

Environmental Geography

Definition of Environmental Geography

Environmental geography is the study of systematic description of different components of environment and interactions of man with these components. . K. Hewitt and F. K. Hare first used the term of ‘**environmental geography**’ in Man and Environment.

Thus the definition of Environmental geography may be further broadened as follows:

“Environmental geography is the study of characteristic features of various components of the Environment, the interactions between and among the components in a geocosystem in terms of ecosystem of varying spatial and temporal scales.”

Savindra Singh defined Environmental Geography in 1989 as follows:

“Thus broadly speaking, environmental geography may be defined as the study of spatial attributes of interrelationships between living organisms and natural environment in general and between technologically advanced ‘economic man’ and his natural environment in particular in temporal and spatial framework.”

The final definition of environmental geography may be formulated as follows :

“environmental geography may be defined as that branch of geography which studies the characteristics, compositions and functions of different components of the natural environmental system, mutual interdependence of different components, various processes that link the components, the interactions of different components with each other and among themselves and consequent responses (environmental problems) in spatial and temporal context in terms of ‘geocosystem.’ as well as interactions of technologically advanced ‘economic man’ with different components of natural ‘**geocosystem**’ and resultant modifications and changes in the natural geocosystem leading to environmental degradation and pollution, the techniques and strategies of pollution control measures and management of ecological resources” .

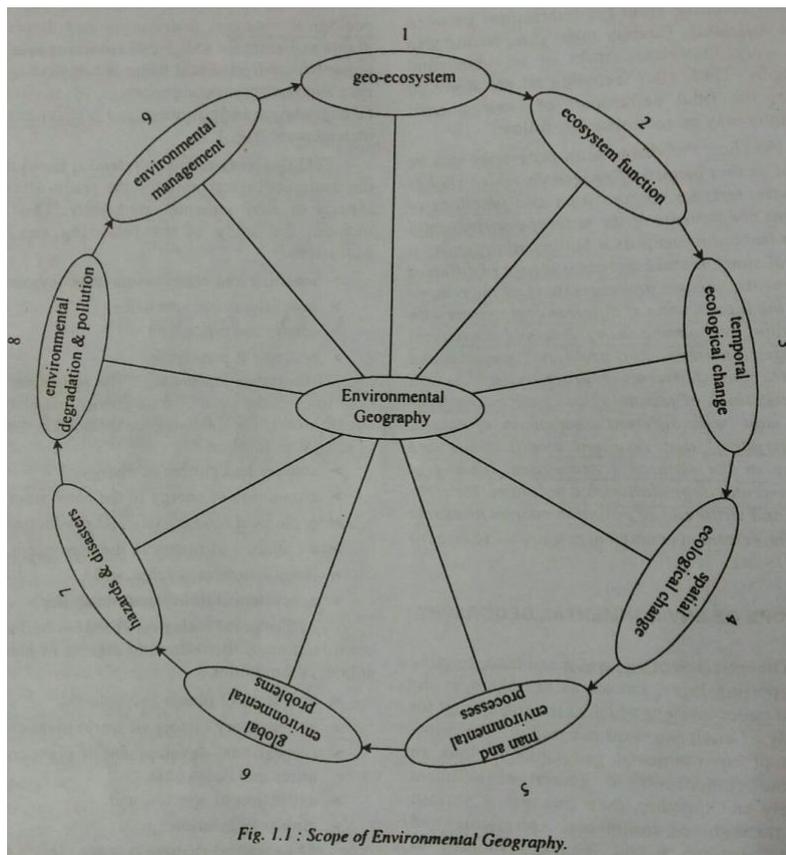
-(Savindra Singh,1989)

Scope of Environmental Geography

The interface of air, water and land forming life supporting layer known as Biosphere is the broadest geo ecosystem (ecosystem) which is the spatial unit for the study of environmental geography. The prime concern of environmental geography is thus to study the components of natural environment separately and together their linkage at various levels through environmental and biological processes and human responses to environment. Environmental geographers are not just familiar with how natural systems function, but they also identify that humans are a dominant agent of change in nature. They realize that it is not possible to understand environmental problems without understanding the physical processes as well as the demographic, cultural, and economic processes that lead to increased resource consumption and waste. Environmental geographers thus follows a variety of academic paths, and these paths converge with those of other disciplines. By its very nature geography is a discipline that seeks to integrate and synthesize knowledge.

The scope of environmental geography may be grouped into 9 major subfields.

1. Geocosystem or simply ecosystem as study unit.
2. The functioning of ecosystem including circulation of energy and matter and ecosystem productivity
3. Temporal changes in ecosystem
4. Spatial ecological changes
5. Global environmental problems
6. Environmental hazards disasters
7. Man and environmental processes
8. Environmental degradation and pollution
9. Environmental management.



Branches of environmental geography

1. Hazards

Hazards research includes study of human-made (anthropogenic), [natural environmental](#) and blended disasters. Hazards frequently studied include: [fire](#), [drought](#), [earthquakes](#), [floods](#), [volcanoes](#), [hurricanes](#), [tornados](#), [toxins](#), [pollution](#), and more. This study is intricately tied to [risk analysis](#).

2. Energy and resource geography

Energy and resource geography studies the spatial placement, interrelations, place-based effects, and human-environment connections of natural resources and energy generation.

3. Political ecology

Study in political ecology incorporates political, economic, cultural, and social systems into the study of the environment and ecological change. Much work in this field focuses on the complex interdependences and interrelationships between human and environmental systems.

