

## **S4 GEOGRAPHY- RHINELANDS (NETHERLANDS, GERMANY AND BELGIUM)**

### **THE NETHERLANDS**

The Netherlands also referred to as Holland, is located in northern Europe. It constitutes one of the countries in the Rhine basin because it has the mouth of river Rhine as it pours its water in the North Sea.



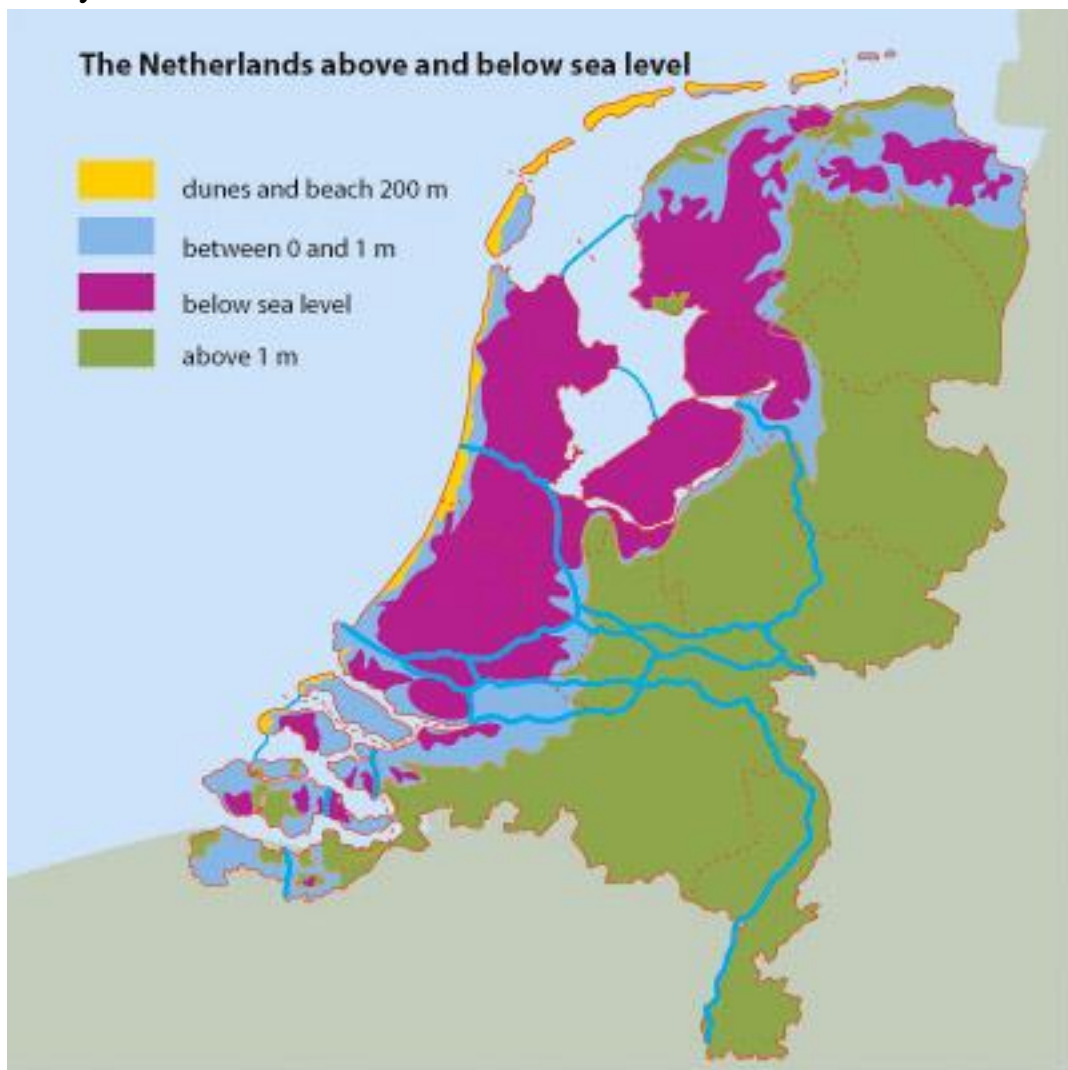
### **RELIEF OF NETHERLANDS**

Holland is regarded as a young country in rock formation and it's located in the great lowland region known as the North European plain.

The country's relief has been influenced by three major aspects, that is;

- Effects of the great ice age;  
The most affected parts during this era were the north, central, and eastern parts where there was a lot of moraine deposition leading to the formation of plains.
- Effects of river deposition.  
River Rhine carries deposits all the way from Switzerland which it deposits on the western coastline of the Netherlands leading to the formation of the Rhine delta which is a relatively flat landscape.
- Effects of the flooding from the red sea.

The flood waters have influenced the relief of the western coastline, much of which lies below sea level and has just been reclaimed from under the sea by man.



### **CLIMATE OF NETHERLANDS**

The country has a mild maritime climate which is influenced by the moist westerly winds from the North Sea and the Atlantic Ocean.

The summers are cool and the winters are mild.

Rainfall is evenly distributed throughout the year at an average of 750mm and temperatures are about 10c

### **SOILS OF NETHERLANDS**

The south and central parts of the country have sandy soils which are often limited in water supply.

The central areas have clay soils used mainly for arable farming and animal grazing.

## NETHERLANDS AND THE SEA

Under here we see how the people of Netherlands have utilised the sea to their advantage through land reclamation.

**Land reclamation** refers to a process of fully or partially draining of water from sources such as lakes, rivers in order to create space for purposes like settlement and farming.

It also refers to the act of putting to use land formerly under water.

The Dutch used to suffer from flood waters coming from the North Sea until when they started land reclamation programs, which they did by using dykes/concrete walls to protect land from the sea water. The land reclaimed from the sea is referred to as polders and half of Netherlands population lives on these polders.



Land reclamation was done in two major projects which included the delta plan project and the Zuyderzee project.





## **THE ZUYDERZEE PROJECT**

This is one of the reclamation projects in northern Holland whose intention was to enable establishment of polders for human settlement and farming.

The project succeeded with the establishment of what is called the lake Yssel polders, comprising of polders such as;

- WIERINGERMEER POLDER
- MARKERWAARD POLDER
- SOUTH FLEVOLAND POLDER

- EAST FLEVOLAND POLDER
- NORTH EASTERN POLDER

**A SKETCHMAP SHOWING THE LAKE YSSEL POLDERS**



**A POLDER.**

*QN. Explain what is meant by the term “polder?”*

**Polder** is a Dutch word which refers to an area enclosed by dykes/concrete walls. It can also refer to allow lying reclaimed piece of land enclosed by a dyke.

