collective wisdom of hosts is incorporated into the overall development process. Tourism policies must be compatible with the physical and human components of the local society.

Forging a partnership between local people, the service industry and tourism professionals make tourism a viable and sustainable industry. The development and implementation of alternative livelihood projects

with direct participation of community and conservation organizations has become one of the most commonly-applied management prescriptions to alleviate existing or potential conflicts between protected areas and local livelihoods.

Roles of Local Community for Biodiversity Conservation

Tourism development needs continuous linkages with stakeholders in the ecologically sensitive places for the purpose of the resource management of the protected areas. Greater participation of local community in the process of development is a part of more sustained and integrated approach. For example, local buffalo keepers (the Maldharies) coexisted with lions for the centuries and they were removed from the Gir National Park after the declaration of the area as park,. Their living standards declined substantially. This has led to instances of carcasses being poisoned to kill lions returning to feed, undermining conservation effort.

The Royal Chitwan National Park (RCNP) was one of the most heavily visited parks in the Asia. There were 996 households in 7 of the 36 village Development Committee adjacent to the park and their livelihoods were determined by the inflow of visitors into the park.

Similarly, community participation is seldom workable in the case of the Nanda Devi Biosphere Reserve where the indigenous community was almost wiped out and sent out to live an isolated and abandoned life of misery away from their homeland.

Stakeholder Participation

Tourism development can only be sustainable if benefits do not percolate to different sections of the community. The development of tourism industry needs a coordinated and co-operative management effort for delivering tourism product. The need for multiple stakeholder involvement is essential for maintaining balance development. At the same time, hospitality services are offered and extended to visitors by local families or a host community to establish direct personal and cultural communication between host and guest. The consequential impacts will certainly bring in radical changes in the living pattern of the community.

Many regional tourism development projects have witnessed several setbacks due to the severe demonstration effects. The exclusion of residents from the development process can give rise to a considerable loss of effectiveness of outcomes. Most of local people are incapable to measure the potential costs and benefits of tourism and they are unprepared to make any important decisions.

Gunn highlighted the role of four key players –

- ➢ The tourist,
- ➢ The tourism developer,
- ➢ Government planning a
- ➢ Control agencies a
- ➢ The local populace

Elliot (1997) has commented that government involvement in tourism development can be measured in two ways;

- ➢ The extent and nature of allocated statutory responsibilities
- ➢ The methods used by the public sector to discharge these responsibilities

Summary

The small-scale tourism brings more benefits for locals by promoting locally materials for higher multiplier effects. Once local communities fully participate and derive benefits, they can develop a sense of ownership and will use their natural resources sustainably. The need for participation leads to making the people economically, psychologically, socially and politically empowered. Above all, sustainable tourism cannot successfully be implemented without the direct support and involvement of those who are affected by it. Therefore, evaluating a community's sensitivity is the first step in planning for sustained tourism development. A community–driven ecotourism approach should be promoted for evaluating the wide-ranging effects of tourism.

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Lesson 4.3 - Ecotourism in Protected Areas

Learning Objectives

After reading this chapter, you should be able to

➢ Understand the importance of conservation of ecology and environment for ecotourism

➢ Know about the protected areas and their potential for ecotourism

➢ Explain the management techniques for ecotourism to sustain in the protected areas

➢ Find the key roles of community and other stakeholders in the management of ecotourism

Ecotourism is aligned with the ecosystem of protected areas for the mutual benefits. It is a proven model to generate revenue for the management of protected areas in the western countries. Many protected areas in the developed countries are also managed by private enterprises and revenue from ecotourism is used for maintaining and managing protected areas. Traveling to natural areas has been a primary motivation before the declarations of protected areas for the purpose of preserving the endangered species and wildlife plants.

Nature travel is not consumptive or commercial and visitors do not have much expectation from the nature excepting enjoying the serenity and sublimity. When the nature travel was regarded as the ecotourism, the travel to the natural scenic places underwent changes due to the involvement of professional tourism service providers to provide value-added services for meeting the business objectives and the governments to provide sources of income and employment to the people in the backward areas.

Integrating ecotourism with the management of protected areas like National Park, Wildlife Sanctuary, Biosphere Reserve and Projects for

Endangered Species. Protected area authorities could not manage to shift the people from the national parks and wildlife sanctuaries due to lack of political resolution and ambiguity of policy and programmes. All the protected areas in India have been facing the problems of deforestation, poaching, hunting, shifting cultivation and construction of public roads and dams, building, etc.

Thus, ecotourism has been embraced to help counter the problems and contribute for preservation of flora and fauna. On the other hand, governments were more concerned about the ways that the ecotourism sites are functioning. It is also observed that there is no direct relationship between ecotourism and community well-being and conservation of nature or visitor satisfaction. This chapter will present the ecotourism in protected areas.

Need for Protected Area Management

Protected areas face financial difficulties, poverty and resistance of local communities against the protected areas and this has raised the issue of conservation management through ecotourism. The increasing pressure on the environment necessitates the need for preservation of biological diversity. Protected areas are meant for conserving biodiversity. Protected areas are degraded due to the human intervention for development and these areas are created for prevention of deforestation. Many protected areas are the direct victims of damaging effects of logging, hunting, fire, and grazing.

Meaning of Protected Areas

According to the Convention on Biological Diversity (CBD), a "protected area" is a geographically defined area designated or regulated and managed to achieve specific conservation objectives. The International Union for Conservation of Nature (IUCN) defines the Protected Areas as " It is a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values". Protected areas are similarly important for conserving sites of cultural or indigenous importance, and considerable reserves of natural resources.

Historical Background of Protected Areas

Protected areas had received the support from the governments and the local community members in early 1960's. Over 80 per cent of the world's protected areas have been established since the First World Parks Congress, held in 1962. There are 104,791 protected areas covering approximately 18.38 million km on land and 1.89 million km at sea worldwide. There is an increase of 12.65 per cent of earths land surface. Many plans and policies have been implemented as per the declarations of the First World Park Congress. It was decided to reinforce the efforts in the World Park Congress in 1972 so that protected areas can deal with a number of internal and external challenges.

Six years later (in 1978), the IUCN classified ten categories of Protected Areas during the Third World Park Congress in 1982. However, the ten level systems did not contain an overall definition of Protected Areas. These concerns were highlighted at the Third and Fourth World Park Congresses. Eventually, the IUCN issued its six level criteria for classifying protected areas in 1994. This category system was endorsed at the Fifth World Park Congress in 2003. It includes

- Strict nature reserve: Protected area managed mainly for scientific research

- Wilderness area: Protected area managed mainly for wilderness protection

- National Parks: Protected area managed mainly for ecosystem protection and recreation

- Natural monument: Protected area managed mainly for the conservation of specific natural features.

- Habitat/Species Management Area: Protected area managed mainly for conservation through management intervention.

- Protected landscape/seascape: Protected area managed mainly for landscape/seascape conservation and recreation.

- Managed resource protected area: Protected area managed mainly for the sustainable use of natural ecosystems.

The UNs took a lead role to save the ecotourism by celebrating the International Year of Ecotourism and Mountaineering as an agenda of Millennium Development Goals. As a result of which, the Quebec Declarations on Ecotourism have included issues of ecotourism in the protected areas for preventing mining, sand quarrying, construction of national or state highways, irrigation or hydro power dam, commercial fishing, hunting, sporadic agriculture, public thoroughfare, etc. In consequence of this, Government of India has enacted the Forest Act and Wildlife Act for the protected areas to stop the illegal commercial activities and wildlife hunting.

Objectives of Protected Areas

Protected areas are protected for the preservation of natural, ecological and cultural values. These areas largely prohibit the encroachment of human and it is an area with protection for ecosystem. The areas are set aside to maintain functioning of natural ecosystems to allow species to grow and breed in an undistributed natural environment. Human occupation and exploitation of resources is limited protected areas It maintains ecological processes to function for the larger benefits of the coexistence of man-animal. These areas are essential for conservation of biodiversity and natural habitats. Protected areas are classified as per the laws and the regulations of many international organizations. Protected areas act as benchmarks against which the relationship between human and man coexists in a most natural way.

Protected areas are created with the objective of conserving biodiversity and providing and providing technical and administrative support for saving the degraded resources and dynamics ecosystem. Protected areas are created for Endemic Bird Areas (EBA), Plant Diversity (CBD), Indigenous and Community Conserved Areas (ICCA), Alliance for Zero Extinction Sites (AZE) and Key Biodiversity Areas (KBA).

The new guidelines of IUCN during the 4th World Conservation Congress in Barcelona, October 2008, The Protected Area Management Guidelines highlight on the followings

> ➢ A protected area is an area set aside primarily for nature conservation.

➢ All protected area categories make valuable contributions to conservation.

➢ All categorization of protected area should be based on local context and conditions.

➢ The wilderness protected area category was updated and strengthened.

Protected Area Management through Ecotourism

All tourist facilities within five km of any protected area are monitored by local communities to guard its environment and wildlife. As per the eco-tourism guidelines prepared by the Union Ministry of Environment and Forests, the local communities are empowered to monitor the activities of tour operators.

The illegal tourism activities make disturbances to animals while taking visitors to the protected area. At the same time, the State Governments are going to introduce "Local Conservation Cess" on all privately run tourist facilities. The revenue will be used for the protected area management, conservation and local livelihood development.

At the same time, hotels in a five-km radius of the boundary of a reserve must contribute 30 per cent of their turnover to the reserve as per the Tiger Task Force Report in 2005. Relocated forest dwellers are given priority in livelihood generation activities through ecotourism in the protected area. Protected areas develop its own ecotourism plan as part of its tiger conservation plan and management plan as per advices of the Chief Wildlife Warden of the State. The National Tiger Conservation Authority approval is necessary if it is located in the State. Physical, real and the effective/permissible carrying capacity of visitors and vehicles must be studied and maintained. It has been recommended that a ceiling on the number of visitors to the protected area at any given time must be set by taking the maximum of carrying capacity of the habitat

Ecotourism in Protecting Protected Areas

Ecotourism plays an important role in many nature conservation projects. The ecotourism objectives rare elated to protected areas due to

- Ecological and cultural compatibility of tourism development.
- Generation revenue for the management of the protected area.
- Creation of income for local people.
- Acceptance of nature protection as an indirect result of economic effects

These are the following guidelines of Government of India for management of ecotourism sites in the Protected Areas.

- Identify using GIS and monitor the ecologically sensitive areas surrounding PAs prevent corridor pinching/destruction for ensuring ecological integrity
- Assessment of physical, real and effective/permissible carrying capacity of visitors and vehicles
- Ceiling level on number of visitors at any given time given capacity of habitat.
- Designated ecotourism zone
- Develop a participatory community-based tourism strategy to ensure long-term local-community benefit-sharing
- Develop codes and standards for privately-operated tourist facilities
- Develop monitoring mechanisms to assess impact of tourism activities.
- Develop generic guidelines for environmentally acceptable and culturally
- Appropriate practices for all new constructions
- Enforcement of do's and don'ts for visitors

Compensation should be paid In the case of human animal conflicts. All ecotourism activities should take place only in delineated ecotourism zones. Forest dwellers will be given priority in terms of livelihood generation activities related to ecotourism in case of relocation in the Tiger Reserve project. The following norms may be adhered to in the context of ecological-tourism activities for conservation of critical wildlife habitats of national parks/sanctuaries and for core/critical tiger habitats of tiger reserves.

➢ Larger than 500 sq.km, 20% of such areas may be permitted for regulated ecotourism access, subject to the condition that 30% of the surrounding buffer/fringe area should be restored as a wildlife habitat in 5 years.

➢ Smaller than 500 sq.km, 15% of such areas may be permitted for regulated ecotourism access, subject to the condition that 20% of the surrounding buffer/fringe area should be restored as a wildlife habitat in 5 years.

Tourism infrastructure must conform to environment-friendly, low-impact architecture, including solar energy, waste recycling, rainwater harvesting, natural cross-ventilation, reduced used of asbestos, controlled sewage disposal, and merging with the surrounding habitat. Tourism infrastructure must conform to environment-friendly, low-impact architecture; renewables including solar energy, waste recycling, rainwater harvesting, natural cross-ventilation, no use of asbestos, controlled sewage disposal, and merging with the surrounding landscape.

All tourist facilities falling within 5 km of a protected area must be reviewed regularly by the Local Advisory Committee vis-à-vis environmental clearance, area of coverage, ownership, type of construction, number of employees, etc, for suggesting mitigation/retrofitting measures if needed.

All tourism facilities located within five kms. of a Protected Area must adhere to noise pollution rules under 'The Noise Pollution (Regulation and Control) Rules', 2000, and 'The Noise Pollution (Regulation and Control) (Amendment) Rules', 2010 issued by the Ministry of Environment and Forests. All tourist facilities, old and new must aim to generate at least 50% of their total energy and fuel requirements from alternate energy sources that may include wind, solar and biogas.