Environmental perception

Environmental perception is the study of both individual and group understandings of the environment, the creation of those understandings, and their impacts on decision making.

Relationships between human activity and the environment

Our environment means our physical surroundings and the characteristics of the place in which we live. It also refers to the wider natural world of land, sea and atmosphere. Humans have been interacting with their environment since people first walked the Earth. For example, humans have been cutting down forests to clear land to grow crops for centuries and by doing so we have altered the environment. Conversely, the environment affects us in many different ways as well. A simple example is the way we change our clothes in response to cold or hot weather. In this section we will introduce some of the ways in which humans influence their environment and how the environment influences us, both positively and negatively.

A good climate, accessible clean water, fertile soil, etc. are aspects of the physical environment that enable people to live and thrive. However, harsh environments, such as a very hot climate, limited water and infertile land, make it more difficult for people to survive. We are also affected by major environmental events such as earthquakes, floods and drought that damage homes, property and agriculture. These can lead to the displacement of people and can cause injury, loss of life and destruction of livelihoods. They can also damage water sources and pipelines, causing water contamination and spreading waterborne diseases. In Study Session 10 you will learn more about the effects of floods and droughts.

Our relationship with the environment changed with industrialisation, which began in the 18th century in the UK, shortly followed by elsewhere in Europe and North America, and then spreading across the world. Prior to industrialisation, the impacts of human activity were not very significant because the technologies used were not capable of modifying the environment on a large scale. People at that time lived in agricultural societies using hand tools and simple technologies with limited environmental impact. Industrialisation has allowed for a greater exploitation of resources. For example, we now use powerful chainsaws to cut down trees and industrially produced chemical fertilisers and pesticides for crop production. These changes have rapidly increased the human impact on the environment.

The links between human activity and the environment are complex and varied, but can be grouped into two main types of activity:

- use of natural resources such as land, food, water, soils, minerals, plants and animals
- production of wastes from a range of activities including agriculture, industry and mining, as well as wastes from our own bodies.

Environmental management

Define 'environmental management'.

A diverse set of activities

Environmental management is not easy to define. As Barrow (2005) has acknowledged, it can refer to a goal or vision, to attempts to steer a process, to the application of a set of tools, to a philosophical exercise seeking to establish new perspectives towards the environment and human societies, and to much more besides. Environmental managers are a diverse group of people including academics, policy-makers, non-governmental organisation (NGO) workers, company employees, civil servants and a wide range of individuals or groups who make decisions about the use of natural resources (such as fishers, farmers and pastoralists). Indeed, environmental management involves all people to some extent because all human activities ultimately have some sort of environmental impact. However, some individuals are more directly involved with resource use, and some special interest groups are particularly concerned with resource exploitation and with issues related to pollution. Environmental management therefore involves many stakeholders and requires a multidisciplinary perspective. It involves many spatial scales, ranging from the local to the global. It also involves many, diverse goals, including the desires to control the direction and pace of development, to optimise resource use, to minimise environmental degradation and to avoid environmental disaster. Environmental management may be practised by individuals and groups holding conflicting - and even directly opposing - views, as may be the case when environmental managers employed by large multinational corporations come into conflict with environmental managers representing voluntary organisations.

A focus on decision-making

In general, however, environmental management is concerned with the understanding of the structure and function of the earth system, as well as of the ways in which humans relate to their environment. Environmental management is therefore concerned with the description and monitoring of environmental changes, with predicting future changes and with attempts to maximise human benefit and to minimise

environmental degradation due to human activities. Yet, characteristically, environmental management is about decision-making - and it is especially concerned with the process of decision-making in relation to the use of natural resources, the pollution of habitats and the modification of ecosystems. Fundamentally, then, environmental management is a political activity because those decisions - about resources, pollution and ecosystems - are never neutral or objective; on the contrary, they are value laden and they reflect the exercise of power by particular groups over others. Moreover, in general, it is naïve to conceive of environmental management as being about simply 'the management of the environment' in the sense of humans manipulating and controlling the components and processes of the earth system. Of course, humans do exert such influences on the earth system; but it is a fallacy to think that humans 'manage', for instance, populations of humpback whales. Instead, it is more accurate to suggest that humans may be able to make some progress towards managing human impacts on humpback whales. Ultimately, then, environmental management is more concerned with the management of human activities and their impacts than with the management of the natural environment per se.

Influencing the course of development

Nevertheless, some types of activity are common to environmental managers. Environmental managers attempt deliberately to steer the process of development in order to take advantage of opportunities; they attempt to ensure that critical environmental limits are not exceeded; they work to reduce and mitigate environmental issues; and they are concerned with increasing the adaptability and resilience of human societies in the face of environmental change, variability, unpredictability and hazards. From this point of view, environmental management may be defined as the system that anticipates and avoids, or solves, environmental and resource conservation issues. From another point of view, environmental management may be defined as a process concerned with human-environment interactions which seeks to identify:

- what are environmentally desirable outcomes
- what are the physical, economic, social, cultural, political and technological constraints to achieving those outcomes
- what are the most feasible options for achieving those outcomes

Indeed, in many parts of the world (and arguably worldwide), environmental management is intimately linked with pressing issues of justice and even of survival. A further definition might suggest that environmental management is concerned with meeting and improving provision for human needs and

demands on a sustainable basis with minimal damage to natural habitats and ecosystems. Thus the concept of environmental management is closely related to another important (and problematic) concept: that of sustainable development.