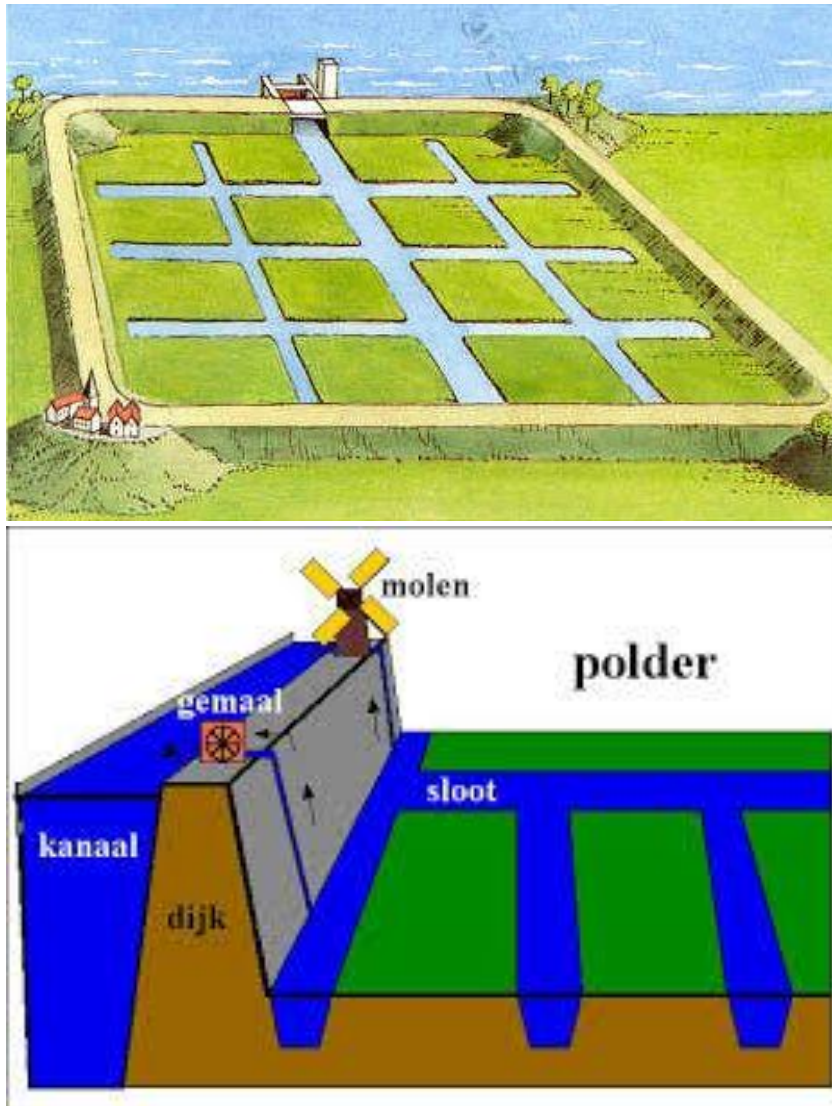


### **CREATION OF A POLDER**

*QN. Describe how polders were created or made.*

- A ring dyke /concrete wall is constructed around the area to be reclaimed.
- Canals are constructed to drain water from the land under reclamation.
- A pumping station is built to remove excess water from the reclaimed land.
- The reclaimed area is irrigated with fresh water to reduce salinity of the soils.
- Lime is added to neutralise the acidity in the soils.
- Grasslands are planted to drain the excess water and also provide pasture for the animal.

## THE STRUCTURE OF A POLDER



## LANDUSES ON THE POLDER

**QN.** Describe the various land uses on a polder.

1. Polders are used for human settlement
2. They are used for industrial establishment
3. Forestry is also carried on the polders
4. Crop farming in fruits and vegetables is done on the reclaimed lands.
5. Animal rearing is also carried out on the polders.
6. Recreational grounds like parks are established to promote tourism.
7. Schools and hospitals are established on the polders.
8. Trade and commerce is carried out in the many towns on the polders.
9. Polders support establishment of transport lines like roads and railway lines.



## **CONDITIONS WHICH LED TO THE ESTABLISHMENT OF POLDERS(OBJECTIVES)**

- 1) The need to control flooding from the North Sea
- 2) There was need to provide fertile alluvial soils for agricultural production.
- 3) The need to create land space for the establishment of coastal towns like Amsterdam.
- 4) The need to create land space for human settlement.
- 5) The need to create an inland fresh water reservoir that is lake Yssel .(Ijssel)
- 6) The need to protect the available land from salination caused by the North Sea waters.
- 7) The need to improve drainage in the interior of Netherlands.

## **FACTORS THAT FAVOURED SUCCESSFUL ESTABLISHMENT OF POLDERS IN NETHERLANDS**

1. Availability of large sums of capital to construct the concrete dykes, pumps.
2. Presence of high levels of technology for where example where power is generated from wind mills to run the water pumps on the polders.
3. Availability of adequate skilled labour to work as engineers on the polders.
4. The positive policies of the government, like financing the different polder projects.
5. The determination of the Dutch people to create land space.
6. The desire by the Dutch people to protect, preserve and improve on the quality of soils in Netherlands.
7. An improved transport network that eased movement of labour and materials for the establishment of the project.

## **IMPORTANCE OF POLDERS TO NETHERLANDS**

1. A fresh water lake (lake Ijssel) has been created providing people with water for domestic use.
2. Water logging is prevented because of the proper drainage system on the polders.
3. Fertile alluvial soils for farming are created, supporting food crop cultivation.
4. Space for settlement is created on the polders.
5. Polders are a tourist attraction bringing foreign exchange to the country.

6. Locals are able to access fresh water from Lake Yssel as compared to the salty North Sea water.
7. Fishing is possible on Lake Yssel giving people employment and income.
8. Water transport is also developed easing movement of people.
9. Space for industrial establishment is created on the polders promoting industrialisation.
10. Urbanisation has been realised with towns being established on the polders.
11. The dam in the north helped to reduce the distance between one part of Holland and another.

### **PROBLEMS FACED ON THE POLDERS**

*QN. Explain problems facing the people living on the polders.*

1. Occasional flooding especially caused by the braking of the dykes, destroying property.
2. Urban related problems like prostitution and high crime rates in the polder towns.
3. The coastal areas continue to face a problem of the salty sea waters from the North Sea.
4. Soil exhaustion caused by monoculture on the polders resulting into reduced production.
5. Soil pollution caused by the many agricultural chemicals added to the soils.
6. It's very expensive to rent land on the polders for activities like crop farming.
7. Silting of canals discourages smooth flow of water encouraging flooding.
8. There is limited land for expansion on the polders.
9. Polders are very expensive to maintain.
10. High water levels during winter at times cause flooding on the polders destroying property.
11. Sinking of the polders after a long period of time like after 10 years.

### **SOLUTIONS**

*QN. Describe steps being taken to solve the problems on the polders.*

1. Fertilizers are added to improve on soil fertility.
2. Dykes are regularly repaired to control flooding.
3. Excess water is always pumped out of the polders to prevent flooding.

4. Fines are put in place especially against those that can't maintain the polders.
5. Regular dredging is done to control silting and the flooding on the polders.
6. More land is reclaimed from the sea to create adequate land space.
7. Polders are maintained regularly to prevent sinking.
8. Policing is done to ensure law and order in the urban areas.

## **AGRICULTURE IN NETHERLANDS**

69% of the total land area in Netherlands is under agriculture and of this land area 43% is covered by grasslands, 22% by arable farming, and 4% is covered by horticulture.

Farmers in Netherlands use the land intensively due to lack of space and the major agricultural practice is horticulture.



## **CHARACTERISTICS OF AGRICULTURE IN NETHERLANDS**

1. The farms are intensively managed to ensure maximum production.

2. Scientific methods of farming are applied on the farms, like spraying to ensure maximum production.
3. High produce is obtained from the farms given the modern methods used on the farms.
4. Production is mainly for commercial purposes.
5. There is constant government inspection of the farms.

### **TYPES OF FARMING IN NETHERLANDS.**

#### **1. ARABLE FARMING.**

This involves growing of food crops like cereals, maize, sugar beets, and potatoes. This type of farming is concentrated on the fertile well drained soils in the North and south west of Netherlands.



