

8. Geography : Nature and Scope



Let's recall.

Dear students, you have been studying geography either as a part of Environmental Studies since Standard III or as Social Studies since Standard VI and as an independent subject since Standard XI. Your journey to understand our homeland earth began with the study of the cardinal directions in Standard III. In the consecutive academic years, you learnt various geographical concepts. Now just recall the various concepts that you have learnt till now and make a list of them. Also classify them under different categories given below in the table. One in each category has been done for you as an example.

Table 8.1

Related to Lithosphere	Related to Hydrosphere	Related to Atmosphere	Related to Biosphere	Related to man and his activities	Other Concepts
Mountain	Oceans	Climate	Vegetation	Agriculture	Maps

Geographical explanation

While studying geography, you have learnt about the physical environment of the earth as well as the human activities and their interactive relationship with each other. The nature of the earth's surface is full of variations. There are various features with variations such as mountains, hills, plains, plateaus, oceans, rivers, lakes, deserts and many more. Climatic patterns on the global and local level, its impact on vegetation and wildlife, wind patterns, soils and its types, etc. are also studied in Geography. Types of landforms, submarine relief, ocean currents, salinity, etc. are also studied by a geographer. All these physical aspects affect human populations. These factors bring about variations in social and cultural features too, which changes from place to place and time to time.

This variation is observed in the forms

of settlements, transportation networks, ports, markets and many other elements created by man, across the entire period of their cultural development. Thus, the subject matter of Geography can be divided into two major themes : physical factors and human factors. This has given rise to two branches in Geography- Physical and Human Geography.

Thus, Physical Geography includes the study of landforms, drainage, relief, slope (lithosphere), composition, structure, weather and climate, winds, precipitation, climate types (atmosphere), oceans, seas, lakes, rivers (hydrosphere) and life forms including human being and macro-organism, ecosystem, food chain, ecological balance (biosphere). Human Geography studies relationship between man and his environment and distribution of various attributes related to humans social and environmental phenomena around the world.

Nature of Geography as a discipline :

Geography is a study of the earth and phenomena related to it. The earth is dynamic. We find there are variations in its physical and cultural environments. Geographers study these distributions, their patterns and these variations. In addition, geographers also study the causes behind these phenomena. Thus, a geographer is interested in knowing the cause and effect relationship between these distributions and patterns. For example, a geographer studies various crops in different regions. He understands that this is a result of different climates, soils, demand in the market and application of technologies, etc. By studying a region, he can tell what type of economic activities are most suitable for a region.

Also, a geographer studies 'space' or 'area' or a 'geographical location'. Moreover, these geographical phenomena, whether physical or human, are not static but highly dynamic. They change over time. For example, we study weather over a period of time (roughly 30 years) and decide the climate of a place.

The population of India or world over a period of time, development of a landform or the age of the earth are various phenomena which are of interest to a geographer as they are concerned with 'time'. Thus, Geography is a study of 'space' and 'time'. This makes Geography *dynamic* in nature. In short, a geographer tries to answer the questions : *Where, 'When, What and Why.'*



Can you tell ?

Make a list of skills that you have obtained through your study of Geography. (Hint : You can revisit the learning objectives given in this textbook or earlier textbooks). Some are given here as a hint. See Fig 8.1.

Geographical explanation

The skills required to study Geography and the methods and techniques used in Geography make it empirical and practical in nature. See fig. 8.1. The study is very scientific and is always supplemented with experiments, data, observation patterns, data analysis and research findings. It is not just based on theory but supported by evidence based on data collection and analysis through various tools and techniques.