In a phased manner (within five years), permanent residential facilities located inside of core-critical tiger habitat/critical wildlife habitat, which are being used for wildlife tourism should be moved to revenue lands outside. There shall be a complete ban on burying, burning or otherwise disposing non-biodegradable or toxic waste in the tourism area.

In the case of number of visitors/vehicles exceeding carrying capacity, establish an advance booking system to control tourist and vehicle numbers. Rules of booking must be transparent, and vehicles must strictly maintain a distance of 15 m from one another when stationary. Violators must be penalized, since congestion and overcrowding in this manner causes undue disturbance to wild animals that are being observed.

Residential tourist facilities (number of beds) should be in conformity with the carrying capacity of the PA. In the case of Tiger Reserves, ecotourism should be under the oversight of the respective Tiger Conservation Foundations for each tiger reserve, to enable Eco-Development Committees/ Village Forest Committees/ forest cooperatives to strengthen the institutional framework through a Memorandum of Understanding.

There shall be a complete ban on burning or disposing non-biodegradable waste within the Protected Area or in surrounding eco-sensitive zone or buffer area.

The use of wood as fuel shall be prohibited, except for campfires for which wood must be procured from State Forest Department/Forest Development Corporation depots.
In order to allow free passage to wildlife, development should be sensitive to the conservation of flora and fauna, and the corridor value of the area.

Tourist facilities/tour operators must not cause disturbance to animals while taking visitors on nature trails.

Pilgrim sites located inside Protected Areas must be designated as sacred groves, with trict building and expansion controls, in accordance with the Forest Conservation Act, 1980 and the Environment Protection Act, 1986. All transit camps and places of stay for such pilgrimage must be restricted to nominated days in a year. All rules that apply to tourism facilities including noise, building design, use of alternate energy and free passage to wildlife will apply to such pilgrim facilities. Temple boards must negotiate terms of revenue sharing with local communities, and channel a minimum of five percent of gross revenue collected into development of local communities through the Panchayat and Gram Sabha.

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The first benefit from ecotourism must go to the local people, and in the long-run, capacity-building should be carried out to forge a sustainable partnership between the forest department, tourism professionals and local communities.

Soft loans may be provided for Community Credit Programme/ Special Trust Funds/ Special Central Assistance/ Developmental Schemes of Tribal Department/District level Integrated Developmental Programme/ Tiger Conservation Foundation, to pre-identified local-community/beneficiaries for promoting ecotourism.

Do's & Don'ts for Visitors

- Appreciate the colours and sounds of nature
- Treat the Protected Area/wilderness area with respect
- Dress in colours that blend with the natural environment
- Take pictures, but without disturbing wildlife
- Observe the sanctity of holy sites, respect local customs
- Keep a reasonable distance from wild animals, and do not provoke them
- Dispose waste responsibly: carry back all non-biodegradable litter, and leave
- Campsites litter-free before departing
- When in a vehicle, remember wild animals have right of way
- Keep to the speed limit, don't use the horn, and do not startle animals
- Do not talk loudly or play loud music
- Do not get out of the vehicle or approach wild animals
- Do not approach animals closer than 15 m or disturb them while they are resting
- Do not take away flora and fauna in the form of cuttings, seeds or roots.
- Do not feed wild animals
- Do not light fires, or smoke inside protected areas. Accidental forest fires cause irreparable damage

One pertinent issue is whether the revenue from park resources is spent for conservation purposes only or for the quality of life of indigenous people. In the end, ecotourism offers a unique opportunity and space to create sustainable interface between "local people" and "park authority". This interaction and collaboration will offer a kind of delightful experience to the visitors.

The obvious links among local people, parks, and tourism operators have drawn significant attention of conservationists and tourism planners by underpinning the potential for mutually beneficial relationships in recent years. Parks are among the most common ecotourism destinations.

Wildlife Tourism

Wildlife has been a fervent topic in the discussions since the last two centuries. The wild occupies a special place in the consciousness of human civilization Different animals associated with different gods symbolize the love and care for animals as a religious sanctity. For example, Rudyard Kipling's Jungle Book gives much information regarding wildlife and their habitats in the protected areas in India.

There are about 350 species of mammals, 1200 species of birds with nearly 2100 forms, and more than 20,000 species of insects. The love and regard for wildlife is a part of India's culture. There are also numerous examples of sacred land/waterscapes especially among the hunters, food gatherers, agriculturists, and pastoral communities throughout the country.

According to Gadgil and Guha (1992) found that even outside such spaces, hunting and fishing communities followed strict rules for not killing the pregnant females and young ones or sub adults, not hunting and fishing in certain seasons and many others. Many individual species were also protected for their religious, social, or economic importance. For example, the Black Buck by Bishnoi community in Rajasthan, Painted storks and Grey Pelicans in Kokrebellure in Karnataka, the Langur and Ficus species all over the country and many others clearly symbolize the respect for the wildlife and denote the hereditary dependence on the wildlife habitats.

Hammitt and Wells (1996) suggested that wildlife tourism is typically associated with nature-based activities such as observation and/ or photography of wildlife.

The term "wilderness" is derived from Norse and Teutonic languages in the rhetorical terms. The term wild" was derived from "willed" meaning self-willed or uncontrollable.. Thus, "wild-doer-ness"means "place of wild beast. Further, the physical wilderness refers to places or regions that are uncultivated and uninhabited. These places include swamps, forest areas, grass plains, savannah, mountains, and oceans for perfect wilderness.

Wildlife tourism based on encounters with non-domesticated (no human) animals in either their natural environments or in captivity. The major components of wildlife tourism comprise nature-based tourism, special interest tourism and ecotourism. Increased level of participation in a particular type of wildlife, specialization of wildlife tourism, consideration of wildlife issues, environmental awareness and recognition of synergies between the wildlife tourism and conservation is figured in most of the definitions of wildlife tourism.

Wilderness Act (1964) states that wilderness is a place where one can obtain a primitive travel and recreational experience away from society and the built-environment. Conway (1995) defines that wildlife tourism is based on encounters with non-domesticated animals in either their natural environment or in captivity. It includes both so called non-consumptive forms, such as viewing, photography, and feeding and consumptive forms that comprise hunting and recreational angling.

Technically, the life in the wild regions includes both flora and fauna, but it is limited to faunal species (animals). As usually, any animal is a member of animal kingdom. In this context, wildlife tourism is overlapped with nature-based tourism, special interest tourism and ecotourism in most of the literature. Historically, wildlife refers only to some game species that people used to hunt. In course of the time, the term 'wildlife' includes all living forms even those that are not used for sport. The Cooperative Research Center (CRC) for Sustainable Tourism (2001) describes wildlife tourism as "tourism that involves encounters with no domesticated animals either in their natural environment or in captivity. Furthermore, wildlife tourism experiences provide opportunities to

observe and interact with animals that may be endangered, threatened or rare, and being offered in an increasing number of destinations worldwide.

Moulton and Sanderson (1999) explained that any living non-human and undomesticated organism in the kingdom of Animalia is generally considered to be wildlife. Burns and Sofield (2001) argued for wildlife tourism as a subset of nature-based tourism that can then be defined as tourism based on interactions with wildlife, whether in its natural environment or in captivity.

One of the main arguments for continuing the development of wildlife tourism attractions is to help secure a long- term conservation strategy for wildlife and habitats to sustain in their own ecosystems without having shortage of basic foods. Reducing negative impacts through the implementation of appropriate policies, planning and management strategies are essential to the development of sustainable wildlife tourism industry. As a result, the demand for trophy hunting and the opportunity to hunt is diminished because of stricter government regulations and declining number of wildlife. The current hunting regulation is based on the theoretical concept of ecological carrying capacity.

When a tourist travels to a particular destination primarily for the purpose of having a wildlife experience, obviously wildlife tourism can be been seen as a form of special interest tourism. In the areas where the density of wildlife is relatively more, the governments can generally permit the visitors to learn and admire the wildlife viewing or any other non-consumptive activities that can provide economic incentives and revenues for conservation of natural habitats and wildlife conservation.

Summary

Ecotourism is an integral part of protected areas. The need for ecotourism was felt after the International Year of Ecotourism in 2002 followed by the Quebec declarations. It is means for providing employments to the community that will result in stopping the cutting of trees and hunting the wild animals. At the same time, protected areas can generate revenue from entry fees, camera fees, guest house rent, parking fees and donations from the visitors to partly manage the maintenance of the Pas. Many protected areas in the developed countries are also

managed by private. Integrating ecotourism with the management of protected areas like National Park, Wildlife Sanctuary, Biosphere Reserve and Projects for Endangered Species is a step to reduce the gap of understanding between man and nature. The existence of is determined by others. This lesson has explained the meaning of PAs and the need for protected area management along with objectives and do's & don'ts for visitors. Protected area management through ecotourism and ecotourism in protecting protected areas have also highlighted in this lesson. Wildlife is the principal attraction of the protected areas that has been presented in the end of the lesson.

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Lesson 4.4 - Ecotourism Projects in Biosphere Reserve

Learning Objectives

After reading this chapter, you should be able to

➢ Know the meaning and importance of biosphere reserves for ecotourism

➢ Be familiar with the geographical and socio-economic backgrounds of ecotourism sites

➢ Be acquainted with the ecotourism attractions and activities in the selected biosphere reserve

➢ Understand the integration between the benefits of ecotourism and conservation of biosphere reserve

➢ Admire the efforts being initiated to bring man and nature closer through ecotourism

Ecotourism is an important medium of improving the well-being of local community in protected areas. Conservation and education are other two dimensions of ecotourism for which visitors are permitted to see the biodiversity and its functioning in biosphere reserve. Giving opportunity to people from cities and urban centers to learn and experience natural scenic beauty, wildlife and plants along with culture of primitive tribal people is the primary objective of promoting tourism in protected areas. Moreover, ecotourism is a proven source for the local people to depend for livelihood like agriculture, horticulture and fishing. As a result, local people engaged traditionally in destroying forest and killing wildlife can be motivated to work for the ecotourism projects as cook, waiter, porter, guide, interpreter, driver, guard, etc. Having realized the tangible and intangible benefits of ecotourism, the Department of Environment and Forest, Government of India and State Governments have implemented the ecotourism projects in the biosphere reserve to provide support for nature conservation, community well-being and visitor satisfaction.

In this chapter, you will read and understand about the functioning of ecotourism projects at the selected biosphere reserves like Periyar Tiger Reserve, Thenmala Eco-Project, Similipal Ecotourism Project, Sunderban Ecotourism Project and Nandadevi Biosphere Reserve.

Periyar Tiger Reserve (PTR)- A Must-See Ecotourism Sites in Kerala

Geographical Locations

The PTR falls in the 5-B Zone of the Western Ghats and it is located on the mountains range of peninsular India in the Southern Western Ghats. The Periyar has become an attractive ecotourism site for the nature lovers as it is endowed with scenic beauty, culture and flora and fauna. It is an ecotourism site in Kerala, that offers visitors to study, admire and enjoy natural habitations, cultural attractions and human life. More importantly, visitors come to see wildlife in the buffer zone.

Climate

The PTR has a cool and humid climate with comparatively high rainfall. The PTR is known for its unique natural biodiversity and the climatic conditions are largely influenced by the ecological diversities comprising the largest predator Royal Bengal Tiger along with species in the food chain of the Reserve.

Biodiversity

It includes West Coast Tropical Evergreen Forest, Southern Hilltop Tropical Evergreen Forest, West Coast Semi Evergreen Forest, Southern Moist Mixed Deciduous Forest, Southern Montane Wet Temperate Forest, Southern Montane Wet Grasslands, South Indian Subtropical Hill Savannahs and Marshy Grasslands (Vayals)

As many as 63 species have been identified and seven are endemic and endangered to South Western Ghats like Lion Tailed Macaque. Tigers are found in all types of habitats, but the density is very less in the evergreen forests. Some of the major carnivorous mammals of the PTR are Leopard *(Panthera Pardus)*, Wild dog *(Cuon alpines)*, Leopard Cat *(Felis bengalensis),* Jungle Cat *(Felis Chaus)*, Rusty spotted cat *(Felis*

Rubiginosa) and fishing cat (Felis viverrina). Other major carnivores are also distributed across the Reserve.   The Periyar holds a credit of a sizeable population of Elephants *(Elephas Maximas)* with as many as more than 1000.

There were a total 21 tiger population in 2002 in the reserve.   A total of 525 species of birds have so far been recorded in the Tiger Reserve. A total of 45 reptile species are reported from the PTR.

PTR and Administrative Background

The total areas of the reserve spread over 925 sq km consisting of Core, Tourism and Buffer zones, including ecological, eco-development and management zone respectively. Presently, it is the biggest wildlife sanctuary in Kerala. The PTR with an extent of 881 sq km of core critical tiger habitat areas has become a model of participatory biodiversity conservation. The fringe areas of communities of PTR act as a social fence around the park. The PTR falls administratively in the district of Idukki and Pathanamthitta of Kerala. The PTR is divided into two territorial divisions: Periyar West and Periyar East with the headquarters at Thekkady and Peermede respectively. The Periyar West Division is divided into two ranges: the Azutha Range and the Pampa Range.