#### **2. LIVESTOCK FARMING.**

This is the rearing of cattle, though in Netherlands emphasise is put on dairy farming where animals are kept for milk other than beef production. It's more dominant in the low lying wetlands of Friesland and major animal types kept include; **The black and white Friesian Holland breed and the Red and White meuse-Rhine –Ijssel breed.**



### 3. **MIXED FARMING.**

This involves rearing of animals, birds and the growing of crops. It's dominant in the east and south of the country. Crops grown are mainly fodder crops for feeding animals.

#### **4. HORTICULTURE.**

This involves growing of fruits, flowers and vegetables for sale. Fruits grown include; apples, straw berries, pears, melons, plums. Vegetables include; tomatoes, onions, lettuce, mushrooms, carrots and flowers include the rose flower.



## ASPECTH MAP OF NETHERLANDS SHOWING HORTICULTURE AREAS AND DIARY FARMING PROVINCES



### GENERAL FACTORS FAVOURING DUTCH AGRICULTURE.

1. Presence of a temperate climate with cool summers and mild winters with rainfall totals of about 750mm and temperatures of 22°C.
2. Availability of fertile clay soils especially along the North Sea coastline whose nutrients support crop growth.
3. Presence of a generally flat landscape that allows use of machines on the farms.
4. The availability of sufficient water supply from the reservoirs helps during irrigation in the dry season.
5. The positive policies of government like finding market for the farmers produce.

6. Presence of both local and foreign markets has encouraged more production.
7. Availability of an efficient transport net work that helps to transport famer's produce to markets.
8. Presence of vibrant cooperatives that have eased marketing, transportation and selling of the famers produce.
9. Banks have easily extended credit to famers, providing them with adequate capital to buy tractors on the farms.
10. Presence of high levels of technology like the use of glass houses improving output.
11. The availability of an adequate skilled labour force to work in the agricultural sector as farmers and processors.

### **HORTICULTURE FARMING**

This involves **growing of fruits, flowers and vegetables for sale**. Fruits grown include; apples, straw berries, pears, melons, plums. Vegetables include; tomatoes, onions, lettuce, mushrooms, carrots and flowers include the rose flower



### **CHARACTERISTICS OF HORTICULTURE**

1. Farms are intensively managed because they are small in size to ensure maximum produce.
2. Farming is usually done in glass houses, to maintain production throughout the year without disturbances from very cold winter seasons.





3. Its labour intensive since much of the work is done by hand
4. Marketing is usually quick since they deal in perishables.
5. Products require quick transportation after harvest since they are perishables.
6. Farms are scientifically managed with methods like spraying.
7. The practice is capital intensive as a lot of money is required to put up the glass houses.
8. Very skilled labour force is needed especially during harvesting.

### **FACTORS THAT HAVE FAVOURED HORTICULTURE FARMING IN NETHERLANDS.**

1. The strategic location of the country along the North Sea has provided it with cheap water transport for its horticultural products.
2. The mild climate with temperatures of 20°C in summer allowing ripening of the crops.
3. Presence of high levels of technology, like the use of harvesting equipment, hence ensuring production throughout the year.



4. Availability of adequate skilled labour used especially during harvesting.
5. Availability of large sums of capital to put up glass houses for example.
6. High level of advertisement of the country's horticultural industry hence widening foreign market.

7. Investment in research has enabled coming up with better crop varieties.
8. The country's early specialisation in market gardening (horticulture) has enabled farmers gain experience and knowledge over the years.
9. Availability of a sizable domestic and foreign market has encouraged more production.
10. The presence of active cooperatives that have eased production, processing and marketing.
11. The positive policies of government like finding market for the farmers produce.

### **PROBLEMS FACING HORTICULTURAL FARMING IN NETHERLANDS**

1. Climatic hazards like the too much frost during winter that discourages production.
2. The crops are highly perishable leading to a lot of post-harvest losses.
3. The problem of pests that cause a lot of crop diseases affecting production.
4. Its capital intensive which makes it an expensive practise.
5. Price fluctuations on the world market due to over production, lowering profits.
6. Competition from other countries lowering intended profits.
7. Soil exhaustion resulting from monoculture which later lowers production.
8. High dependence on foreign markets which is not reliable. Hence affecting profits.
9. The presence of salty soils on the polders that discourage horticulture.
10. Inadequate land space for expansion given the so many land uses on the polders.
11. Occasional flooding on the polders has destroyed farmer's produce.

### **SOLUTIONS**

1. Farming is done intensively and modern methods like spraying applied to ensure maximum produce.
2. More land is reclaimed from the sea to increase on available land space.
3. Refrigeration facilities are put in place to ensure better storage of the perishable crops.
4. Organic manure is used instead of artificial fertilizers with bad chemicals, to avoid soil pollution.

5. Crop diversification is done to grow different crops that suit the different climatic seasons.
6. Crops are sprayed to control pests and diseases.
7. Dykes are repaired regularly to prevent flooding.
8. Continuous research is carried to improve on crop varieties.
9. Quality of the produce is emphasised to beat the competition on the world market.

## **DIARY FARMING. (LIVESTOCK FARMING)**

This is the rearing of cattle, though in Netherlands emphasise is put on dairy farming where animals are kept for milk other than beef production.

It's more dominant in the low-lying wetlands of Friesland and major animal types kept include; **The black and white Friesian Holland breed and the Red and White Meuse-Rhine –Ijssel breed.**



## **CHARACTERISTICS OF DUTCH DIARY FARMING**

1. High quality breeds of animals are kept like **The black and white Friesian Holland breed and the Red and White Meuse-Rhine –Ijssel breed.**
2. There is a high level of specialisation where mainly dairy cattle are kept.



3. The farms are highly mechanised with equipment like milking machines.
4. Very highly skilled labour force is used on the farms.
5. Production on the farms is mainly milk and related dairy products like cheese, butter, and yoghurt.
6. Land on the farms is intensively managed due to the limited space on the polders.



## **CONDITIONS/FACTORS FAVOURING DIARY FARMING IN NETHERLANDS**

1. The flat nature of landscape on the polders allows easy movement of the animals and the use of machines.



2. The warm summers and mild winters provide favourable conditions for the stay of the animals.
3. Presence of plenty of pastures on which the animals graze.
4. Availability of adequate water supply on the polders for the animals.



5. Presence of wide domestic and foreign market, which encourages more production.
6. Availability of an adequate skilled labour force to work on the farms as milk processors.
7. The high levels of technology like the indoor grazing equipment and milking machines, simplifying work.



8. The presence of large sums of capital to buy the milking equipment.
9. Presence of an efficient transport system like cheap water transport on the Rhine, to transport products to the markets.
10. Presence of active cooperative societies that ease production and marketing of the farmers produce.

