

UG 1st Major

Growth of Nature-Centric Geography: Evolution and trend of physical geography as a study of earth process system.

- From the birth of geography as a science during the Greek Classical period and until the late nineteenth century with the birth of anthropogeography (human geography), geography was almost exclusively a natural science.
- The period between 1400 and 1800 was when the subject matter and the methodology of geography were not fully developed. This period was characterised by exploration, discovery and conquest.
- In 17th century, the work of Alexander von Humboldt (Cosmos) was a pioneer in the development of physical geography. In which geography is regarded as a physical and natural science.
- Between 1850 and 1950, the main ideas that had a strong influence on the discipline were Uniformitarianism, exploration and survey and conservation.
- In the mid 1750s, a Russian geographer Mikhail Lomonosov showed the organic origin of soil and developed a comprehensive law on the movement of the ice, thereby founding a new branch of geography glaciology (study of ice and snow, including their physical properties).
- Climatology also received a strong boost from the Russian School, by Vladimir Koppen whose main contribution is climate classification, which is still valid today.
- Another important process is the theory of evolution by Darwin in mid-century, which

meant an imp concept in the development of Biogeography.

- In late 19th and early 20th centuries another major event took place in the US is William Morris Davis's theory of cycle of erosion. In this theory, explained that mountains and other landforms are shaped by factors that are manifested cyclically.
- During 1800 and 1950, an important school of thought has emerged, where an attempt has been made to explain the relationship between human beings and their environment.
- Environmental Determinism → Variations in human behaviour around the world can be explained by differences in the natural environment is known as ED.
- Proponents of ED ^{deterministic} School of thought such as Mackinder, Ellen Semple and Huntington believed that human actions and activities were moulded by Physical (natural) conditions.
- In several developing countries, human beings are susceptible to natural disasters such as drought, famine, floods and earthquakes. Human beings under such natural conditions usually surrender to nature.
- ED was geography's entry into modern science.
- Environment controls human action. Human action is not supreme, the environment decides what people should do.
- Wegener declared geography as a pure natural science.

In the development of Physical Geography we should pay more attention to the following frontier areas

and directions.

- Geomorphology needs to focus on the study of landforms and global environmental change and geomorphology and human activities.
- Biogeography needs to focus on the exploration of frontier fields such as attribute geography, global change biogeography, and to connect spatial distribution in biogeography and human needs under the background of change.
- Hydrology needs to integrate the multifactor, multi-process and multi-scale research and to promote the development of ecological hydrology, social hydrology and hydrological morphology.
- Physical geography needs to play a key role in the research of climate change and serve major international research projects in climate change.
- * Comprehensive physical geography ^{research} ~~research~~ needs to meet national priority demands, focusing on the coupling of human-land system, resource and environment carrying capacity assessment, ecological civilization construction.
- Physical geography needs to merge the natural and human elements and processes, develop complex system simulation models and analyze the coupling mechanism of natural and human factors and the dynamic change of land surface system.