Tourism Activities in PTR

The total tourist arrivals registered a growth of 83.99 per cent in 2011 as compared to 2001. A large number day visitors come for boating activity in the reserve though it is a special interest destination. There is an increase in the arrivals of day visitors (foreign) from 37.48 thousands in 2005 to 39.34 thousands excepting a decline of from 12.84 thousands between 2008 and 2009. The amount of revenue generated from foreign tourist arrivals got declined by 6.96 per cent in 2009. Subsequently after, there has been an increase of revenue since 2010.

All these nine A Class hotels in Kumily have 18 single as well as 330 double rooms with a maximum capacity of 731 rooms by 2011. As far as the boat facility is concerned, the maximum capacity of boats is 302. The year-wise total revenue generated from the KTDC boat services as against of total number of visitors taken the services of boat was 21.78

lakh during 2006-2007 tourism season. There was a steady decline in number of visitors in taking the boat ride between 2006-07 and 2011-12, excepting 2008-09 during which the PTR could witness 2.01 lakh visitors taken the services of boat and the KTDC operated boats alone generated total revenue of ₹ 30.54 lakh.

Community-Based Ecotourism Programmes

The soft community-based and protection-oriented ecotourism programmes and the number of visitors participated in each activity from 2004 to 2011. These programmes comprise Bamboo Rafting, Border Hiking, Bamboo Groove, Jungle Camp, Windy Walk, Periyar Tiger Trail, Jungle Scout, Jungle Inn, Nature Walk, Tribal Heritage Museum, Green Walk, Bullock Cart Discoveries, Range Scan and Clouds walk. However, the nature walk, including trekking is one of the finest programmes being enjoyed by the visitors. The Department of Forest, the PTR East Division has incurred the total revenue of ₹ 690.27 lakhs from all these 15 ecotourism programmes from 2004-05 to 2010-11.

As many as 193 staff members along with officers are posted in the various positions to discharge the duties like guarding forest, wildlife and other natural resources, the conduct of tiger and elephant census, creation of awareness programme among the local people and school children, regulation of ecotourism activities, management of the EDC, operation and maintenance of forest lodges, jungle roads, parking areas, boats, conduct of research, participation in the workshop, coordination with other stakeholders, estimation of budget outlays, computation of tourist arrivals and revenue receipts from tourism. As many as 11 staff members are working for the foundation to execute policy and programmes for the conservation of tiger.

The Periyar Foundation is a Government-owned public trust with the legality of the Government organization and flexibility of a good NGO. The main aim of the foundation is to facilitate and support the biodiversity conservation initiatives through eco-development and people's participation in the PTR. Apart from a fall in the total revenue in 2009-10, there has been an increase in the inflow of revenue through entry and user fees during the period. However, the total revenue during 2010-11 was collected to the tune of ₹ 336.73 lakh. It is further reported

that the entry fees collected from the foreign check post accounts for the maximum as compared to other sources of generating revenue.

The construction of irrigation dam, sporadic shifting cultivation and animal poaching by tribes and hunting and collection of forest products like timber, barks, leafs and honey, etc have largely disturbed the functioning of ecosystem and altered the natural landscape of the Reserve. The PTR has not only wooed the tourists for inculcating love and care for nature, wildlife and primitive people, but also generated substantial amount of revenue from the various activities of ecotourism with marginal variations. This has resulted in the creation of employments for the local community members, thus increasing the income and purchasing power.

Thenmala- An Award-Winning Ecotourism Site in Kerala

Location

Thenmala is a well-known ecotourism destinations located about 72 km from Thiruvananthapuram in Kerala. The site is the first planned ecotourism project situated at the foothills of the Western Ghats in India. The Shenduruney Wildlife Sanctuary is a major constituent of Thenmala ecotourism project. The project has been extremely successful in providing all possible supports for protection to Chenkurinji tree as it has medicinal values curing arthritis and blood pressure since it was declared an a ecotourism site. There is a total population of 24,212 and the altitude is 100-600 m above MSL. The maximum temperature during daytime in the hottest month is about 39oC. The daily temperature varies from 17oC to 35oC.

Ecotourism Features

The ecotourism site is located at a unique place that attracts visitors from coming to Tenkasi or Thiruvananthapuram. The site witnesses large scale human interventions in the periphery area. The State government has been projecting soft ecotourism activities with the direct involvement of community members. These activities are reported to have more positive impacts in the locality and minimum resources are being used for meeting the needs of visitors. Eco-tourists enjoy and learn beautiful ecosystem of the wildlife sanctuary and experience the small nature trails,

elevated walkway through canopies, and mountain biking. Swimming and boating are other two attractions. The Department has been operating boating in water reservoir that gives breathtaking views of forest of the sanctuary. Other man-made attractions like boardwalk, sculpture garden, amphitheatre, and musical dancing fountain have been developed to lengthen the activity-based tourism.

Achievements

When the project adheres to the principles of ecotourism of international organizations, the PATA awarded the sites with PATA gold award in 2003–04 for its outstanding performance in managing ecotourism resources. The site also bagged the national tourism awards by the Ministry of Tourism, Government of India for eco-friendly organization during 2001–02 and the best ecotourism practices during 2003–04.

Facilities and Amenities

This ecotourism project has figured in the publication of sustainable development of ecotourism by the UNWTO. It is a compilation of good practices in SMEs (small and medium enterprises). It is a long-term sustainability of the ecotourism resources. In this site, the environmental impact assessment (EIA) is regularly done to monitor and practice wormi-composting techniques, battery-driven vehicles, solar lamps, creation of zones and tree plantation. Several afforestation programmes have been undertaken in and around Thenmalai.

Collective Efforts

Thenmala Ecotourism Promotion Society has adopted a strategy in association with the Forest Department, the Irrigation Department and the Department of Tourism for undertaking various developmental activities. The Society is committed to spreading the environmental education among the youths and students. The authority organizes various programmes related to conservation of ecology and environment in collaboration with local educational institutions. Participation of local community is spontaneous. For example, women's self-help group has been established and they are running gift and souvenir shops along with some cafeteria. The project has created self-employment to local youths

and they are associated with the management of waterfalls. Bird watching trails, trekking programmes and butterfly watch are some of the important activities that are managed by the local community members.

The Government of Kerala has introduced the formation of eco-development committees (EDCs) in ecotourism sites. One such EDC has been functioning in Thenmalai. Local community members are the members of the committee for conservation and management of ecotourism products. The project is implemented with the direct help of government, private sector, and the local community.

In Thenmalai, several zones have been created to manage the footfalls of visitors and preserve the unique ecosystem of the sanctuary. For example, Restaurant, Shopping center and Amphitheatre have been established to facilitate tourists to have the taste of local cuisines. At the same time, visitors can also carry Kerala crafts as souvenirs. For example, a garden of host plants for the butterfly has been created enabling the large number of butterfly species of the region to thrive.

Attractions

The theme of the Garden depicts the relationship between man and nature. It also demonstrates the coexistence of man and nature together for their mutual benefits and survival. There are zones that house sculpture garden, elevated walkway, the mountain biking, rock climbing, river crossing, nature trails, resting spots, lotus pond, etc.

The Thenmala Ecotourism Promotion Society (TEPS) has been constituted with major objectives to develop Thenmala dam and its surroundings as a major tourist destination and to promote ecotourism on the basis of sound principles of ecological sustainability in the surrounding areas of Thenmala and to have a well planned tourism destination with emphasis on sustainable tourism development so as to become a model for other destination development programmes.

The TEPS has entrusted the task to Kerala Forest Research Institute (KFRI) to conduct Environmental Impact Assessment (EIA) and the Society has taken several measures to minimize the negative impacts of the project. Some of the sustainable approaches have been

implemented to ensure that Thenmalai will remain to be beautiful. The EDC and Participatory Forest Management Committees known as Vana Samrakshna Samithi (VSS) have been working towards the effective management of ecotourism and its impacts.

Ecotourism Projects in Sunderban

Ecotourism is a major component of the Sundarban Biodiversity Conservation Project. It comprises a range of integrated activities. These activities are part of the project of Sundarban Eco-Tourism Development and Management Plan. The development of ecotourism is one of the top priorities of the Forest Department and the SBCP. It forms part of the existing Government national objectives concerning existing and proposed tourism policies in Bangladesh.

The EDMP advises on legislation, tourism practices, structural changes, training and facilities requirements, environmental impact, and marketing and promotion strategies. It will contribute to the development of a healthy, responsible and sustainable type of eco-tourism for the benefit of all. The SBCP project.

- The development and the improvement of eco-tourism policies
- The practice of responsible guidelines
- The compliance of new eco-tourism regulations
- The development of well planned limited infrastructure and facilities for visitors
- Capacity development and training of the Park Rangers and other forest department officials
- The training and assistance of tour operators in specialised topics
- The development, marketing, promotion and positioning of the SRF as a new and alternative world-class eco-tourism destination.

The Sundarban hosts one of the most spectacular and strongest predators of the world, the Royal Bengal Tiger. The probability to spot one of the hundreds of them that roam the forest area is less than the probability that the tiger detects you first, but the forest is full of pugmarks.

It is estimated that the Sundarban provides a habitat for more than 450 animal species: 40 mammal species including 5 species of whales and dolphins, more than 270 different species of birds, 45 species of reptiles, 120 species of fish, including species of rare shark, and about 334 plant species; the counting is still going on. Spectacular natural phenomena of the world, the Bengal Delta ending in the Indian Ocean.

The most important eco-tourism activities planned for the SBCP are the following:

- Information and Education Centre
- Mangrove Interpretation and Visitor Centre
- The first Code of Ethics and Conduct for visitors
- Licensing of tour operators
- Eco-tourism nature guidelines
- Production of wildlife and eco-tourism videos
- Publication of a Sundarban wildlife photography book
- Organization of international photography contest
- Production of promotional material and sales promotion
- Assistance to the eco-tourism
- In-house specialized training
- Local craft products

Nandadevi Biosphere Reserve

Historical Background

It has been enjoying the status of a national park since it was declared in 1982 park. The flora and fauna surviving in the high altitude has caught the attention of the UNESCO and in 1988, the park has been enlisted in the World Heritage Site. W W Garden, Tilman and N E Odell explored the Nanda Devi and they brought the unique biodiversity to the lime light. Subsequently, many mountaineering expeditions have been organized in the 1950s. This Reserve is part of the UNESCO World Network of Biosphere Reserves since 2004.

Location

The Nanda Devi National Park covering an area of 630 square km is located near to Nanda Devi. It is the second highest mountain peak in India with an altitude of 7,817 meters in Chamoli district in Uttarakhand. The total core area of the biosphere consists of 712.12 sq km. it comprises the Nanda Devi National Park with 624.6 sq km and the Valley of Flower National Park with 87.5 sq km. The unique species is predators that are under endemism. The core areas of NDBR is not allowed to be disturbed with tourism activities and it conserves the wild life along with medicinal herbs.

Geography and Climate

The entire park lies at an elevation of more than 3,500 m (11,500 ft) above mean sea level.There is a Nanda Devi sanctuary surrounded by a glacial basin and mountain peaks and the sanctuary is drained by the river Ganges. The Nanda Devi Biosphere Reserve includes the Valley of Flowers. The region gets snow-covered for six months. It receives heavy rainfall between June and August receiving.

Flora and Fauna

The biosphere reserve houses Birch, rhododendron, juniper, fir as the main vegetation types. As many as 300 floral species can be found in the park. Out of which, 17 are considered to be rare species. The faunal species are equally diverse in the reserve. It includes Himalayan Tahr, snow leopard, Himalayan black bear, common langur, Himalayan musk deer, bharal and brown bear. Some of the unique birds like warblers, rose finches are ruby throats are also found in this region.

Economic Benefits through Tourism

All trans-Himalayan trade routes were closed due to the security and other political reasons. There was a serious problem of unemployment and loss of income of local people due to the closure of the routes. With the opening of Nanda Devi peak (7817 m) in 1982 as one of the most popular destinations for mountaineers, local people have been receiving some economic benefits. They work as porters and guides for trekkers and mountaineers.

Ecotourism Activities

The transition zone of the park is located at the Joshimath area. This area is used for collection of fodder, fuel and medicinal plants. This is largely considered as the area for economic sustenance to the local people. For wildlife viewing, visitors are allowed to go to the Ghat and Bedani-Auli areas in Chamoli district and parts of Bageshwar and Pithoragarh districts. This area a Development activities such as sheep farming, eco-restoration, ecotourism, cultivation of medicinal plants, bee keeping, training programmes are encouraged in this zone. The land use pattern mainly comprises of forests, agricultural land, waste land, settlements, cultivable waste land, orchards, etc.