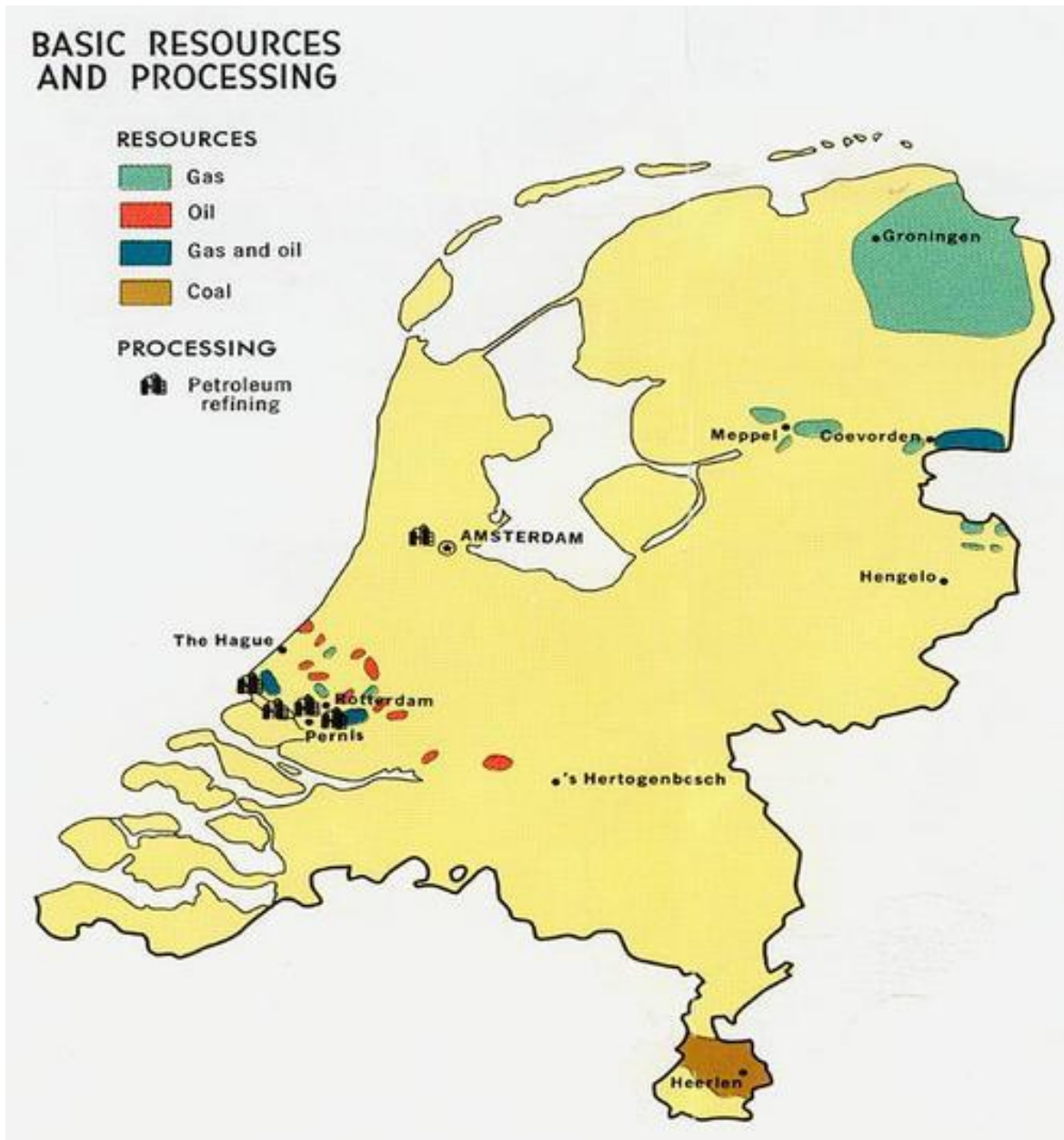
## **IMPORTANCE/BENEFITS OF DIARY FARMING TO NETHERLANDS**

1. The sector promotes industrialisation by providing milk that used as a raw material in manufacturing of products like cheese and butter.
2. Its a source of food in form of milk and meat to the people of Netherlands.
3. Employment opportunities are created for the famers giving them income.
4. People's standards of living have improved using the income from the sector.
5. Foreign exchange is earned after the exportation of dairy products.
6. There is infrastructural development in form of roads, schools, and hospitals around the farms.
7. Dairy farming has given the best use to the polders given the poor soils that don't support that much crop farming.
8. Netherlands generates domestic revenue through local taxes levied on the sector.
9. It has created market for locally produced goods like gumboots for the famers, promoting local industries.
10. Friendly international relations have developed with countries that import her products.

## **MINING IN NETHERLANDS**

There was no mining in Netherlands until the 19<sup>th</sup> century, towards the end of this period there was need for industrialisation to produce finished goods since many industries had been destroyed during the world war. Therefore there was great demand for minerals to act as raw materials in the many upcoming industries. Netherland has minerals like, coal, natural gas, oil among others.

# A SKETCH MAP OF NETHERLANDS SHOWING MINERAL RESOURCES



## **TYPES OF MINERALS**

### **COAL.**

It's mined in southern Netherlands but its demand has decreased over the years especially after the 1960's with the discovery of natural gas and this is because of the following;

- Natural gas is cheaper to produce than coal.
- It has low transport costs compared to coal.
- Natural gas is more economical to use than coal.
- Coal causes more air pollution compared to gas.
- Gas can cheaply be imported and exported than coal.
- Gas can be used with modern equipment like gas cookers unlike coal.

### **2. NATURAL GAS;**

Netherlands has one of the largest reserves of natural gas in Europe found in the north of the country. Much of this natural gas is exported using pipelines to neighbouring countries like Germany, France and some is used domestically for homes and industries.

### **3. OIL.**

This is the third mineral of importance to Netherlands and it's used as a source of fuel in the country's industries. It's mined in areas around Rotterdam and The Hague.

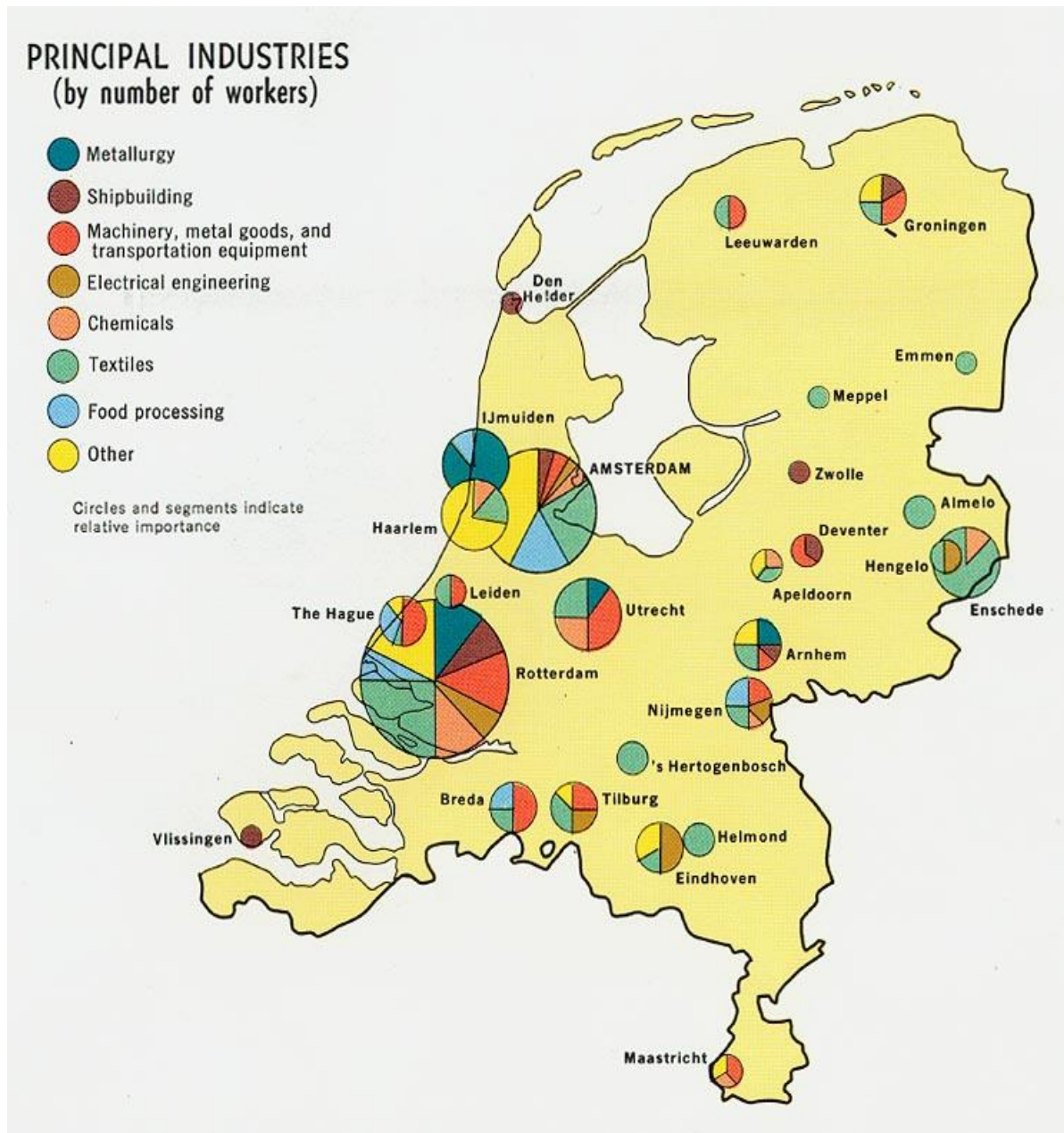
Other minerals of little significance include clay, marl and peat.