Initially, Geography has developed through observations. When we look back at the history of the subject, we find that earlier scholars of the subject have written a lot about the description of the earth. Notable among them is the work of a Greek scholar called Hecataeus. His book *Ges-Periodus* (description of the earth), which was published most probably before the end of the 6th century BC. It is the first systemic description of the world. It also gives a detailed account of the Mediterranean Sea, islands, straits and describes the general outline of all the countries of the world. (Fig. 8.2) Ptolemy's 'Geography' was another book on general description and also

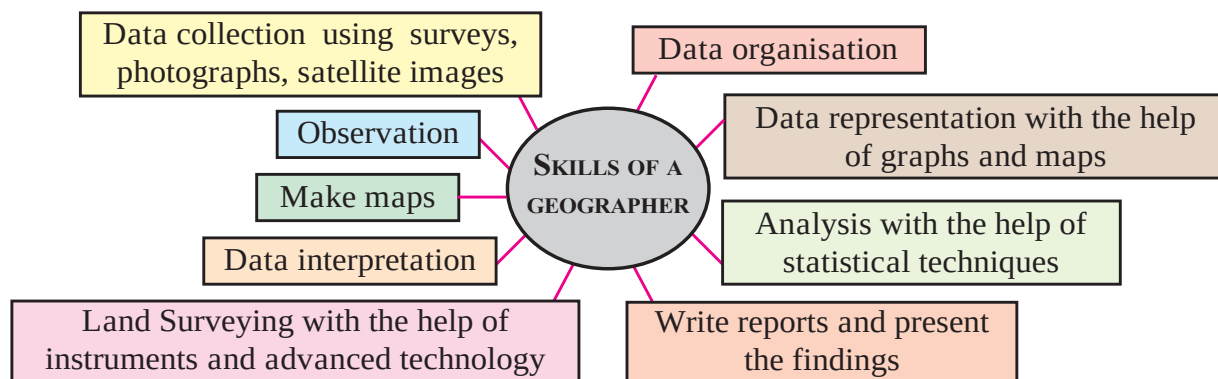


Fig.8.1

included an atlas. Another book by a Roman scholar called Strabo was 'Geographica', which is an encyclopaedia of geographical knowledge, consisting of 17 'volumes'. (fig. 8.3)

Thus, the skills acquired by a geographer enables him to make observations and describe the various elements he sees on the earth. These skills of the geographer have enriched the subject as newer branches of geography keep developing with time.



Can you tell?

Discuss the following points in class with reference to its importance in the subject matter of Geography.

- 1) Environment Vs. Man
- 2) Complete study of India Vs. Study of only agriculture in India