Summary

Ecotourism is an ideal model for socio-economic development of local community in protected areas. Providing learning experience to the visitors about the flora, fauna, ecosystem, biodiversity, etc is one of the important objectives for which the buffer areas in the protected areas are opened for tourism activities. It is however very important for the protected areas to provide direct and indirect sources of income to the local community. As a result, the local tribes can be prevented from damaging the forest. Thus, ecotourism has become a part of protected areas for the preservation of forest, wildlife and primitive people and culture. In this context, the lesson has presented the historical background, topography, climate, biodiversity, flora and fauna, people and ecotourism activities at the selected protected areas like Periyar Tiger Reserve, Thenmala Ecotourism Project, Similipal Ecotourism Project, Sunderban Ecotourism Project and Nandadevi Biosphere Reserve

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Lesson 4.5 - Ecotourism Projects In National Parks & Wildlife Sanctuaries

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Learning Objectives

After reading this chapter, you should be able to

➢ Know the meaning and importance of national park and wildlife sanctuaries for ecotourism

➢ Understand the people, topography, nature, culture and socio-economic backgrounds

➢ Be motivated to know about the ecotourism attractions, activities and facilities for ecotourism to generate revenue for local area development

➢ Understand interdependence between ecotourism and conservation of ecosystem

➢ Appreciate the efforts of the authorities in regulating the ecotourism activities

Conservation of forest and wildlife along with socio-economic well-being of primitive people can be practically possible in the protected areas. All the national parks and wildlife sanctuaries in India have adopted the micro ecotourism projects for refraining local people from damaging forests and hunting animals in India. Many reports and studies have revealed that local people have no option but to depend on the forest produce and killing of animals to meet the livelihood. As per the tradition, the park authorities have been implementing several schemes to improve the socio-economic conditions and bring in changes in their perceptions. One of the common problems is the man-animal conflicts in the protected areas. The clearance of forest areas for agriculture has so far made massive damage to the protected areas. In addition to this, poaching and cutting of the trees for commercial purposes have also caused irreparable damages to the wildlife population.

It is found that ecotourism projects can find ways to empower local people and they can contribute to the conservation of forest. The demand is growing at 20 per cent to 30 per cent annually and nature travel is a major constituent of travel motivation today.

Thus, the approach of ecotourism is proven to be a best form of sustainable tourism or alternative tourism that gives practical solutions to the park authorities. In this chapter, you will find the descriptions about the selected ecotourism projects implemented successfully in Periyar National Park, Corbett National Park, Thenmala, Run of Kutch, Gulf of Mannar in India and Kruger National Park, South Africa

Background of National Parks & Wildlife Sanctuaries

National parks and wildlife sanctuaries are the protected areas by the Wildlife and Forest Act of Government of India enacted in 1973. The authorities have enforced the laws to stop poaching, hunting, forest clearance and illegal mining in the protected areas. Even human habitations are not allowed to take place in these areas. All the parks and sanctuaries in India open the protected areas for certain duration of period for ecotourism activities in buffer area and to some extent, in the core area of park.

More restrictions are generally imposed on the tourism activities in the national parks as compared to the wildlife sanctuaries as the purpose of these two protected areas are clearly different. As such, all these national parks and sanctuaries are open for five to six months in a year and closed during monsoon months and breeding seasons. It was a policy decision in India to implement ecotourism in the national parks, wildlife sanctuaries and biosphere reserve after the International Year of Ecotourism in 2002 in sustainable and responsible manner.

The Similipal National Park was the hunting ground of erstwhile Mayurbhaj king. It was declared as National Pak in 1957, tiger projects in 1973, wildlife sanctuary in 1979 and Biosphere Reserve in 1994. The mass killing of animals on the occasion of *Akanda Sikara* during the mid of April to celebrate the festival during which poaching is a customary to indulge in large-scale killing of animals.

Topography

The National Park spreads over in an area of 2750 sq km. The core area is around 845 sq. km. The total buffer zone comes around 1905 sq.kms. Annual precipitation is reported over 200 cm in 135 days. The altitude ranges from 40mts to 1168mts. Khairiburu is the lowest point and Meghasini hill is the highest point. The watercourses and many waterfalls including Barehipani (400 mts) and Joranda (150 mts) waterfalls are feeders of many river tributaries. There is a variation of temperature between the central and southern regions of the park.

Biodiversity

The park has resemblance with the biodiversity in the Western Ghats and north-east. It is a unique ecosystem and part of the Mahanadian bio-geographic region. The park has 94 species of orchids and about 3000 species of other plants. Out of which 2 species of orchids are endemic, 8 plants are endangered, and the status of 8 species and 34 other rare species of plant is vulnerable. The inimitable feature of the park is the residence of the black and melanistic tigers. Species of fauna that include 12 species of amphibians, 29 species of reptiles, 264 species of birds and 42 species of mammals.

Ecotourism Activities

That area is categorized for undertaking safari tour, animal watching, fishing, angling, photography, trekking, picnicking, etc; with the fine intention of reducing its effect on core zone. The movement of traffic is very high during the peak season from November to February. Consequently the chances of spotting and watching animals on the road stretching on the buffer zone are very less. The places like Meghasin and Debastali located in the core zone are prohibited areas for tourism activity.

The revenue being generated from entry of vehicles, participating in trekking activities, use of still camera, cine camera, video camera, etc; as another major principal revenue receipts of the park. There are seventeen different category forest rest houses with 80 beds contributing much revenue to the park.

Forest Rest Houses

Forest rest houses are located at Chhala, Baraipani, Joranda, Gududgudi, Nawana, Joshipur, etc. Tribal people work for the tourists as cook, watchman, eco- guide, etc at these guesthouses.

Tribal Population

There are 61 tribal villages in the buffer area of the park and 1200 villages in the transit areas with total population of 4.5 lakhs, out of which 73 per cent of populations are tribes. The settlements of human habitation in the buffer and transition zone have posed a great challenge to the eco system of the park. Kharias Gonds Bhumija, Bathudi, Kolha, Gonda, Santhal and Mankadia. These tribes collect and sell the minor forest produces due to lack of skills, lower educational levels and socio-culture traits. However, they are mainly dependent on local resources.

Wildlife Population

The number of tigers and leopards has increased from 142 in 1972 to 229 in 2004. The increase of 35 per cent over 32 years is showing a tremendous success in the tiger conservation in this park. The adjoining forests of Hadgarh and Kuldiha are proposed to be the best habitat centre for tigers in the future. You may see the name of the animals and total animal population in Table.

Name of the Animals	Population
Tiger	102
Leopard	127
Elephant	512
Bison	1243
Wild Bear	14538
Sambar	10185
Chital	3548
Barking Deer	12278
Mouse deer	4013

Wildlife Populations

Source: Ecotourism Destinations in Orissa, Forest Department, Government of Orissa, 2004, P-52.

Kaziranga National Park

Kaziranga National Park is the oldest park along the river Brahmaputra and it is located in districts of Golaghat and Nagaon in Assam. It was declared as National Park in 1974. It spreads over an area of 430 sq km. It a UNESCO Enlisted World Heritage Site known for the Great Indian one horned rhinoceros. The park has its unique landscape that includes sheer forest, tall elephant grass, rugged reeds, marshes & shallow pools.

Kaziranga National Park is inhabited by one-horned rhinoceroses along with other animals such as tigers, elephants, panthers and bears, and thousands of birds. The park is open from November to April. Tourists can take rides on elephants to move around the park or cruise in a boat on the Brahmaputra along the park.

Topography

The land is plain all around. It is covered by dense and tall elephant grass.A few pockets of tropical semi-evergreen and deciduous forests can also be seen in some parts of the park. The grasslands along with scattered trees of Silk cotton provide unique variety of ecosystem. These swamplands are dotted with water lilies, water hyacinth and lotus. The park is located against the backdrop Mikir and Karbi Anglong hills.

Faunal Species

Apart from being one of the largest animals in the work-the great Indian One-horned Rhinos, the park has a sizable population of the Wild Buffalos and Indian Elephants. Herds of wild elephants along with 15 threatened mammalian species.

Flora

The floral species in the Park consist of grasslands, tropical wet evergreen forests and tropical semi-evergreen forests. The grasslands include elephant grass and short grasses and small swamplands.

Ecotourism Activities

Ecotourism Activities in Rann Of Kutch

The Great Rann of Kutch is a salt marshland located between the Gulf of Kutch and the mouth of the Indus River. This one of the finest scenic beauty places in Thar Desert in Gujrat. There are three important areas comprising Great Rann of Kutch, along with the Little Rann of Kutch and the Banni grasslands. It is the largest salt desert with 7,505.22 sq km.

Biodiversity

The wetland is an ideal breeding ecosystem of flamingos. It is a wildlife sanctuary for the Indian wild ass. This is famous for its attractive chestnut brown Asiatic wild ass. It is a sandy islets of thorny scrub that attract innumerable migratory birds. This unique biodiversity is represented with wolf, blue bull, gazelle, jungle cat, Indian foxes, jackal and hare.

Corbett National Park – An Ecotourism Site

Corbett National Park is known for its long tradition of conservation. This the first tiger reserve in India named after the great naturalists and hunter Mr. Jim Corbett. This park is situated at the junction between Garhwal and Kumaon hill regions of Uttaranchal. The great naturalist-writer Jim Corbett needs little introduction. His writings have fascinated generations of wildlife enthusiasts and he still commands no less appeal nowadays. The areas in and around the present day Corbett National Park were the stage for his exciting adventures in wilderness. Most of his man-eater hunting expeditions also took place in the same areas. Jim Corbett lived in Kaladhungi, where his house has been made into a Museum dedicated to his life and times. Corbett attained the distinction as the first national park to be established in mainland Asia in 1936. Besides being located at a bio-geographic confluence

It covers an area of 521 sq. km comprising the Sonanadi Wildlife Sanctuary and Reserve Forest areas forming the Corbett Tiger Reserve over 1288 sq. km. The most famous of Corbett's wild residents are the Bengal Tiger and the Asiatic Elephant, but with about 600 species of avifauna Corbett is one of the richest bird regions of India.

Hence, the Park represents a synthesis of cultures of both these mountain areas. Corbett National Park has captured the imagination of many with its diverse wildlife and breathtaking landscapes.

The natural uniqueness of the area was recognised long ago and so. Corbett National Park lies in two districts – Nainital and Pauri – in the hill state of Uttaranchal in northern India..Its geographical location between the Himalayas and the terai, and the streams, rivers and ridges crisscrossing the terrain, present Corbett with a remarkable variety of landscapes. This vivid mosaic of habitats –

Topography

The park is located between 29°25' to 29°39'N latitude and 78°44' to 79°07'E longitude. The average altitude of the region ranges between 360 m (1,181 ft) and 1,040 m (3,412 ft). It has numerous ravines, ridges, minor streams and small plateaus with varying aspects and degrees of slopes.

The park encompasses the Patli Dun valley formed by the Ramganga river. It protects parts of the Upper Gangetic Plains moist deciduous forests and Himalayan subtropical pine forests ecoregions. It has a humid subtropical and highland climate.

Biodiversity

The park has sub-Himalayan belt geographical and ecological characteristics. It is wet and dry, plain and mountainous, gentle and rugged, forests and grasslands – supports numerous plant and animal species, representing Himalayan as well as plains kinds. Dense moist deciduous forest mainly consists of sal, haldu, pipal, rohini and mango trees, and these trees cover almost 73 per cent of the park. The 10 per cent of the area consists of grasslands.It houses around 110 tree species, 50 species of mammals, 580 bird species and 25 reptile species. The endangered Bengal tiger of India resides here. The sanctuary was the first to come under Project Tiger initiative. Hailey National Park is situated in Nainital district of Uttarakhand was established in 1936 as the park acts as a protected area for the endangered Bengal tiger of India

Ecotourism Activities

An ecotourism destination it contains 488 different species of plants and a diverse variety of fauna. The increase in tourist activities, among other problems, continues to present a serious challenge to the park's ecological balance. every season more than 70,000 visitors come to the park from India and other countries. The park comprises 520.8 km. area of hills, riverine belts, marshy depressions, grass lands and large lake. The elevation ranges from 1,300 feet (400 m) to 4,000 feet (1,200 m). Winter nights in Corbett national park are cold but the days are bright and sunny. It rains from July to September.

Historical Backgrounds

Some areas of the park were formerly part of the princely state of Tehri Garhwal The Boksas—a tribe from the Terai—settled on the land and began growing crops, but in the early 1860s they were evicted with the advent of British rule. The reserve does not allow hunting, but does permit timber cutting for domestic purposes. Soon after the establishment of the reserve, rules prohibiting killing and capturing of mammals, reptiles and birds within its boundaries were passed. It was chosen in 1974 as the location for launching Project Tiger.

This thirteen protected areas covered by World Wildlife Fund under their Terai Arc Landscape Programme. Over 585 species of resident and migratory birds have been categorized, including the crested serpent eagle, blossom-headed parakeet and the red junglefowl. The tigers Leopards include the jungle cat, fishing cat and leopard cat. Other mammals include four kinds of deer (barking, sambar, hog and chital), Sloth and Himalayan Black bears, Indian Grey Mongoose, otters, yellow-throated martens, ghoral (goat-antelopes), Indian pangolins, and langur and thhesus monkeys.