## **INDUSTRIALISATION IN NETHERLANDS**

Industrialisation became widespread in the Netherlands after the Second World War; this was because of the wide demand for finished goods in Europe at the time. Many of the county's industries are concentrated in west around Amsterdam and Rotterdam. Which areas are referred to as the west polar conurbation (a combination of many towns?)



## A SKETCHMAP OF NETHERLANDS SHOWING MAJOR INDUSTRIES.



### TYPES OF INDUSTRIES

#### 1. CHEMICAL INDUSTRY;

This is found in cities like Rotterdam, Amsterdam and Haarlem. This industry has received the greatest expansion as compared to others in Netherlands.

It contributes 17% of the country's total export earnings.

Products from this industry include plastics, cosmetics, and fertilizers.

#### 2. METAL AND STEEL INDUSTRY;

Major towns where it's found include Amsterdam, Rotterdam and Utrecht. It employs the largest number of labour force in Netherlands.

Products from this industry include; vehicles, aircrafts, engines.

### 3. ELECTRICAL ENGINEERING;

This covers every field of electrical products and among products manufactured include, Radio systems, television sets, electric bulbs, and other house hold appliances. Major companies include Phillips. Major centres are Rotterdam and Amsterdam.

### 4. FOOD PROCESSING AND TOBACCO INDUSTRY.

This industry is boosted mainly by the agricultural sector that provides the necessary raw materials like milk, fruits, and vegetables and tobacco it's self. Products from this industry include; packed meat and milk, cigars, soft drinks found in centres like Amsterdam, Rotterdam, and The Hague.

### 5. TEXTILE INDUSTRY;

This is one of the oldest industries and it has undergone several changes like combining several small cottage industries to form one large industry. Also there has been a change from using the traditional cotton wool and linen, to synthetic nylon and this was because of the reduced demand for the traditional cotton products. Major centres are Haarlem, Groningen, Amsterdam and Rotterdam.

## **FACTORS FAVOURING INDUSTRIALISATION IN NETHERLANDS**

1. Availability of adequate skilled labour force to work in the industries.
2. Presence of large sums of capital to buy industrial equipment.
3. Availability of valuable minerals like iron ore that are used as raw materials.
4. Presence of sufficient power supply informs of HEP and coal used to power industrial equipment.
5. Netherland's strategic location neighbouring rich countries like Germany, has provided it with market and industrial raw materials.
6. An efficient transport system to transport finished goods for example along the Nile.
7. High levels of technology where computerised equipment is used hence simplifying work.
8. The country strategically located along the North Sea which makes exportation and importation of goods easy.

9. Presence of a wide market, both domestic and foreign hence encouraging production.
10. The stable political climate in the country attracts industrial investors.

### **PROBLEMS FACING DUTCH INDUSTRIES**

1. Scarce mineral resources which results into lack of sufficient raw materials, lowering production.
2. Competition from other industrialised nations, reducing profits on the world market.
3. Environmental pollution when bad gasses are released into the land and water surfaces.
4. Limited land space for industrial expansion hence reducing industrial output.
5. Inadequate domestic market due to the sparse population in the country, reducing profits.
6. Profit repatriations by foreign investing companies, which reduce domestic revenue.
7. Competition from other sectors within the economy like agriculture, which reduces the budget of industrial expansion.
8. Inadequate labour supply given the sparse population, hence reducing production levels.

### **PORTS OF NETHERLANDS**

#### **AMSTERDAM PORT.**

This port is found in the north of Netherlands. It developed as a transshipment port and also a trade and fishing centre. Its growth resulted from the construction of the new water way in 1872 called the North sea canal which gave it direct access to the North sea. Its popularity grew further when it began taking commodities entering and leaving Netherlands.



### **FUNCTIONS OF AMSTERDAM PORT**

1. It serves as the capital city of Netherlands.
2. It serves as a port concerned mainly with food items.
3. It's a national distribution centre for many commodities especially imported tropical products like sugarcane, tobacco, coffee.
4. It's an industrial centre with a number of industries like, chemical plants.
5. It's a service centre providing services like banking, insurance and telecommunication services.
6. It's an administrative centre with a number of government offices.
7. It's a tourist and cultural centre with many tourist attractions like cinemas, parks.

### **ROTTERDAM PORT.**

This port is found on the delta of river Rhine. Rotterdam became a transit port for heavy goods and it has developed as a result of the industrial expansion in the interior.



### **FUNCTIONS OF ROTTERDAM PORT.**

1. It's an industrial centre with a number of industries like engineering plants.
2. It serves as an entry point to Netherlands and the rest of Europe.
3. It's an education centre with colleges and universities.
4. It's a tourist destination with a number of attractions like museums and parks.
5. It's a service centre with banks and insurance companies.

### **FACTORS THAT HAVE FAVOURED DEVELOPMENT OF PORTS IN NETHERLANDS.**

1. The presence of deep waters that can accommodate large sea going vessels.



2. The presence of natural deep harbours that allow easy anchoring of the ships.



3. The ports are well sheltered from strong sea winds, hence ships anchor easily.
4. A port like Rotterdam is ice free much of the year, meaning its normal business much of the year.
5. Ports have a low tidal range which allows easy anchoring of the boats.
6. The ports have a very wide and rich hinter land that they serve extending to countries like German, France and Switzerland.
7. The efficient transport networks inform of roads, railway lines, canals has eased movement of goods at the ports.
8. The high levels of technology at the ports like the container lifters and scanners, this has made work easier and faster.