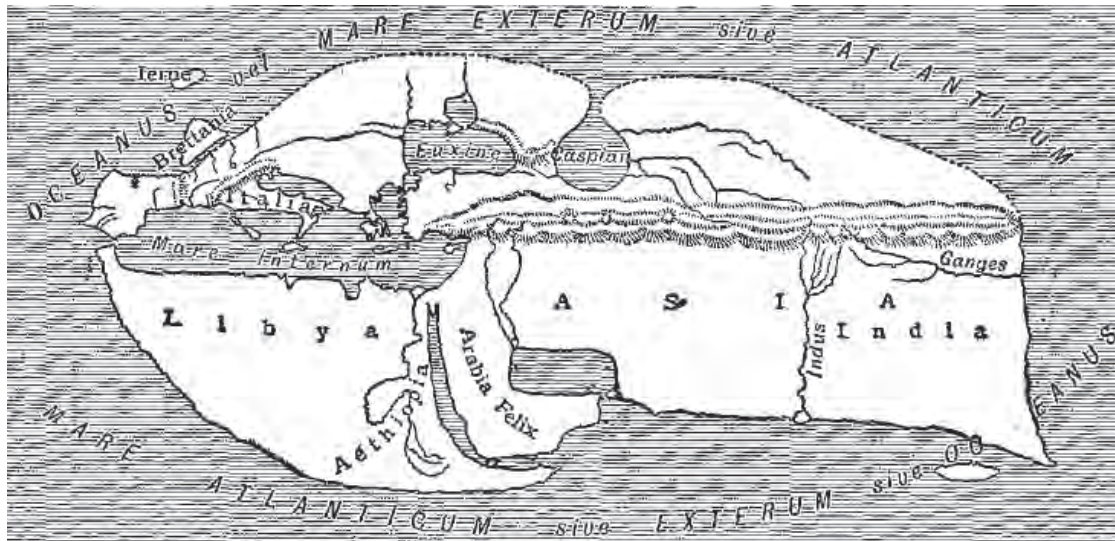


Fig. 8.2 Map of the world by Hecataeus



Fig. 8.3 Map drawn by Strabo, a Roman geographer

Geographical explanation

When you discuss these points you realise that they are two contrasting approaches to study Geography. For example, does nature rule us or does man rule the nature? When we study Geography, shall we study various regions in which a sector is distributed or study various sectors in a region? These are some of the questions, a geographer faces while studying. This contrast is known as Dualism in Geography. It refers to existence of two contrasting or separate approaches in Geography. For example, some geographers are of the view that nature is more dominant than man. This is called environmental determinism. While others think that man dominates the nature, they believe in possibilism. There are many other such dualistic approaches in Geography. This makes Geography dualistic in nature.

Scope :



Try this.

Given here are some of the concepts or subject matter we study in Geography. Write the name of subjects or disciplines you think they are also studied in. One has been done for you as an example. Complete the table after discussing in the class in pairs.

Table 8.2

Concepts	Subject in which the concept is also studied
Calculations involved in projections, shapes of projections	
Means of livelihood : agriculture, industry, trade, etc.	Economics
Cost of production, GDP, incomes, resources, scarcity, etc.	
Social relations and inequalities	
Racial structure of humans, evolution of humans, etc.	

Rocks and minerals	
Behaviour of humans in different climates and topography	
Electoral divisions, voting patterns, types of governments	
Biomes, food chain, forests, etc.	
Chemical weathering, erosion, acid rain, etc.	
Mean, variance, correlation, regression, etc.	
Past of different places, their development before attaining the present day status, etc.	

Note : You can add some more if you want!

Geographical explanation

We find that almost every discipline, under natural and social sciences, is linked with Geography. (See Fig. 8.4) Geology, Meteorology, Hydrology and Pedology are linked with the fields of Physical Geography such as Geomorphology, Climatology, Oceanography and Geography of Soils, respectively. Similarly, knowledge of Mathematics is essential for cartographic techniques. Drawing of maps and diagrams requires understanding of Mathematics. To do data analysis, geographers use various statistical techniques and hypotheses testing.

In case of Human Geography, every social science studied separately has interface with branch of Human Geography because of their spatial attributes. Social sciences such as Sociology, Political science, Economics, History and Demography are closely linked with the branches of Human Geography like Social, Political, Economic, Population and Historical Geography, respectively.

It can be concluded that Geography has strong interface with natural as well as social sciences. At the same time, every sub-discipline