Ecotourism

The reserve management has also encouraged ecotourism. In 1993, a training course covering natural history, visitor management and park interpretation was introduced to train nature guides. the Indian government has organized workshops on ecotourism in Corbett National

Park and Garhwal region to ensure that the local citizens profit from tourism while the park remains protected. The summer (April–June) to be the best season for Indian tourists to visit the park while recommending the winter months (November–January) for foreign tourists. As early as 1991, the Corbett National Park played host to 3237 tourist vehicles carrying 45,215 visitors during the main tourist seasons between 15 November and 15 June.

This heavy influx of tourists has led to visible stress signs on the natural ecosystem. Excessive trampling of soil due to tourist pressure has led to reduction in plant species and has also resulted in reduced soil moisture. The tourists have increasingly used fuel wood for cooking. This is a cause of concern as this fuel wood is obtained from the nearby forests, resulting in greater pressure on the forest ecosystem of the park. Additionally, tourists have also caused problems by making noise, littering and causing disturbances in general.

Gulf of Mannar

The Gulf of Mannar falls in the Indo-Pacific region. It is considered to be one of world's richest marine biological resources. This ecologically sensitive marine ecosystem is the Gulf of Mannar Biosphere Reserve.

Topography

It is an inlet of the Indian Ocean, between Southeastern India and Western Sri Lanka. The GoM is 130 km to 275 km wide and 160 km long. During high tide, the seawater is known to rise more than 1.2 meters above the mean sea level. The Gulf of Mannar is a large shallow bay forming part of the Laccadive Sea in the Indian Ocean. It lies between the southeastern tip of India and the west coast of Sri Lanka.

Biodiversity

It has 3,600 species of plants and animals, of which there are 117 species belonging to 37 genera. It is also well known for its diversity of sea grasses.

Kruger National Park

Kruger National Park is one of the largest game reserves in Africa.

Topography

It covers 19,485 sq km and extends 360 km from north to south and 65 km from east to west. The park lies in the north-east of South Africa, in the eastern parts of Limpopo and Mpumalanga provinces. Phalaborwa, Limpopo is the only town in South Africa that borders the Kruger National Park. It is one of the largest national parks in the world, with an area of 19,485 sq km The Park is approximately 360 km, and has an average width of 65 km. At its widest point, the park is 90 km wide from east to west.

Biodiversity

Out of the 517 species of birds found at Kruger, 253 are residents, 117 non-breeding migrants, and 147 nomads. All the Big Five game animals are found at Kruger National Park, which has more species of large mammals than any other African Game Reserve (at 147 species).

Summary

Conservation of forest and wildlife has become practically possible in the ecotourism sites. There is an increase in animal population in most of the protected areas where ecotourism projects have been launched by the State Governments in India. It is in fact a successful model that has resolved many critical chronic issues in a very amicable manner. After the IYE All the national parks and wildlife sanctuaries in India have adopted the micro ecotourism projects for strengthening the relationship between man and nature. Ecotourism projects have provided sufficient opportunities to empower local people participate in the conservation of forest and wildlife. In this lesson, chapter, much focus has been given on the Periyar National Park, Corbett National Park, Thenmala, Run of Kutch, Gulf of Mannar in India and Kruger National Park, South Africa with reference to the topography, biodiversity, ecotourism activities, etc.

Self Assessment Questions

1. What are the present and past trends of ecotourism? and how can these trends be exploited as business opportunities?

2. Explain the trends for participating in ecotourism activities.

3. Explain the prevailing issues of ecotourism.

4. Discuss about the challenges of ecotourism and how can these challenges be tackled in the future?

5. Discuss the issues that affect the wildlife tourism in India.

6. Trace the origin of concept of community and community participation for tourism development.

7. Discuss the benefits of community participation from ecotourism projects.

8. Explain different types of community participation and suggest the types of community participation more appropriate for ecotourism projects.

9. What is community empowerment and explain the need for community participation for sustainable development.

10. What is stakeholder participation and how can the local community be useful for biodiversity conservation?

11. Explain the meaning of protected areas and find out the historical background of protected areas.

12. Discuss the need for protected area management and what are the objectives of Protected Areas?

13. How can the protected areas in India be managed through ecotourism? Discuss.

14. Which are the do's and don'ts to be enforced for visitors and tourism operators in the protected areas?

15. Explain the significance of wildlife tourism in the protected areas.

16. Present report on community-based ecotourism programmes in the Periyar Tiger Reserve in Kerla.

17. Present a report on the ecotourism activities and community-based tourism prorgammes in Thenmala ecotourism projects.

18. Highlight the ecotourism places of interest and activities in Sunderban National Park

19. Prepare a report focusing on the ecotourism aspects in Nandadevi Biosphere reserve.

20. Present a report on Simlipal National Park as an ecotourism project.

21. Present a report on Kaziranga national park as an ecotourism project.

22. Present a report on Kaziranga national park as an ecotourism project.

23. What types of Ecotourism activities in Rann of Kutch can be promoted?

24. Present a report on Corbett national park as an ecotourism project.

25. What types of ecotourism activities can be promoted in Gulf of mannar

26. Present a report on Kruger national park as an ecotourism project.

CASE STUDY
Ecotourism in Chhattisgarh

The government of Chhattisgarh has unveiled several programmes to take maximum benefits of ecotourism potentials in the state. The State has been facing several socio-economic problems like poverty, hunger, malnourishment, unemployment, illiteracy, etc. These are the chronic problems that the government is addressing with several welfare measures. One such measure is the promotion of ecotourism that can partly resolve the problems in a sustainable manner. Chhattisgarh is one of the newly created states with over 44 per cent lush green forests. The state has also 12 per cent share of India's total forests. There are 11 wildlife sanctuaries and three national parks dotted across the stated providing ample scope for promotion of ecotourism. The Department of Forest has indentified three ecotourism regions comprising Bilaspur-Achanakmar, Raipur-Turturia and Jagdalpur-Kanger Valley. In addition to this, Indrawati National Park, Kangerghati National Park, Barnawapur Sanctuary, Sita Nadi Sanctuary Sanjay National Park and Udanti Sanctuary are some of the well-known ecotourism destinations in Chhattisgarh. Wild Buffalo and the Mocking

Hill Myna are commonly spotted in the ecotourism destinations. Besides, Spotted Deer, Four Horned Antelope, Sloth Bear, Wild Boar, Wild Dog, Jackal, Wolf, Hyena and Bison are the endangered species. There is a high probability of spotting these endangered species while visiting the protected areas.

There are three principal objectives that the government primarily expects from the implementation of ecotourism projects in the protected areas. The first objective is to provide financial and manpower support for protection and preservation of threatened species like Royal Bengal Tiger and Leopard. Secondly, the government will solve the socio-economic problems through ecotourism as it generates revenue for people at the bottom and grassroots level. Thirdly, ecotourism can become one of a key attraction through which other attractions can also be promoted.

Eco-tours are arranged to provide a glimpse of the rich tribal heritage as Chhattisgarh is known for its large concentration of primitive tribes like Mariya, Muriya, Koya, etc. Walks, treks, rafting and parasailing are some the activities that are offered to eco-tourists. Visitors are also taken on occasional trips to the tribal weekly or village weekly market to give new experience to the urban high-heeled tourists. In addition to this, tribal dance, music, food, costume, etc are some of the important attractions that the Department of Tourism takes much interest in programming them for the eco-tourists with much interest in ethnic life. Cockfight is a typical and traditional prorgamme that is organized during the festival occasions. It is the most striking live programme that tribal people demonstrate in the weekly market places or at the place of village fair.

On the other hand, ecotourism may cause harmful environmental impacts like disturbance to the breeding of animals and birds due to noise pollutions, contamination of water, trampling the trekking trails in the jungle, clearance of trees for construction of guest houses and connecting roads, etc. For example, feeding animals can create unnatural behavior. Some birders attract birds by whistling or playing a tape- recorded song. Tourists set fire to the forest when they leave behind the burnt wood at the place of picnic. The fire runs out of control and destroys the vegetation and wildlife habitat. Tourists often venture off the trail in pursuit of birds and animals that damage the vegetation and soil.

Questions

1. Explain the factors that have provoked the Government of Chhattisgarh to promote ecotourism?

2. What are the unique features of ecotourism attractions in Chhattisgarh?

3. What are the benefits that ecotourism projects are expected to help the State address the issues?

4. What are the likely negative impacts of ecotourism in the protected areas in Chhattisgarh?

5. Suggest the ways that the negative impacts of ecotourism can be minimized.

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UNIT - V

Unit Structure

Lesson 5.1 - Role of International Agencies

Learning Objectives

After reading this chapter, you should be able to

➢ Know about the three leading international organizations for ecotourism promotion

➢ Know their roles and activities for ecotourism

➢ Understand the commitment towards the preservation of environment through ecotourism

Ecotourism is a niche tourism attraction that has been the global phenomenon since the year 2002 was designated as International Year of Ecotourism. The need for the intervention of UNs was felt when the whole world was discussing on important issues like global warming, climate change, poverty eradication, preservation of endangered species, etc. These issues can be resolved with the collaboration and partnership of countries. As such, ecotourism is promoted in ecologically sensitive areas and visitors are more keen to enjoy the nature and culture of the places. There are possibilities of conflicts of interests between the objectives of preserving environment with the help of ecotourism, providing experience to the visitors and providing economic benefits to the local community. This chapter has highlighted the background, objectives and commitment towards ecotourism of the UNWTO, UNDP and WWF.

United Nations World Tourism Organization (UNWTO)

The Union of National Propaganda Organizations (UNTPO) was set up by the representatives of 14 countries at The Hague in Netherland in 1925 The UNTPO was changed to the International Union of Official Tourist Propaganda Organizations (IUOTPO) in 1934.

The International Union of Official Travel Organization (IUOTO) was established in 1947 after the World War II. The IUOTO was finally changed to World Tourism Organization (WTO) on January 2, 1975 with the headquarters of WTO at Madrid in Spain The UN General Assembly approved to add UN before the World Tourism Organization on December 1, 2005. These are the following objectives.

➢ Promotion and development of tourism for economic development, international understanding, peace, prosperity and human rights and fundamental freedoms

➢ Safeguarding the interests of the developing countries in promoting tourism

➢ To establish collaboration with various bodies of the UNs

International Year of Ecotourism (IYE)

The UNs Economic and Social Council (ECOSOC) in 1998 proposed designate 2002 as the International Year of Ecotourism (IYE). The theme was "Ecotourism- A Key to Sustainable Development. It was considered to achieve the aims of Agenda 21 in promoting development and the protection of the environment. This was an attempt to assess the state of ecotourism potentials for sustainable development in the future. This means maximizing the economic, environmental and social benefits from ecotourism, while avoiding its past shortcomings and negative impacts. The objectives of the IYE are as follows;

➢ To generate greater awareness among public authorities, the private sector, the civil society and consumers about the capacity of ecotourism to contribute to the conservation of the natural and cultural heritage in natural and rural areas, and the improvement of living standards in those areas

> ➤ To disseminate methods and techniques for the planning, management, regulation and monitoring of ecotourism to guarantee its long-term sustainability

> ➤ To Promote exchanges of experiences in the field of ecotourism

Resolution for Ecotourism Promotion

The UN General Assembly unanimously adopted a resolution on a theme "Promotion of ecotourism for poverty eradication and environment protection". The resolution was facilitated by Morocco and sponsored by a record 105 delegations. The resolution emphasized on the significant role of ecotourism to eliminate poverty and protect environment. The resolution, entitled, Ecotourism has positive impact on income generation, job creation and education. Thus, this model of economic development can fight against poverty and hunger. The resolution has outlined the multifaceted role of ecotourism the conservation, protection and sustainable use of biodiversity and of natural areas by encouraging local and indigenous communities in host countries and tourists alike to preserve and respect the natural and cultural heritage. The members can generate investment for small and medium-sized enterprises in ecotourism projects. This investment can include financial services for providing microcredit to the poor and indigenous communities in areas of ecotourism potential and rural areas.

UNWTO's Funding Project for ST-EP

The origin of concept Sustainable Tourism for Eliminating Poverty initiative has been an attempt since the World Summit on Sustainable Development in Johannesburg 2002 to meet the UN's Millennium Development Goals by 2015. The programme is especially designed for people with an income of less than a dollar a day in the 49 least developed countries. The ST-EP Foundation has committed for supporting funds with an amount of US$3,043,150 to 44 projects in 31 countries. This fund also includes five projects with IUCN with UNWTO and UK Travel Foundation. The Foundation provides partly to 12 projects and Protected Areas in 9 Countries of West Africa and Discover Ghana Billboards Project.