9. The over 600 years of existence of these ports has given these ports to develop over time.
10. The high level of industrialisation at these ports has also contributed to the development as the industries give the ports business.

### **PROBLEMS FACING PORTS IN NETHERLANDS**

1. Congestion of both ships and vehicles, causing delays.
2. Overcrowding because of the many people at these ports, causing problems like high crime rates.
3. Pollution of especially waters and air as ships and industries release wastes and gasses into the environment.
4. Inadequate land space for expansion limiting expansion and development.
5. Silting of the canals and river channels causing occasional flooding.
6. High levels of unemployment causing increase in crime.
7. Development of slums and related problems like increase in crime because of the high population.
8. Ship accidents are common destroying property and leading to loss of lives.
9. Too much snow and ice during winter slows down business at the ports.

### **SOLUTIONS**

1. Vertical expansion is done to maximise the available land space.
2. Waste is treated before being released into the environment.
3. Regular dredging is done to clear the blocked canals.
4. Dykes are built and regularly repaired to prevent flooding.
5. Alternative routes like fly over, canals are developed to reduce traffic congestion.



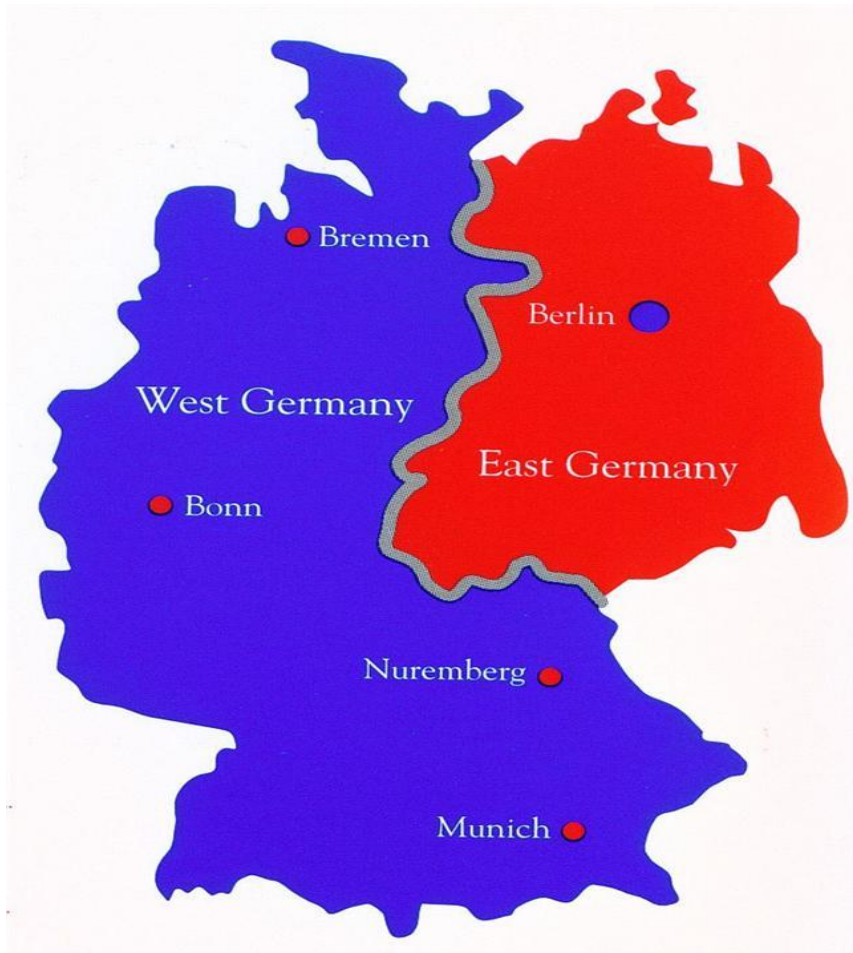
6. Policing is emphasised to reduce crime in the ports.

7. More industries are established to create employment opportunities for the un employed.
8. Rural urban migration is discouraged to prevent congestion in the ports.
9. Containerisation is done to reduce congestion of goods at ports
10. Time tabling of ships is done to reduce accidents.



## GERMANY

After the Second World War Germany was divided into two nations, that is east and West Germany. It was not until 1990 when the Berlin wall came down that Germany became united as one country.



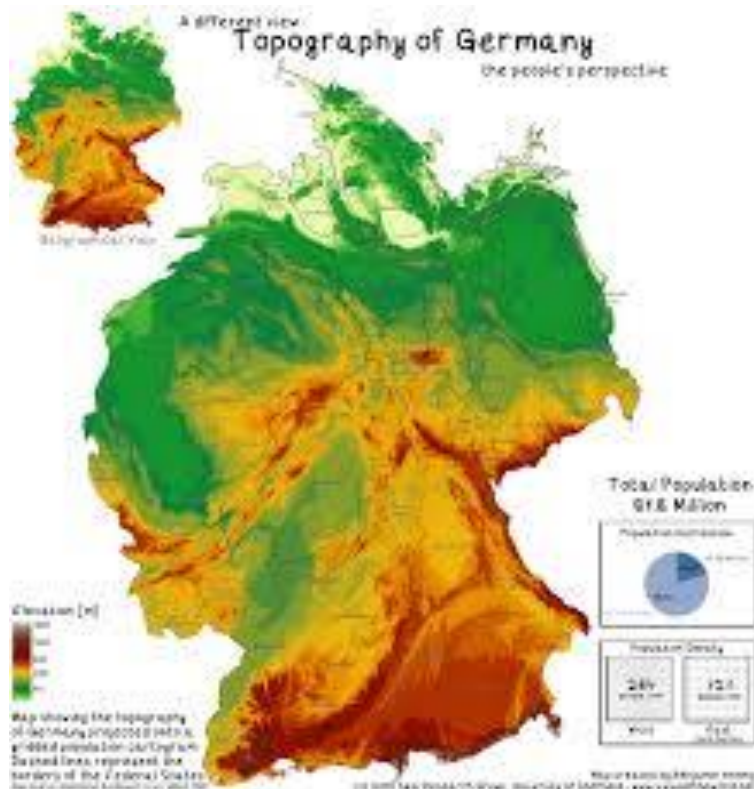
its located in central Europe bordered by the North sea and Baltic sea in the north , Poland and Czech republic in the east, Austria and Switzerland in the south, France , Belgium and Netherlands in the west.



## RELIEF OF GERMANY

The country's relief can be categorised into three major regions, including;

- The North Germany low lowlands
- The central uplands
- The southern highlands.



- **The north Germany low lands.**

This is an undulating landscape of glacial deposits laid down by the ice sheets which spread south from the Scandinavians. This region is also referred to as the North European plain.

In the south of this region there are folded rocks.

In the north Germany low lands, there are relief sub divisions that include;

- **The manschen.**

This is part of the north Germany low lands that has been reclaimed from the sea. Its dominated by activities like, livestock farming , crop cultivation and market gardening.

- **The Geestlands.**

This region is mainly covered by sandstones and oak forests.

- **The Bordelands.**

These comprise of fertile soils, hence encouraging agriculture in crops like wheat, barley, flowers, fruits and vegetables. The region also has minerals like iron ore, coal, rock salt and potash.