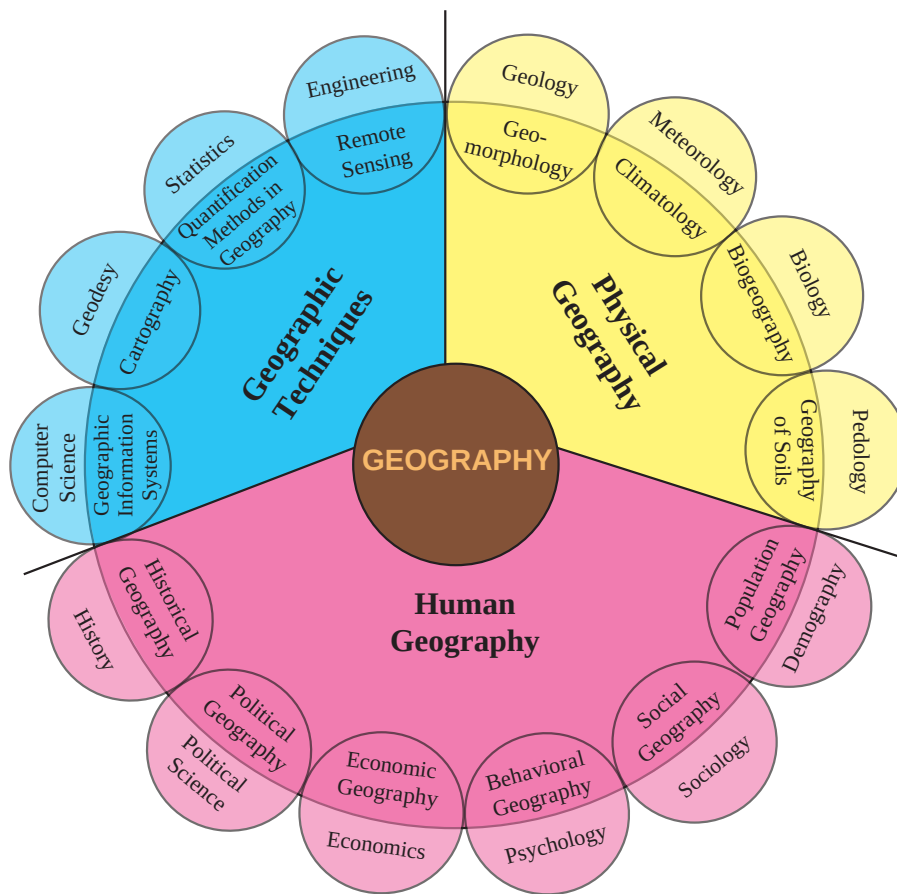


Fig. 8.4 : Relationship of Geography with other subjects

in Geography has its own scope. This is because their subject matter varies over space and time. Geography has adopted and developed a lot from different disciplines within its own boundaries. Many branches of Geography have developed from mainstream disciplines. This makes geography an *integrating* and *interdisciplinary* discipline.

Latest Trends in Geography :

A geographer explains the phenomena in a frame of cause and effect relationship. It helps in analysis but also predicts the future through data collection and modelling. This opens up intra and inter-disciplinary avenues and widens the scope of Geography. The dynamic nature of Geography keeps adding new things in the subject. The audio-visual media and Information Technology have enriched the database. Technology, use of computers and softwares, has offered better opportunities in data collection, interpretation, analysis and presentation. Use of GPS and GIS

has become a mandatory aspect of geographical studies. Mapping is now mostly done using GIS softwares. Thus, knowledge of computers is now an added skill that a geographer requires. Use of Apps has also further enhanced its applications in daily life. Mathematical modelling and computer models are now increasingly being used in Applied Geography. The future growth and density of population, use of land, intensity of cropping and migration, pattern of population, industrialization, urbanization and growth of cities and slums are being predicted with the help of such models. These are increasingly being used in the forecast of weather, change of climate, change in sea level, environmental pollution, soil erosion, forests depletion and evolution of landforms. Advanced statistical techniques and computer programmes are being used in studying and explaining geographical phenomena depending on the collection of reliable data about earth surface phenomena. The use of computer

helps in measurement of numerous elements in the geographic environment.

With such a vast scope and dynamic developments occurring in the subject, it has become a lucrative option as a career. Besides being a popular and lucrative subject and providing a good base of knowledge in competitive examinations, Geography offers great careers with a combination of various hard and soft skills. Here is a list of major career possibilities in Geography. (Table 8.3) In some cases, knowledge of disciplines in combination with Geography also becomes imperative.

Table 8.3

Career Opportunities	Specialisation in Branch of Geography
Cartographer	Cartography, G.I.S.
Climate Change Analyst, Climatologist	Climatology
Demographer/Census officer	Population Geography
Geospatial analyst	G.I.S.
Journalism	Any field of Geography
Surveyor	Cartography /Human Geography
Urban Planner	Urban geography
Researcher	Any branch of Geography
Freelancer /blogger / report writer / travel blogger	Any branch of Geography

Disaster management specialist	Geomorphology / Disaster Management
Tour operator / tourist guide	Human Geography, Tourism Management, Historical Geography
Data Scientist and Analyst / Census / Defence	Statistical Geography, Computer knowledge, Artificial Intelligence , Machine learning, G.I.S.
Consultant	Various fields like mapping, report-writing

Many careers in Geography may also be such that they encourage entrepreneurship and freelancing. Journalism, tourism, teaching, book writing, blog writing, content writing, map-making services, etc. are the fields which need people from background in Geography. Geographers are also increasingly working in the field of environmental conservation, water pollution and monitoring, water conservation, environmental education, sustainability, health, urban governance, transport planning, etc.



