GERMANY

Introduction:
The official name of Germany is the **Federal Republic of Germany** and it is the largest country in Rhine lands covering an area of 375,000 sq. Km.

It lies between latitude 55°N and 47°N and between longitude 6°E and 15°E.

The capital city is Berlin. Before 1990, there were two Germanies i.e. West Germany and East Germany. The two re-united in 1990.

Germany is bordered by the Netherlands, Belgium and France in the West, Switzerland and Austria in the South, by the Czech Republic and Poland in the East and by Denmark in the North.
Towards the North East, it is bordered by the Baltic Sea and towards the North West is bordered by the North Sea.

Map of Germany

Major Cities of Germany:
The main cities include Berlin, Hamburg, Munich, Cologne, Frankfurt, Essen, Am Main, Dortmund, Dusseldorf, Stuttgart, Leipzig, Dresden, Bremen, Hannover, and Chemnitz.

Drainage of Germany:
Germany is drained by rivers, which include the Rhine, Danube, Main, Oder, Ems, Ruhr, Necker, Mosel, Spree, etc.
Major Lakes include: - Lake Constance (Bodensee), Schwerener see.

POPULATION AND PEOPLES OF GERMANY
Germany has a population of approximately 82 million people. It has an average population density of 220 persons per sq. Km. 85% of the population is urban, 15% is rural. Birth rate is 12.3 per 1000 and the death rate is 12.0 per 1000. Life expectancy for the males is 70.6 years and for the females is 76.6 years. The official language is German (High German). The main ethnic groups include Germans, Turks, Yugoslavs, and Italians etc. Main religions are Protestants (66%), Roman Catholic (27%) and other faiths (7%).

PHYSICAL DIVISIONS OF GERMANY:

i) NORTHERN LOWLANDS:
   This region is sub-divided into three, namely;
   a) The Marschen
   b) The Geestland
   c) The Bordeland

The Marschen:
This is made of lands mainly reclaimed from the North Sea and mainly consists of marine silts. It has mainly been utilised for pasture. However, crops like wheat, potatoes etc. are grown.

The Geestland:
It is made of poor soils of sandy nature containing limited humus or plant nutrients. The soils are infertile and not suitable for cultivation, which is only possible with use of fertilizers.

The Bordelands:
It has fertile soils due to the loess and loamy nature. It is very important for Agriculture and the crops grown include wheat and sugar beets. There is also dairy farming.
The North Germany lowlands lie at an altitude of less than 210 metres. The region is rather flat. They are at times referred to as the North Germany plains.

ii) THE CENTRAL UPLANDS:
This is area comprising much of central Germany that has been dissected by the R. Rhine and its tributaries. It is commonly referred to as the Hercynian Block land.
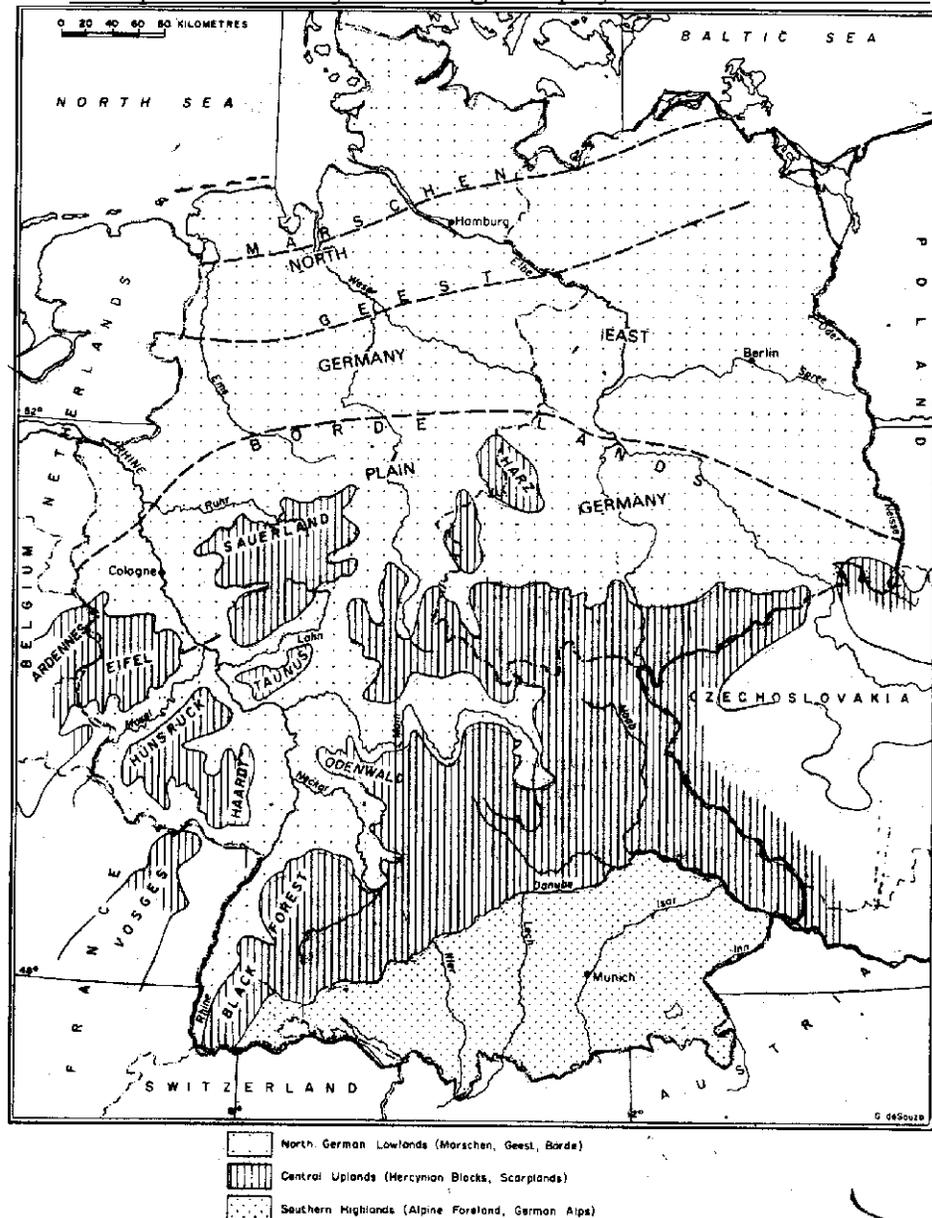It was greatly influenced by folding and modified by denudation such that they are now areas of pene plains i.e. the anticlines have been degraded and the synclines are aggraded.