- **The central uplands.**

This region is characterised by mountains. It was uplifted, folded, and later acted on by denudation processes. The same region was affected by earth movements which resulted into Block Mountains like **the Black Forest Mountains and the Vosges mountains.**

The same earth movements in the region led to the formation of the **Rhine rift valley.**

- **The southern uplands.**

This region is characterised by an undulating plateau rising between 300-900m above sea level. This plateau is composed of mainly limestone rocks, which are not that favourable for crop farming, although farming still goes on in the region in crops like, oats, barley, and rye.

## CLIMATE OF GERMANY

The climate of the country is determined by her position in the cool temperate region in the higher latitudes. The country experiences the four seasons of summer, winter, autumn and spring.

The country experiences rainfall much of the year at times in form of snow and the average temperature range is between 1-13°c , although in some months like December and January , temperatures drop below 0°c.

## VEGETATION OF GERMANY

The natural vegetation of Germany was originally of forests especially in the low lands. Forests were coniferous in nature. Today very little of the original forests

remain as they have been cut down to allow space for cultivation, grazing and settlement.

### **SOILS OF GERMANY**

The northern low lands have glacial soils, composed of mainly fertile clay soils.

The soils of the central uplands are poor due to leaching which makes them favourable only for the growth of coniferous forests.

The fertile soils are mainly found along the edges of the central uplands and the northern lowlands and along the Rhine rift valley.

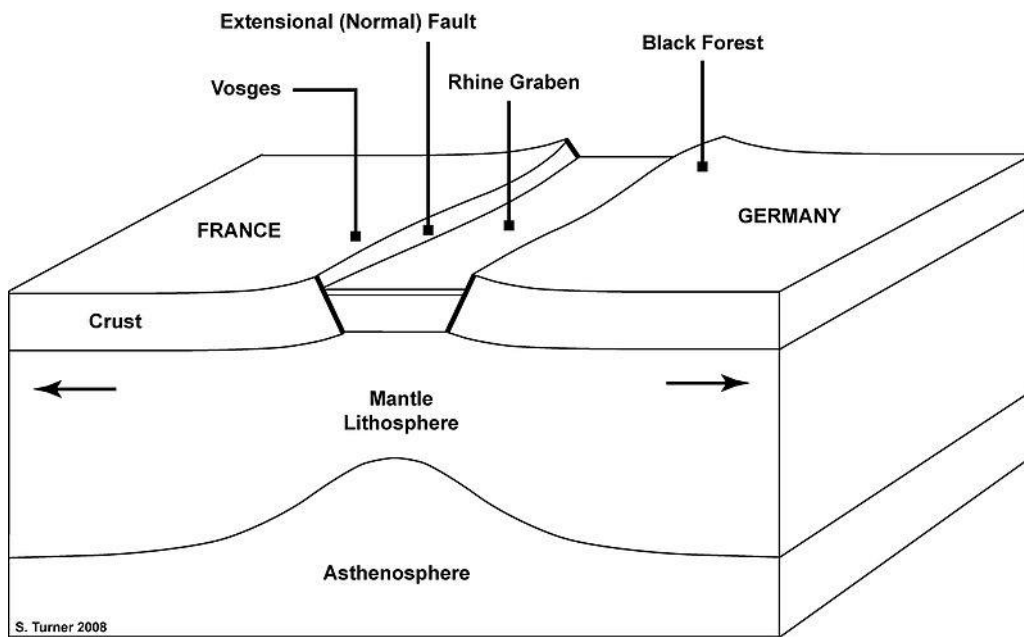
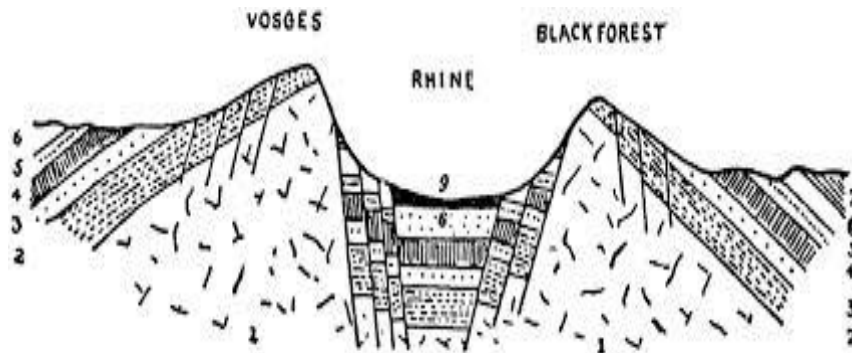
### **THE RHINE RIFTVALLEY AND RHINE GORGE**

The Rhine rift valley is an elongated depression with escarpments on either sides running for a distance of about 290km.

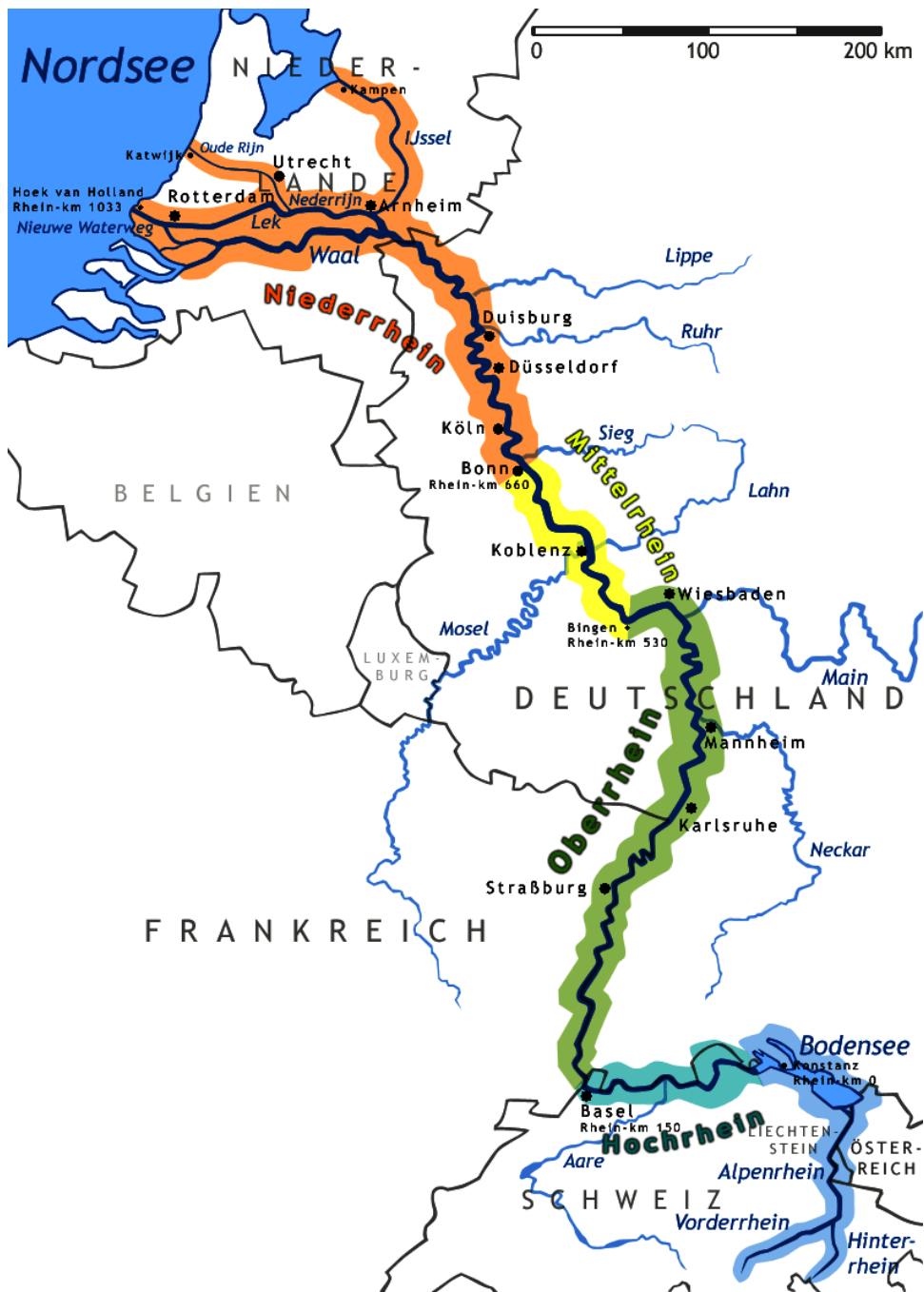


The Rhine gorge is a narrow deep sided valley found along the Rhine water way. It's very deep and narrow compared to the Rhine rift valley.