United Nations Development Programme (UNDP)

The United Nations Development Programme (UNDP) is an important arm of the UN's global development network to achieve the Millennium Development Goals (MNG). It advocates for change and connects countries with rest of the world to acquire knowledge, experience and resources. The primary objective is to promote inclusive and sustainable human development. It advocates for inclusive growth and development that can reduce poverty, malnourishment, unemployment, hunger, etc.

Network of UNDP

The UNDP operates in 177 countries to evolve strategies to face international and national development challenges. It is fully funded by from member nations of UNs. Each member country becomes the part of the prorgamme. It works with local governments to provide financial and technical support to find solutions to the development challenges and enhance capacity of local people to take up responsible and high skill jobs. It provides expert advice, training and financial grant to developing countries, along with the least developed countries.

The UNDP's environmental strategy focuses on effective water governance. It primarily access to water supply and sanitation and access to sustainable energy services. Sustainable land management is an important strategy to fight for desertification and land degradation, conservation and sustainable use of biodiversity. It works for controlling carbon emissions of harmful pollutants and ozone-depleting substances.

The UNDP supports pilot projects and it encourages rural women to take active part in the development. It plays a connecting point between governments, NGOs, and outside donors. Thus, it works with local leaders and governments to provide opportunities for impoverished people to become socially and economically independent.

Tourism Projects

The Ministry of Tourism, Government of India and the UNDP have been funding the Endogenous Tourism project in partnership with

local implementing NGOs. The project aims to develop selected rural destinations in India as rural tourism villages. The activities of the project include construction and renovation work of building, roads and water facilities along with community sensitization, training and capacity building, and skill upgradation.

As many as 153 rural tourism projects have been implemented in 28 States/Union Territories. It includes 36 rural sites where UNDP has supported for capacity building. Tourism capacity building programme includes the aspects of networking, site marketing, hospitality, traditional local cuisines, interpretation skill and language skill. The Self Help Groups (SHGs) are given the training for sustainable diversified livelihood. For example, Sualkuchi is a weaving village in Kamrup district of Assam under the UNDP It is the largest village with traditional handloom and rich cultural heritage in Assam. It offers a unique experience of Silk weaving practices right from reeling to weaving.

World Wide Fund for Nature

Many environmentalists, NGOs and campaigners have protested against the campaign namely Corporate Watch and PR Watch funded by Coca-Cola, Lafarge and IKEA. For example, In 1988, Prince Bernhard, former president of the WWF, sold paintings for GBP700,000 to raise money for the World Wildlife Fund. WWF-India is not active at the tiger reserve given as the example, but it is active elsewhere seeking to limit adverse tourism impacts and better sharing of tourism benefits to local communities

The World Wide Fund for Nature (WWF) is an international non-governmental organization working on issues regarding the conservation, research and restoration of the environment, formerly named the World Wildlife Fund, which remains its official name in Canada, United States and the United Kingdom. It is the world's largest independent conservation organization with over 5 million supporters worldwide, working in more than 100 countries, supporting around 1,30 conservation and environmental projects. WWF is a foundation, in 2010 deriving 57% of funding from individuals and bequests, 17% from government sources (such as the World Bank, DFID, USAID) and 11% from corporations. The group says its mission is "to halt and reverse the destruction of our

environment. Currently, much of its work focuses on the conservation of three biomes that contain most of the world's biodiversity: forests, freshwater ecosystems, and oceans and coasts. Among other issues, it is also concerned with endangered species, pollution and climate change.

The history of establishment of WWF may be traced back to the publication an article in the Observer by Victor Stolan. The article highlighted on the protection of endangered animals through fundraising. It was Max Nicholson, who coined the name World Wildlife Fund on 29th April, 1961 with the sole objective of supporting wildlife conservation worldwide. The establishment of WWF was formally approved with the signatures of members in the Morges Manifesto in Morges, Switzerland. The American Conservation Association was merged into the WWF. The organization undertook its own conservation projects and campaigns. More strategic approaches for conservation activities were taken up by the 1980s. The name of WWF was changed to World Wide Fund for Nature in 1986 without the change in original name in the United States and Canada. In the 1990s, WWF revised its mission to make it more focused towards conservation and other alternative energy sources. As many as 238 eco-regions were identified with the representations of world's terrestrial, freshwater and marine habitats. In 1996, the organization obtained general consultative status from UNESCO.

The Objectives of WWF are as follows

➢ To act for fundraising and providing grants to non-governmental organizations
➢ To provide scientific knowledge for the protection of endangered species
➢ To work towards preservation of biological diversity
➢ To focus on sustainable use of natural resources
➢ To take more efforts for the reduction of pollution and climate change

Mission of WWF

Rapid degradation of the planet's natural environment must be stopped and efforts must be made to create to build a future for humans to live in harmony with nature.

This can only be possible with the practice of these three primary missions.

➢ Conserving the world's biological diversity

➢ Ensuring that the use of renewable natural resources is sustainable

➢ Promoting the reduction of pollution and wasteful consumption

Activities of WWF

The organization works on providing funds to study biodiversity loss and unsustainable use of natural resources. This body works with NGOs, governments, business, investment banks, scientists, fishers, farmers and local communities. It also undertakes public awareness and mass contact campaigns to influence decision-making institutions and general people to provide support for preservation of environment.

Panda Symbol- The Official Logo

The official logo of WWF is Panda. The Panda named Chi Chi was transferred from the Beijing Zoo to the London Zoo in 1961. Presently, the WWF focuses on restoring populations of 36 species and some of the important species include elephants, tunas, whales, dolphins and porpoises. Ecological footprints include carbon emissions, cropland, grazing land, fishing, forestry and water.

Publications

The WWF brings out a two-yearly Living Planet Report namely the Living Planet Index in collaboration with the Zoological Society of London. It also calculates the ecological footprints to find out the impact of human activity. The organization also regularly publishes reports, fact sheets and other documents.

Tourism Projects

These are the two remarkable examples of the initiatives of WWF to protect the flora and fauna species for the promotion of ecotourism. For example, the WWF will develop the natural glaciers-fed lake 'Chandertal' as an ecotourism site. The project will promote the land-locked landscape

and tribal culture of Chandertal. Efforts will be taken to constitute eco-societies under forest divisions of the state. Further, Government of India, Ministry of Tourism had allocated about ₹ 3 crore in 2008-09 and ₹ 1.8 crore in 2009-10 renovate old rest houses owned by the Department of Forest.

For example, the WWF provided a quick response fund to take care of tiger protection Kaziranga National Park in Assam. This is otherwise called as Tiger Emergency Fund (TEF) to preserve the predator species devastated by floods in 1988. The WWF fund also supported fire control in Panna National Park, anti-poaching in Corbett Tiger Reserve and drought relief measures in Sariska National Park, as well as Ranthambore Tiger Reserve in 1988.

Summary

Ecotourism has been so popular in the world after the IYE in 2002 that the international organizations and funding agencies have seriously felt the need for technical financial and administrate support to the countries and ecotourism sites promoting ecotourism for the preservation of nature and wildlife and providing income and employment to the local community members. All the global issues and challenges like global warming, climate change, poverty eradication and preservation of endangered species are linked with the policy and programmes along with international rules and regulations to deal with these menaces in the world. Thus, it is the attempt of the UNs, UNDP and WWF to set the rules and regulations and take several worldwide campaigns for the nature conservation that leads to protecting the ecologically sensitive areas in developing countries and third world countries. Those countries do have expertise and financial capability to protect their natural resources and wildlife. Thus, the lesson has presented the background, objectives and commitment towards ecotourism of the UNWTO, UNDP and WWF.

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Lesson 5.2 - Role of National Agencies

Learning Objectives

After reading this chapter, you should be able to

➢ Know the primary reasons of the involvement of government and NGOs in ecotourism

➢ Understand their commitments towards the sustainable ecotourism

➢ Know their contributions towards the formulation of ecotourism policy

➢ Appreciate the efforts of the organizations in regulating responsible ecotourism

➢ Know their initiatives in carrying out and funding research projects with regard to sustainable ecotourism.

Ecotourism is an ultimate solution to socio-economic development in the protected areas as it is already experienced at many ecotourism sites in Kerala, Madhya Pradesh, Uttarakhand and Himachal Pradesh. Conservation of nature is practically possible with the help of revenue from tourism activities and local community participation. The involvement of government agencies and NGOs in promoting ecotourism shows the concern and commitment towards the conservation of nature and elimination of poverty. When local people get direct or indirect employment in the ecotourism projects, this can stop them from destroying the forest and wildlife.

Thus, the Ministry of Environment and Forest and Ministry of Tourism, Government of India have undertaken joint action programme to involve local people in the ecotourism projects and create awareness about the conservation of protected areas (National Park, Wildlife Sanctuary and Biosphere Reserve). Each State Government in India has implemented ecotourism policy to promote responsible as well as sustainable ecotourism at the ecotourism sites. In this chapter, you will

read the roles of EQUATIONS and ATREE in creating awareness and contributing research findings on the impacts of tourism on ecology and environment.

Ministry of Forest & Environment - Government of India

The Ministry of Environment & Forests (MoEF), Government of India aims to plan, promote, coordinate and oversee the implementation environmental and forestry policies and programmes relating to conservation natural resources, biodiversity, forests and wildlife. As per the principle of sustainable development and enhancement of human well-being, it ensures the welfare of animals and the prevention and abatement of pollution. A set of legislative and regulatory measures have been framed for preservation, conservation and protection of the environment. All the objectives of the Ministry are guided by the legislative measures of the National Conservation Strategy and Policy Statement on Environment and Development, 1992; National Forest Policy, 1988; Policy Statement on Abatement of Pollution, 1992; and the National Environment Policy, 2006.

The Ministry also serves as the nodal agency the UNEP SACEP, ICIMOD, UNCED, CSD, GEF, ESCAP and SAARC) on matters pertaining to the environment. These are the majot objectives of the MoEF.

- ➢ Conservation and survey of flora, fauna, forests and wildlife
- ➢ Prevention and control of pollution
- ➢ Afforestation and regeneration of degraded areas
- ➢ Protection of the environment and
- ➢ Ensuring the welfare of animals

Guidelines for Developing State Ecotourism Strategy

Ecotourism guidelines are based on the recommendations of the Tiger Task Force (2005), provisions contained in the Wildlife (Protection) Act, 1972 as amended in 2006, the revised guidelines of the Centrally Sponsored Scheme of Project Tiger and the provisions of the Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act, 2006.

The Ministry has emphasized on the cooperation and collaboration with the Central Government, State Governments, Hospitality Sector, State Forest Departments, Protected Area Managements, Forest Dwellers and Local Communities and Civil Society institutions for ensuring successful implementation of the ecotourism guidelines. The State-level ecotourism strategy must be in tune with the framework of guidelines.

➢ Ecologically sensitive land use policies should be implemented for preventing the altercation of beauty of landscape in protected areas.

➢ Adequate provisions must be made regulate ecotourism from getting moved to purely high end and exclusive tourism without benefiting local communities.

➢ Modifications in State rules and regulations must be for tourism developers and operators.

However, the Ministry of Environment and Forests has suggested to all States to notify the State-level Ecotourism Strategy. It is a comprehensive plan to include protected areas, critical wildlife corridors and local community participation to provide continuous support for Forest and Wildlife Conservation in ecologically sensitive areas. Emphasis must be on sound environmental design and the use of locally produced by tourists and service providers. Education and training on Conservation of Biodiversity and Sustainable Use of Resources must be imparted to the local community members and hotels and tour operators. Efforts must be taken to enhance the capacity of local communities to help in planning, providing and managing facilities at the ecotourism sites ecotourism.

Adequate mechanisms for monitoring and evaluating the impacts of ecotourism activities must be carried out continuously. The Ministry has emphasized that there must be appropriate land use and water management planning and regulation for maintaining the ecological integrity of landscape in protected areas

Revenue generated from the gate receipts should be utilized for the Protected Area management. As part of the Ecotourism Strategy, the State government should levy a "Local Conservation Fee" as a minimum 10 per cent of turnover on all tourist facilities within a minimum 5 km of the boundary of a Protected Area, and identified wildlife corridors / sensitive

habitats. Further, resources generated from tourism should be earmarked for protection, conservation and local livelihood development. This can help in tacklinghuman-wild animal conflict and welfare measures of field staff. The rationale for a local conservation cess should be clearly explained to the public at large, including through clear signage at local tourist facilities. In order to convert such lands to forest status, financial assistance/ incentives from the local conservation fee can be provided as incentives for communities in the outside protected areas. A Local Advisory Committee must be constituted for each Protected Area by the State government

Ministry of Tourism, Government of India

The Ministry of Tourism, Government of India promotes ecotourism in a responsible and sustainable manner as per this mandate of ecotourism policy and programmes. Ecotourism should be ecologically sustainable that must protect the ecosystem of a protected area. Ecological sustainability includes the environmental carrying capacity of ecotourism sites for minimizing negative impacts. These are the following objectives on which the Ministry is committed for promoting ecotourism for the preservation of biodiversity and improvement of economic well-being.