Try this.

In Fig 8.5, a newspaper item is given. A list of job opportunities is given. Go through all the entries and see which ones are suitable for a geographer as a career.

Employment News

- Union Public Service Commission (UPSC) – Class -1 Officer 2020 (Notice for Interviews) National Atlas of Thematic Mapping organisation of India, Deputy Director General (Map) Vacant Seats- 2 (1 for UR, 1 Reserved) Educational Qualifications – M.A./ M.Sc. Geography, Cartographer, Masters in Urban Planning Experience – Minimum 5 years
- Mumbai Mahanagar Palika, Department of Urban Planning, Mumbai

Post – Urban planner Class-1 (open) Work of place- Mumbai Qualification- MA Geography /M.Arch./M.Planning Experience: 5 years experience in urban planning or similar work.

- Post- Assistant professor Subjects: Geology, Geography, History, Rural Development Posts : 4 (2 UR, 2 Reserved) Educational Qualifications - Graduation and Post Graduation in the subjects mentioned above NET/SET compulsory Desirable: M.Phil. / PhD

- UN internship - Required consultant to support UNCT Gender Equality Marker implementation. Location: New York Language : English and French, Starting data : 16th Mar 2021. Initial Contract Period : 10 months. Educational Qualifications Masters Degree in Development Studies/Gender Studies/ Social Sciences.
- UPSC Engineering services Examination (Exam notice 2021) (IES) Eligibility : Any Engineering graduate

Total Posts : 495
Apply Online through website. See website for details.

- Bank PO exam : Eligibility : Any graduate Total Posts : 50 Apply Online through website
- UPSC Combined Defence Services (CDS) Eligibility : Any graduate Total Posts : 123 Apply Online through website.

Fig. 8.5 : Sample Advertisement

Geographical explanation

Use of technology has also made it possible for more and more start-ups coming in this field.

The study of 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. The Sustainable Development Goals (SDGs) given by United Nations are related to various aspects of Geography. Hence, a better understanding of Geography is absolutely essential for sustainable development and avoiding clashes between man and nature.



Exercise

Q. 1) Identify the correct group :

- | | |
|----------------------------|----------------------------------|
| A) 1) Geomorphology | B) 1) Cartography |
| 2) Climatology | 2) Survey |
| 3) Biogeography | 3) Data collection |
| 4) Historical geography | 4) GIS/GPS |
| C) 1) Tourism | D) 1) Political Geography |
| 2) Forest conservation | 2) Physical Geography |
| 3) Wildlife conservation | 3) Population Geography |
| 4) Culture conservation | 4) Economic Geography |

Q. 2) Give geographical reasons :

- 1) Human Geography is multidisciplinary in nature.
- 2) Geography is dynamic in nature.
- 3) Geography is dualistic in nature.

Q. 3) Write short notes on :

- 1) Physical Geography is related to various branches of Science.
- 2) Branches of Geography
- 3) Latest trends in Geography
- 4) Skills required for studying geography.

Q. 4) Answer in detail :

- 1) Explain how the knowledge of Geography is important in our day-to-day life. Give examples.
- 2) Discuss the relationship between Geography and other subjects.
- 3) Explain the nature of Geography in detail.

Q. 5) Differentiate between :

- 1) Physical Geography and Human Geography.
- 2) Possibilism and Determinism.

Q. 6) Draw a neat and well-labeled diagram :

- 1) Relationship between Geography and other subjects.
- 2) Skills required to study Geography.



World - Physiography

Scale at Equator
0 5000 km.