The northern parts of this physical division were all subjected to folding and that is why the relief is diverse. In the central uplands, there is the Rhine rift valley formed due to faulting. The central uplands also comprises of the black forest.

iii) THE SOUTHERN HIGHLANDS:

This is a raised land area also known as Alpine foreland. They have relatively poor soils that may not favour cultivation. This region has mainly been used to promote tourism and forestry.

Map of Germany showing the physical divisions.

North German Lowlands (Marschen, Geest, Börde)

Central Uplands (Hercynian Blocks, Scarplands)

Southern Highlands (Alpine Foreland, German Alps)

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CLIMATE OF GERMANY

Germany experiences a cool temperate climate characterised by the following:-

i) Rainfall is received in summer with maximum amounts in July. (Rainfall is generally moderate)

ii) Temperatures are moderate i.e. there are no extremes i.e. winter temperatures range from 1.3^oC upwards while the summer temperatures range from 19^oC upwards.

iii) Snowfall is received in winter.

iv) Highlands receive more rainfall because of the relief effect.

FACTORS INFLUENCING THE CLIMATE OF GERMANY:

1. Wind:
The westerly maritime winds tend to bring in rainfall while the easterly continental winds that influence the conditions on the eastern part of Germany tend to bring in limited rainfall. Local winds such as the Fohn winds tend to bring in warm conditions.

2. Altitude:
Higher lands have lower temperatures and generally higher rainfall.

3. Aspect:
The south facing slopes tend to be warmer and finer than the north facing slopes.

4. Latitude:
Germany being in the temperate latitude generally experiences low or moderate temperatures.

5. Relief:
Highland areas lead to relief rainfall formation or orographic rainfall. In addition well sheltered areas such as the valleys generally tend to be warmer.

6. Natural vegetation:
Forested areas especially the central uplands have cool conditions and fairly high rainfall, partly because of the influence of forests that help in the modification of climate.

NATURAL VEGETATION OF GERMANY

Germany's natural vegetation is mainly of temperate nature and consists of temperate grasslands and temperate forests.

Natural vegetation in this region has been mainly influenced by soils, altitude and human activities. There is not much ideal natural vegetation in Germany because much of the original vegetation has been cleared by man's activities.

FORESTRY IN GERMANY

Forests cover about 30% of the total area and they are mainly coniferous forests with species such as pines, spruce, firs, larch etc. In addition, there are also deciduous species such as beech and oak. Forestry has contributed a lot to the development of Germany through a number of ways.

Importance of Forestry to Germany:

1. Forestry has let to timber provision for construction and furniture making.
2. Source of raw materials for industrial development e.g. wood pulp and paper industry, saw mills etc.
3. Source of medicinal herbs for pharmaceutical purposes.
4. They have been used for research and study purposes.
5. Forested areas provide places for recreation or tourist activities e.g. camping, picnicking, forests walks and games.
6. Forests provide habitat for wild animals such as birds, wild game e.g. butterflies.
7. Forests are seen as a national heritage or symbol of prestige.
8. They protect soils from erosion.
9. Tree roots help in the infiltration of rainwater, thereby boosting the soil moisture.
10. Forests provide employment to foresters and forestry associated labour force e.g. forest rangers, lumbermen etc.
11. Help in the modification of climate by contributing to rainfall formation through transpiration.
12. Protect alpine region from avalanches.
13. Help in purification or cleaning of air since the dust particles settle on the leaves.
14. Tree leaves release oxygen and absorb Carbon dioxide, thereby reducing on global warming effect.

PROBLEMS FACING FORESTRY IN GERMANY:

1. **Forest Damage/Deforestation:** Mainly as a result of air pollution. The emission of industrial gases e.g. CO_2, SO_2, CO, Nl_2, NO_2 tend to lead to the formation and fall of acid rains.
   These gases combine with rain water in the atmosphere to form weak acids that come down as acid rains. These make the trees to lose their leaves, slow down their growth and eventually the trees die.
2. **Over-exploitation of forests:** for commercial purposes have led to deforestation.

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3. Forest Fires at times destroy the forests.

MEASURES TAKEN TO CONSERVE FORESTS IN GERMANY:
1. Re-afforestation in the deforested areas.
2. Afforestation i.e. planting of trees.
3. Legislation against environmental pollution and unauthorised tree cutting i.e. trees are to be cut only with permission of the relevant authorities.
4. Taking forests out of commercial exploitation temporarily or indefinitely.
5. Fighting air pollution by national and international action.
6. Installation of fire fighting equipment and taking measures to prevent forest fires.

Questions:

a) *Describe the physical divisions of Germany.*
b) *Explain why Germany is conserving the forests in the country.*
c) *Describe the main form of forest damage in Germany.*
d) *Outline the measures taken to conserve forests in Germany.*

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