➤ Involvement of local community leading to socio- economic development

➤ Minimization of conflicts between resource use for eco-tourism and the livelihood of local inhabitants

➤ Perfect match between the environment and socio-cultural characteristics of the local community and nature, types and scale of ecotourism development

➤ Inclusive development with sectoral integration and integrated land-use plan

➤ Avoidance of inter-sectoral conflicts for overall area development

Having witnessed the growing trend of international and domestic visitors to travel to National Parks and Wildlife Sanctuaries, the Ministry of Tourism and Ministry of Environment & Forests have received serious complains on the misuse of ecotourism sites in the protected areas by the stakeholders. The unplanned growth of infrastructure for

ecotourism projects largely affects the corridors for movement animals in the parks.

As an effort to ensure the best ecotourism practices, the Ministry of Tourism has instituted National Tourism Awards for Best Eco friendly Hotel, Best Responsible Tourism Project and Best Eco-friendly Practices by Tour Operators.

As a pilot basis, the Ministry of Tourism, Government of India had taken the first assessment of impacts from the establishments of Hotels, Lodges, Resorts, Camps & Guest Houses in Corbett National Park, Kaziranga National Park, Kanha National Park, Bandavgarh National Park, Pench Tiger Reserve and Mudumalai Wild Life Sanctuary subsequently. The survey revealed the impact of tourism activity in and around the national parks and also the blocking the movement of animals.

EQUATIONS (Equitable Tourism Options)

Equitable Tourism Options (EQUATIONS) is a research, campaign and advocacy organization to study the social, cultural, economic and environmental impact of tourism on local community members. The objectives are to be non-exploitative, equitable and sustainable towards the local community. The areas of research include tourism development at the destinations and it impacts on he lives and livelihood of local communities along with socio-cultural, economic and environment. The NGOs take initiatives for campaigns and support the struggles and go against unjust, undemocratic and unsustainable forms of tourism. Decentralized democracy communities should have a decisive voice in the access, control and ownership over their livelihood, natural resources and common resources.

EQUATIONS was founded in 1985 as a NGO to fight for justice, equality and democratic rights of the people in the bottom of the society socially and economically. This organization took decisive role in responding to new economic policies and structural adjustments for free and liberalized trade regimes. It has been working for indigenous people, downtrodden, women, coastal communities and the poor to help

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them access to healthcare, education and employment and participate in policymaking and development decisions

Activities of Equations

The Activities of EQUATIONS spread over areas like Child & Tourism, Ecosystems, Communities &Tourism, Economic Impacts & Tourism, Governance, Law & Tourism, Ecotourism Education and Women & Tourism. For example, the Wildlife Institute of India, and the Governments of Kerala, Nagaland, Himachal Pradesh and Chhattisgarh were involved in the study of Visitor Management and Participatory Ecotourism Strategy for Periyar Tiger Reserve (PTR) in 2002. The study recommended strategies for conservation-oriented tourism and management systems.

Participated in National Initiatives

EQUATIONS participated in policy initiatives for national biodiversity strategy and action plan, livelihoods and lifestyles, the National Environment Policy in 2006. EQUATIONS was consulted by the MoEF for the proposed Environment Impact Assessment notification in 1994 and in 2009. It became the member of PATA India ecotourism and environment committee in 2002. It involves in creating awareness on environmental regulation and reality in the tourism sector in association with service providers, tour operators and industry bodies like the Ecotourism Society of India. it has as been working for south Indian states of Kerala, Karnataka, Andhra Pradesh and Karnataka. Many studies are now being conducted in Central India, Eastern India, Andaman and Nicobar Islands, North-East States, Himachal Pradesh and Uttarakhand.

Landmark Initiatives

In the beginning of 90's, EQUATIONS took an investigative study in 1987 on Impacts of Tourism on Fishermen in Kerala, Karnataka and Goa in collaboration with the National Fish Workers Forum. It criticized the Vohra Committee report to modify the Coastal Regulation Zone notification in 1992. It undertook campaign to oppose the government's plans to convert Bekal Fort area in Kasargode district of Kerala into a Special Tourism Area in violation of the CRZ As a result, the Bekal Resort

Development Corporation has to modify the Master plan for Bekal public. It campaigned against the East Coast Road in Tamil Nadu. EQUATIONS conducted programmes on Environment and Ecosystems as a Special Programme on hill tourism in Ooty and Kodaikanal. That resulted in the ban on plastics in Ooty and Kodaikanal.

Apart from these key campaigns, EQUATIOS in 1997-98 participated the South-Southeast Asian Convention on Development and Sustenance of Coastal Tourism in India organized by the CII. EQUATIONS trained elected members of panchayats on Coastal Tourism in Kerala and CRZ violations on the Kerala Coast. It participated in the Coastal Watch Programme in 1998. A task Oriented National Meet, and the strategy meet on National Coastal Zone Management Authority were both organised by EQUATIONS.

Publications

EQUATIONS published case studies of coastal locations at Karnataka, Tamil Nadu and Kerala in collaboration with grassroots organizations like Malabar Coastal Institute for Training Research and Action, Coastal Action Network, Okkutta Karnataka.

Participation on Issues of Protected Areas

EQUATIONS participated in the consultation on the issue of forest lands and sanctuaries being declared as tourism areas and its implications on traditional rights of tribes and their culture, economy and environment in 1991. In 1992, a meeting in Gudalur (Nilgiris) on Sanctuaries and Tribal people took the debate further. In 1994-95, Guidelines on Wildlife Tourism published by the Ministry of Environment and Forests were evaluated and commented. EQUATIONS was intensively involved in supporting the movement and struggle of the Adivasi collective based in Nagarahole against the move of the Taj Group of Hotels to set up a resort inside the Park.

Study on Community Participation

EQUATIONS have studied on roles of local communities in ecotourism in natural areas in Andaman Islands, Chhattisgarh, Madhya

Pradesh, Uttarakhand, Assam and Ladakh. EQUATIONS was the part of the celebration of International Year of Ecotourism in 2002.

Organizing Conventions

EQUATIONS organized an international conference for NGOs "Tourism Towards 2002" at New Delhi in September 2001 and the Convention on Biological Diversity COP 6 Meeting, International Year of Ecotourism (IYE) and the World Summit on Sustainable Development (WSSD). The debate on the issue of ecotourism certification and the demand for monitoring under the control of local communities were emphasized.

Participations in Global Forum

EQUATIONS have brought the tourism issues to the knowledge of global thank tanks. The organization participated in the workshop on Biodiversity & Tourism at Santo Domingo in June 2001, the Ecotourism Summit in Quebec in 2002, the 11th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) to the Convention on Biological Diversity (CBD) in 2005 at Montreal, Canada, the 8th Conference of Parties (COP) to the Convention on Biological Diversity (CBD) at Curitiba, Brazil in March 2006.

Our engagement with government systems, particularly tourism and ecotourism departments, forest departments, academic institutions have also been towards influencing policy and practice.

Ashoka Trust For Research In Ecology & Environment (ATREE)

Ashoka Trust for Research in Ecology and the Environment (ATREE) is a non-governmental organization with much focus on research in biodiversity conservation and sustainable development. The mission is to promote socially just environmental conservation and sustainable development by generating rigorous interdisciplinary knowledge. It involves academia, policymakers, practitioners, activists, students and wider public audiences as key opinions makers.

The values and practice of ATREE include professional integrity and rigour, academic freedomincreasing ownership, fairness and transparency, accountability, cultural and ethnic diversity and collaboration and partnerships.

The Suri Sehgal Centre for Biodiversity and Conservation and Centre for Environment and Development represent two broad thematic areas nesting four cohesive inter-linked programmes.

Interdisciplinary research is organized under the Centre for Environment and Development (CED) and the Suri Sehgal Centre for Biodiversity and Conservation.

Programmes under CED include Forests and Governance and Land, Water and Livelihoods. Ecosystem Services and Human Wellbeing and Ecosystems and Global Change.Both Centres deploy a holistic perspective that requires different disciplines to work together to resolve key research questions, reflected in programme taxonomy and scope, team compositions, issues addressed and research questions asked.

Ecological & Environmental Issues

➢ Decline in quantity and quality of water for human wellbeing, sustaining economic activities and ecosystem functioning
➢ Changes in agricultural practices
➢ Diversion to high-value uses
➢ Climate variability and change
➢ Land degradation
➢ Salinity and water logging
➢ Land-use management of areas prone to water and wind erosion (
➢ Increased wind draft, reduced rainy days, high rainfall intensities

ATREE works towards bringing about changes by acknowledging social factors, interactive and participative methods and network with organizations. The research-based findings trigger debates and discussions by creating forums communities, researchers and public groups to discuss on providing strategic environmental policy perspectives for the benefits of rural poor. It strengthens the involvement of civil society in conservation of water resources and biological diversity.

For example, the declaration of Western Ghats as a UNESCO World Heritage Site in 2012 is based on reports of ATREE and Nature Conservation Foundation and Wildlife Institute of India. It is certainly a remarkable contribution of ATREE for promoting Community-based Conservation Centre (CCC) to provide a two-way interface for local communities and local institutions to evolve practical strategies for sustainable governance and co-management of forest and other natural resources. These are the following examples of interactive projects.

➢ Conservation and livelihood project in Darjeeling

➢ Vembanad CERC's annual fish count

➢ Agasthyamalai CCC's promotion of community conservation initiatives at Vagaaikulam

➢ BRT CCC's technological and research support to Soliga community

➢ Kanakapura CCC will shortly publish a guide on farmland tree diversity in this part of Karnataka

➢ The MM Hills CCC aspects of invasive weed management with local communities and the Forest Department.

ATREE's Community-based Conservation Centre is located at Biligiri Rangaswamy Temple Wildlife Sanctuary in Karnataka as the first field sites to make microscopic study on indigenous Soliga community in 1996. Anticipating the relocation with declaration of a tiger reserve in 2011, the Soliga proposed a community conservation model for protected area governance. This community helped in preserving the BRT landscape and re-map the forest resources on the basis of location of cultural sites, sacred groves and forest types.

With self help groups, two outlets were established near temple to market the products and decentralized nurseries. The irrigation benefits from the Gundal reservoir have transformed the agriculture. A map depicting 489 sacred sites in BRT has also been made out of the study. ATREE informed the provisions of the Forest Rights Act for which 1468 families have received individual land rights.

ATREE has also studied the role of ecotourism as a tool for conservation and development.

Summary

In this lesson, the roles of MoFE and MoT, Government of India have been highlighted with much emphasis on guidelines of the MoFE for developing ecotourism strategy. These guidelines have regulated the unplanned growth of ecotourism. As a mission to save the environment from the unregulated mass tourism, the EQUATIONS is a Ngo working for the cause of protecting the environment and educating the people to contribute for preservation of environment. It has been spearheading the campaign for sustainable and responsible tourism to minimize the negative impacts of large-scale development for tourism. The published materials of EQUATIONS are empirical and comprehensive to refer for taking any policy decisions. At the same time, ATREE is also a NGO aiming to create awareness campaign against the environmental pollutions. These two NGOs activities and initiatives have been discussed in this lesson.

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Lesson 5.3 - The International Ecotourism Society

Learning Objectives

After reading this chapter, you should be able to

- ➢ Know the need for the creation of TIES
- ➢ Know the landmark years of TIES
- ➢ Be familiar with the activities of ecotourism undertaken by TIES
- ➢ Understand the roles of TIES in the promotion of ecotourism

The International Ecotourism Society is a flagship organization aiming for conservation of nature and improvement of economic well-being. This Society is a non-profit organization working for the promotion of ecotourism worldwide. The objective of this organization is to ensure the sustainable ecotourism development with much emphasis on resource conservation and income generation for rural people.

The Society has been in the limelight for organizing training programmes, workshops, seminars, conferences, professional courses, etc for the members and other partners in the tourism industry. It has been playing a very critical role in linking stakeholders of ecotourism projects and providing consultancy and professional guidance to the registered members. This chapter will focus on the roles and activities of TIES.

Background of TIES

The International Ecotourism Society (TIES) is a non-profit organization committed for ecotourism promotion since it was established in 1990 in USA. It is an international body to help guide the policymakers, planners, tour operators, travel agents, hoteliers, national and international funding agencies, consultants, etc. As many as 120 countries have become the members of TIES and these members are from academics, consultants, conservation professionals and organizations, governments, architects,

tour operators, lodge owners and managers, general development experts, and eco-tourists.

Megan Epler Wood along with team members founded the TIES in Florida in 1989 with an objective of ensuring sustainable development in an ecologically sensitive places through the promotion of ecotourism. He was the first person donated corps money for the Society. It was a first attempt to form a non-profit society for ecotourism in the world. These are the following major breakthrough of TIES

➢ The first Chairman was David Western and other Board of Directors were appointed in 1990.

➢ In the year 1991, as a first attempt, the Society joined with Charles Darwin Foundation to undertake research work on the uncontrolled or irresponsible tourism growth in the Galapagos Islands, Ecuador. The Society organized Seminar on Ecotourism Management in collaboration with the George Washington University in Washington, DC in 1990.

