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**SHORT NOTES**



**NCERT  
CLASS 11**

# **FUNDAMENTALS OF PHYSICAL GEOGRAPHY**

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**CHAPTER 1**

**GEOGRAPHY AS  
A DISCIPLINE**



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## What is geography?

Geography is the description of the earth.

The term geography was first coined by Eratosthenese, a Greek scholar (276-194 BC.).

The word has been derived from two roots from Greek language geo (earth) and graphos (description).

## Why should geography be studied?

Study of Geography is necessary to understand our relation with the nature.

We live on the surface of the earth. Our lives are affected by our surroundings in many ways. We depend on the resources to sustain ourselves in the surrounding areas. Primitive societies subsisted on 'natural means of subsistence', i.e., edible plants and animals. With the passage of time, we developed technologies and started producing our food using natural resources such as land, soil and water. We adjusted our food habits and clothing according to the prevailing weather conditions. There are variations in the natural resource base, technological development, adaptation with and modification of physical environment, social organisations and cultural development.

The 'earth' is multi-dimensional, that is why many disciplines from natural sciences such as geology, pedology, oceanography, botany, zoology and meteorology and a number of sister disciplines in social sciences such as economics, history, sociology, political science, anthropology, etc. study different aspects of the earth's surface.

Geography is different from other sciences in its subject matter and methodology but at the same time, it is closely related to other disciplines.

Geography derives its data base from all the natural and social sciences and attempts their synthesis.

There exist variations over the surface of the earth in its physical as well as cultural environment. A number of phenomena are similar and many are dissimilar.

It was, therefore, logical to perceive geography as the study of areal differentiation. Thus, geography was perceived to study all those phenomena which vary over space.

Geographers do not study only the variations in the phenomena over the earth's surface (space) but also study the associations with the other factors which cause these variations.

For example, cropping patterns differ from region to region but this variation in cropping pattern, as a phenomenon, is related to variations in soils, climates, demands in the market, capacity of the farmer to invest and technological inputs available to her/him.

Thus, the concern of geography is to find out the causal relationship between any two phenomena or between more than one phenomenon.

The geographical phenomena, both the physical and human, are highly dynamic. They change over time as a result of the interactive processes between ever changing earth and untiring and ever-active human beings.

Geography, thus, is concerned with the study of Nature and Human interactions as an integrated whole. 'Human' is an integral part of 'nature' and 'nature' has the imprints of 'human'. 'Nature' has influenced different aspects of human life.

Its imprints can be noticed on food, clothing, shelter and occupation. Human beings have come to terms with nature through adaptation and modification.

With the help of technology, human beings moved from the stage of necessity to a stage of freedom. They have put their imprints everywhere and created new possibilities in collaboration with nature. Thus, we now find humanised nature and naturalised human beings and geography studies this interactive relationship.

## **GEOGRAPHY AS AN INTEGRATING DISCIPLINE**

Geography is a discipline of synthesis. It attempts spatial synthesis. Its approach is holistic in nature. It recognises the fact that the world is a system of interdependencies.

Geography as an integrating discipline has interface with numerous natural and social sciences. All the sciences, whether natural or social, have one basic objective, of understanding the reality.

Geography attempts to comprehend the associations of phenomena as related in sections of reality.

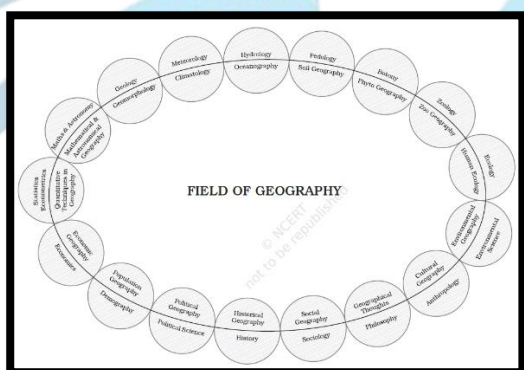
Every discipline, concerned with scientific knowledge is linked with geography as many of their elements vary over space.

Geography helps in understanding the reality in totality in its spatial perspective. Geography, thus, not only takes note of the differences in the phenomena from place to place but integrates them holistically which may be different at other places.

### Dimensions of Geography

- **What** - related to the identification of the patterns of natural and cultural features as found over the surface of the earth.
- **Where** - related to the distribution of the natural and human/ cultural features over the surface of the earth.
- **Why** - related to the explanation or the causal relationships between features and the processes and phenomena.
- **When** - Temporal explanation of the changes in physical and cultural environment.