➢ In the year 1992, the Society took active part in the World Parks and Protected Areas Congress in Caracas, Venezuela and the First World Congress on Tourism and the Environment in Belize and advocated for sound ecotourism practices for the protected areas. The Society undertook the field survey and interviewed the focused group and published first set of comprehensive guidelines for ecotourism operators on the basis of the findings of the survey and interview in the same year..

➢ In the year 1993, the Society published its first book on " Ecotourism: A Guide for Planners and Manager". It also printed and circulated the pamphlet on Ecotourism Guidelines for Nature Tour Operators. The Society was instrumental in hiking entrance fees for foreign visitors to Costa Rica's National Parks.

➢ In the year 1994, the Society conducted the first meeting of International Ecotourism Partners in Virgin Islands to discuss about the promotion of national and regional ecotourism associations. The Society funded the International Eco-lodge Forum and Field Seminar on Eco-lodge Design at Maho Bay Camps, St. John, U.S. Virgin Islands.

➢ In the year 1995, the TIES started Ecotourism News Service and Ecotourism Society Research Service and published The Eco-lodge Sourcebook for Planners and Developers. It took lead role in explaining the international eco-lodge standards 30 countries in Costa Rica.

➢ In the year1996, the TIES organized first Marine Ecotourism Workshop in Hawaii and published documents on Tourism, Ecotourism and Protected Areas with IUCN.

➢ In the year 1995, the TIES was the co-host for organizing the first regional forum on Ecotourism and Community Participation in Quito, Ecuador. In the same year, a regional conference on Ecotourism at the Crossroads: Charting the Way Forward was organized in association with Kenya Wildlife Service and Ecotourism Society of Kenya in Nairobi, Kenya.

➢ In the year 1997, the TIES conducted a regional workshop on Planning and Developing an Ecotourism Destination in Quintana Roo, Mexico. It conducted ecotourism training workshop for tour operators in Tahiti and meetings for Marine Ecotourism Stakeholder the Caribbean and Mexico.

➢ In the 1998, the TIES published Marine Ecotourism Guidelines and conducted ecotourism training workshop at the World Ecotourism Conference in Sabah, Malaysia. It published Cultural Survival Quarterly with special focus on Protecting Indigenous Culture and Land through Ecotourism. It also undertook survey for Belize on the revenue generating strategies for conserving coral reefs in the same year.

➢ In the year 1999, the consumer education campaign was launched on the title "Your Travel Choice Can Make a Difference". The Society signed agreement at at Mohonk Mountain House, New York on the occasion of Ecotourism and Sustainable Tourism Certification Workshop. It also published The Business of Eco-lodges. In the same year, International Ecotourism Society was changed to The International Ecotourism Society and preparatory work was started for the IYE. The office of TIES was moved from North Bennington to Burlington, Vermont.

➤ In the year 1999, the TIES held regional meetings in Belize and the Seychelles with the United Nations Environment Program (UNEP about the IYE. The online version of Ecotourism Observer was also launched in the same year. A document on Ecotourism: Principles, Practices and Policies for Sustainability was also published. It joined actively with Rainforest Alliance to study the feasibility of introducing accreditation system for sustainable tourism and ecotourism certification.

➤ In the 2002, several rounds of regional meeting were conducted for the IYE in India, Peru, Thailand, Kenya and Sweden.

➤ In the year 2003, TIES participated in the World Ecotourism Summit in Quebec City, Canada and offered trainings to NGOs and indigenous groups. It published International Eco-lodge guidelines. It started offering distance learning courses and Sustainable Tourism Certification with the George Washington University.

➤ In the year 2004, the Traveler's Philanthropy Conference was organized at Stanford University in California, USA.

➤ In the year 2005, TIES provided relief to the countries affected by tsunami and fought for sustainable tourism in Indian Ocean countries. It observed the Celebration of Ecotourism in Washington, DC. It sponsored first conference on Ecotourism in the U.S." in Bar Harbor, Maine

➤ In the same year 2006, TIES launched the Advocacy Campaign with the title "Traveling with Climate in Mind"

➤ In the year 2007, TIES organized the Global Ecotourism Conference 2007 at Oslo, Norway and the North American Ecotourism Conference 2007 at Madison, Wisconsin. the first bi-national conference focused on ecotourism in North America.

➤ In the year 2008, TIES organized Washington DC Eco-Tour in partnership with local NGOs. It organized public forum on Indigenous Business Leaders in Ecotourism in partnership with the Swedish Ecotourism Society. It organized the Ecotourism and Sustainable Tourism Conference 2008 (ESTC08) in Vancouver, British Columbia, Canada. It announced the first Lifetime Achievement Award.

➢ In the year 2009, TIES launched Eco-destinations program and Your Travel Choice Blog. It started partnership with Planeterra Foundation, TIES Voluntourism Partner. It published the first edition of the Travel Green Guide. It became conference partnership with the Adventure Travel Trade Association

➢ In the year 2010, the TIES published "Ecotourism Then and Now" on the occasion of bio-decennial celebration. It organized Ecotourism and Sustainable Tourism Conference (ESTC) in Portland, Oregon, USA, in partnerships with Travel Portland and Travel Oregon. It presented the Innovation Leadership in Sustainable Tourism Award at the ESTC10. It was partner of the first European Ecotourism Conference (EuroEco), held in Parnu, Estonia. It became a member of the Global Sustainable Tourism Council (GSTC).

➢ In the year 2011, TIES organized Ecotourism and Sustainable Tourism Conference (ESTC) in Hilton Head Island, SC, USA, in partnerships with Hilton Head Island-Bluffton Chamber of Commerce & Visitor Convention Bureau. It organized a workshop on Sustainable Tourism Business Management in Grand Bahama. It became partner with the US Fish & Wildlife Service and Society for Conservation and Study of Caribbean Birds. It organized a workshop on ecotourism product development and estimation marketing in South Korea, in partnership with Ecotourism Korea. It launched the International Volunteerism Guidelines Project in partnership with Planeterra.

These are the following objectives

➢ To provide guidelines and standards
➢ To provide training and consultancy
➢ To give technical assistance
➢ To provide educational resources
➢ To make tourism a viable tool for conservation and protection of bio-cultural diversity
➢ To urge for sustainable community development.

TIES is committed to helping organizations, communities and individuals promote and practice the principles of ecotourism through

providing membership services, conducting industry outreach and educational programmes.

Travel Ambassador Program is an important attempt of TIES through which eco-tourists or eco-traveler can become the esteemed member. This is the way that the TIES makes an attempt to spread the significance of TIES and ecotourism worldwide.

It helps the members of travel ambassador to select ecotourism destinations and educate them to contribute positively for the betterment of communities and preservation for environment. This will result in the promotion of ecotourism in the future.

The TIES is engaged in providing professional learning series to its valued members and other professional bodies through workshops and training. It is committed for carrying out empirical research work for the larger benefits of the stakeholders of ecotourism. Publications of research findings, decisions of the Board Members, new destinations, welfare University activities, etc are given much priority and it acts as a mirror of the TIES. It further goes for Consortium Certificate, Certificate in Sustainable Tourism Management and Travel Ambassador Program

The TIES is involved in the innovation and development of ecotourism Resources. It identifies ecotourism destinations worldwide and provides certificate after assessing the quality standards.

The TIES sets the quality standards of eco-lodges and tour operators. It also spreads message across the board about the climate change and its direct impact on ecotourism. It gives much emphasis on the preservation and application of indigenous knowledge for ecotourism promotion.

Acknowledging Leader in Ecotourism

TIES has instituted lifetime achievement award to those who makes exemplary contributions and commitments for the promotion of responsible and sustainable ecotourism. The awardees can get a lifelong membership.

Guidelines for Eco-Lodges

The TIES formulates the guidelines for eco-lodge. These guidelines allow the proprietor to start the eco-lodges as per the prescribed guidelines. The objective is to provide valued guidance in designing the eco-lodges and development and operations of eco-lodges. It sensitizes eco-lodge operators to the social and ecological integrity at the ecotourism sites for the larger benefits of environment. The TIES has conducted a study on "The Business of Eco-lodges: A Survey of Ecolodge Economics and Finance".

On behalf of the world Bank's International Finance Corporation, the TIES Epler Wood International carried out a comprehensive study on the environmental, social, and economic footprint of eco-lodges and nature-based lodges around the world In 2003 and 2004

Volunteerism

It is an attempt of TIES to encourage travelers to free time for helping and educating local people being a responsible part of enhancing skills, capacity and knowledge through travel.

Climate Change & Tourism

The TIES has conducted study on nature tour operators' attitudes and actions concerning travel related greenhouse gas emissions. It has prepared the sustainable transportation guidelines for nature-based tour operators. It has also conducted a study on Tourism in the Polar Regions: The Sustainability Challenge in association with the United Nations Environment Programme (UNEP),

Self Assessment Questions

1. Discuss the roles of the UNWTO for the promotion of Ecotourism.

2. What are the UNWTO's funding projects for ST-EP?

3. Discuss the tourism projects funded and managed by UNDP

4. Discuss the roles of WWF in the promotion of ecotourism.

5. Discuss the roles and functions of the Ministry of Forest &

Environment - Government of India for the promotion of ecotourism.

6. Discuss the roles and functions of the Ministry of Forest & Environment - Government of India for the promotion of ecotourism.

7. Critically evaluate the activities of Equations for the preservation of ecology and environment with the promotion of ecotourism.

8. Critically assess the initiatives taken by the ATREE for the preservation of environment.

9. What is the genesis of TIES?

10. Explain the activities that TIES is involved for the promotion of ecotourism worldwide.

CASE STUDY
Ecotourism in Odisha

Odisha is known for its enormous potential for ecotourism attractions. All these ecotourism attractions are situated in the protected areas i.e. three National Parks and 18 Sanctuaries. Ecotourism aims at providing means for achieving "inclusive growth" for the local people, tribal and forest dwelling community. Management of this biodiversity is a unique responsibility and challenge that is proven to be possible through sustainable ecotourism practices. The State Government constituted a Working Group to recommend priorities of Ecotourism to be included the 12th five-Year Plan . The Group has indentified the benefits from the promotion of ecotourism in the protected areas, such as livelihood opportunities to local communities in the wildness areas, wildlife conservation, cultural awareness, education, recreation and adventure activities like trekking, safari, jungle walk, etc.

The potentials of ecotourism have been categorized in four major areas. Protected Area based Ecotourism includes National Parks, Sanctuaries, and Tiger Reserves. Ecotourism in Forests outside Protected areas includes Reserved Forests, Protected Forests and other Government owned forest lands Areas. Village-based Ecotourism includes village landscapes, some natural formations comprising private forests or private land near the

Protected Areas, lakes, coral reefs, waterfalls. Ex situ Conservation Areas includes Ecological Gardens, Zoological Parks, Botanical Gardens and Biodiversity Parks.

This categorization has been done to find the requirements and needs of different stakeholders. As recommended, ecotourism needs to be institutionalized for which there must be the requirements of legal framework, policy enforcement mechanisms, institutional setup and investment. As a result, various schemes in the forms of incentives, rewards and proper monitoring systems shall be introduced for smooth operation of ecotourism projects. Innovative activities include Farm-based ecotourism, Plantation ecotourism, Nursery Ecotourism, NTFP ecotourism, Wilderness camps, Jungle Camping in Tents, Highway Forest Retreat, Eco-Parks, Caving, Rural Ecotourism, Bamboo raft cruise and Water based unique activities.

As suggested, the operation of ecotourism projects can be possible through Department/Boards / Corporations or Joint Venture with other departments or Public Private Partnership/ Corporate Social Responsibility i.e. Build Own Operate Transfer and non-forest lands or contracting the operations of the destination or Community based Ecotourism i.e. owned and managed by the community. As recommended, ecotourism sites should be managed by taking the operational and management models of Kokkrebellur in Karnataka, Rampuria in Darjeeling and Pastanga in Sikkim. It is also suggested for Community Managed and Government Supported ecotourism projects like Bamboo Groves in Kerala. Financing for ecotourism programs can be encouraged through the small and medium enterprises (SMEs) and the corporate partnership model. The use of eco-friendly building materials and vernacular architecture should be given high priority for sustainable ecotourism. Innovative ecotourism projects include home stays, eco-lodges, tented camps along with continuous Capacity Building and entrepreneurship of local stakeholders in all spheres of ecotourism management. The tourist accommodations in the peripheral locations outside the Protected Areas and Forests can be developed by Tourism Department/ OTDC Ltd. /OFDC Ltd on its own or in PPP mode. It is suggested to have a board to be named as Odisha Ecotourism Development Board (OEDB).

Questions

1. What are the objectives of Working Group for Ecotourism in Odisha?

2. Why ecotourism has been categorized?

3. How can the operation of ecotourism sites be managed?

4. What are the innovative steps for sustainable ecotourism?

5. What are the possible functions of Odisha Ecotourism Development Board?

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