### Physical Geography and Natural Sciences



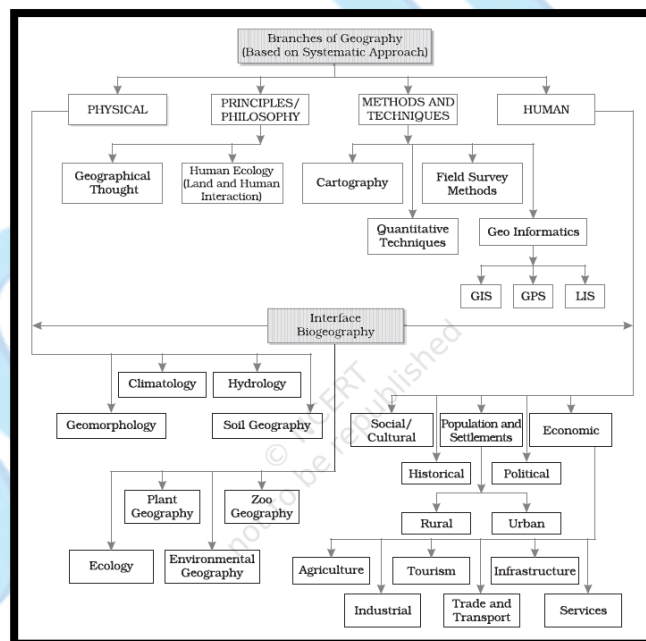
Geography and its relation with other disciplines

### BRANCHES OF GEOGRAPHY

The major approaches to study geography have been (i) Systematic and (ii) Regional. The

systematic geography approach is the same as that of general geography. This approach was introduced by Alexander Von Humboldt, a German geographer (1769-1859) while regional geography approach was developed by another German geographer and a contemporary of Humboldt, Karl Ritter (1779-1859).

### BRANCHES OF GEOGRAPHY (BASED ON SYSTEMATIC APPROACH)



Branches of geography based on systematic approach

### Physical Geography

- ☑ **Geomorphology** is devoted to the study of landforms, their evolution and related processes.
- ☑ **Climatology** encompasses the study of structure of atmosphere and elements of weather and climates and climatic types and regions.
- ☑ **Hydrology** studies the realm of water over the surface of the earth including oceans, lakes, rivers and other water bodies and its effect on different life forms including human life and their activities.
- ☑ **Soil Geography** is devoted to study the processes of soil formation, soil types, their fertility status, distribution and use.



## Human Geography

- ☑ **Social/Cultural Geography** encompasses the study of society and its spatial dynamics as well as the cultural elements contributed by the society.
- ☑ **Population and Settlement Geography** (Rural and Urban). It studies population growth, distribution, density, sex ratio, migration and occupational structure etc. Settlement geography studies the characteristics of rural and urban settlements.
- ☑ **Economic Geography** studies economic activities of the people including agriculture, industry, tourism, trade, and transport, infrastructure and services, etc.
- ☑ **Historical Geography** studies the historical processes through which the space gets organised. Every region has undergone some historical experiences before attaining the present-day status. The geographical features also experience temporal changes and these form the concerns of historical geography.
- ☑ **Political Geography** looks at the space from the angle of political events and studies boundaries, space relations between neighbouring political units, delimitation of constituencies, election scenario and develops theoretical framework to understand the political behaviour of the population.

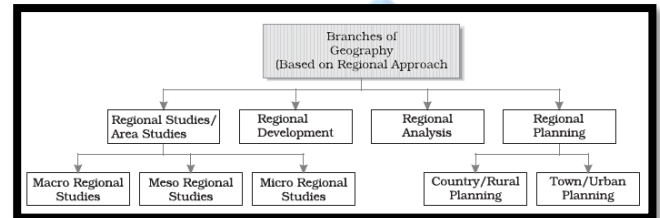
## Biogeography

The interface between physical geography and human geography has led to the development of Biogeography which includes:

- ☑ **Plant Geography** which studies the spatial pattern of natural vegetation in their habitats.
- ☑ **Zoo Geography** which studies the spatial patterns and geographic characteristics of animals and their habitats.
- ☑ **Ecology /Ecosystem** deals with the scientific study of the habitats characteristic of species.
- ☑ **Environmental Geography** concerns world over leading to the realisation of environmental problems such as land

gradation, pollution and concerns for conservation has resulted in the introduction of this new branch in geography.

## BRANCHES OF GEOGRAPHY BASED ON REGIONAL APPROACH



## Branches of geography based on regional approach

- ☑ **Regional Studies/Area Studies** comprising Macro, Meso and Micro Regional Studies
- ☑ **Regional Planning** comprising Country/Rural and Town/Urban Planning
- ☑ **Regional Development**
- ☑ **Regional Analysis**

There are two aspects which are common to every discipline, these are:

### ➤ Philosophy

- Geographical Thought
- Land and Human Interaction/Human Ecology

### ➤ Methods and Techniques

- Cartography including Computer Cartography
- Quantitative Techniques/Statistical Techniques

## PHYSICAL GEOGRAPHY AND ITS IMPORTANCE

Physical geography includes the study of lithosphere (landforms, drainage, relief and physiography), atmosphere (its composition, structure, elements and controls of weather and climate; temperature, pressure, winds, precipitation, climatic types, etc.), hydrosphere (oceans, seas, lakes and associated features with water realm) and biosphere (life forms including human being and macro-organism and their sustaining mechanism, viz. food chain, ecological parameters and ecological balance).

The study of physical geography is emerging as a discipline of evaluating and managing natural resources. In order to achieve this objective, it is essential to understand the intricate relationship between physical environment and human beings.

Physical environment provides resources, and human beings utilise these resources and ensure their economic and cultural development.

Accelerated pace of resource utilisation with the help of modern technology has created ecological imbalance in the world. Hence, a better understanding of physical environment is absolutely essential for sustainable development.



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