## STRUCTURE OF THE RHINE RIFTVALLEY



## ILLUSTRATION OF THE RHINE RIFTVALLEY AND GORGE



### KEY.

**GREEN**- RHINE RIFTVALLEY

**YELLOW**- RHINE GORGE

## FORMATION OF THE RHINE RIFT VALLEY

Two major theories explain the formation of the Rhine rift valley, these include the compression and tension force theories.

### **The compression force theory.**

In this theory compression forces act on the old rock strata/layers.

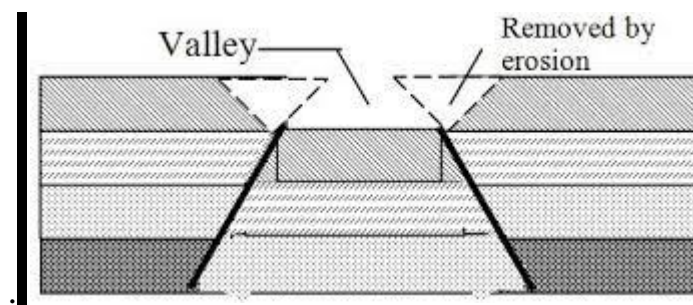
This leads to formation of reversed fault lines that divide the earth's crust into three blocks of A,B, and C.

With continued compression, there is up thrust of the side blocks on either sides over the faulted centre area.

The centre area subsides in a series of steps forming a depression.

Later erosion processes act on the tips of blocks A and C, leaving behind a depression, in this case the Rhine rift valley

### **ILLUSTRATION.**



### **Tension force theory.**

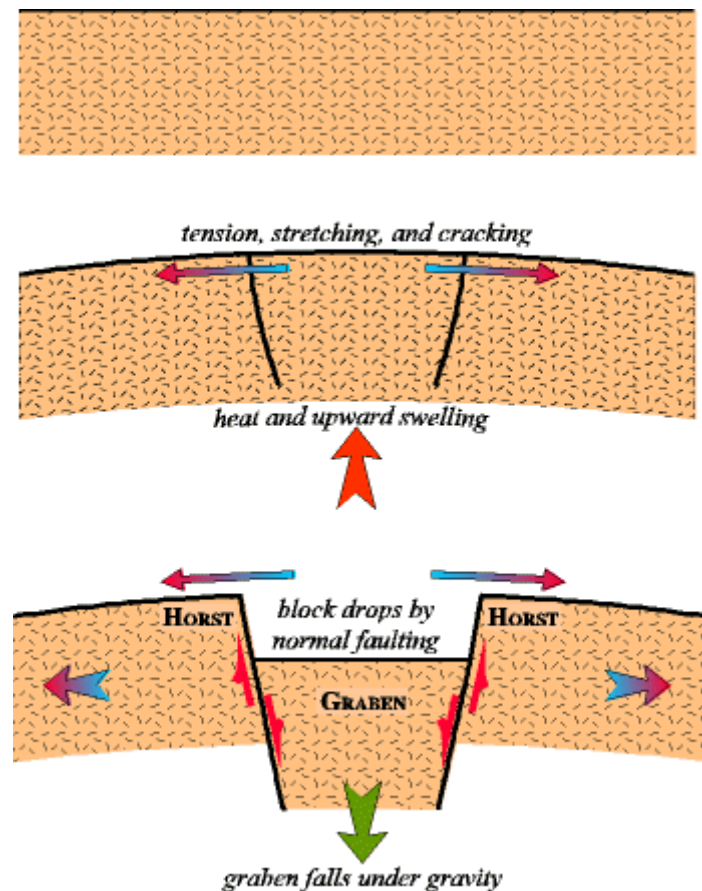
In this theory tension forces act on the old rock strata/layers.

This leads to formation of normal fault lines dividing the earth's crust into three blocks, A, B and C.

With continued tension, blocks A and C give way for block B to drop.

This leaves behind a depression called the Rhine rift valley.

## ILLUSTRATION.



## IMPORTANCE OF THE RHINE RIFT VALLEY TO THE SURROUNDING COMMUNITIES

*QN. Explain the influence of relief on human activities in the Rhine rift valley.*

1. The narrow Rhine gorge has made easy dam construction, generating power for domestic and industrial use.
2. The coniferous forests in the upper escarpments have encouraged lumbering, creating jobs.
3. The presence of minerals has encouraged mining fetching the country revenue and providing industrial raw materials.
4. The rift valley floor has fertile soils that have encouraged arable farming.
5. The south facing slopes of the rift valley are warm due to the sun's rays, hence allowing ripening of fruits and harvesting process.
6. The gentle undulating slopes have favoured construction of communication routes easing transport.
7. The flat valley bottom has encouraged establishment of towns and industries.



8. The beautiful scenery of the rift valley is an attraction to visitors promoting tourism.

### **PROBLEMS FACED IN THE RHINE RIFTVALLEY.**

1. Pests that cause crop diseases hence lowering levels of production.
2. Limited mechanisation because of the steep nature of the escarpments, discouraging increased crop output.
3. Crop failure especially during winter due to frost, affecting farmer's profits.
4. Post harvest losses since most of the crops are perishables, reducing profits.
5. Limited land for agricultural expansions due to the steep escarpments, lowering production.
6. Limited labour at peak periods like harvesting, lowering levels of production.
7. Flooding in the valley, destroying crops and property.
8. Soil erosion leading to loss of fertile soils, which limits production.

### **VITICULTURE AND THE WINE INDUSTRY IN THE RHINE RIFTVALLEY.**

Viticulture is the growing of grapes on vine tress in vine yards. It's the major activity in the Rhine rift valley, hence contributing to the development of the wine industry in Germany.



## **PRODUCTS FROM GRAPES.**

- Wine.
- Manure
- Animal and chicken feeds
- Jam

## **FACTORS THAT HAVE FAVOURED VINE GROWING IN THE RHINE RIFT VALLEY.**

1. Presence of a gently sloping landscape on the western part of the rift valley has encouraged the use of machines on the farms.
2. The warm sunny summers have provided favourable conditions for the ripening of the grapes.
3. The rift valley floor is sheltered by the adjacent escarpments from strong winds which would affect the vine trees.
4. There is controlled soil erosion through construction of dykes favouring growing of the vine trees.
5. Availability of adequate capital to buy the different farm equipment.
6. Presence of adequate skilled labour used especially during the harvesting process.



7. The high levels of technology where machines are used on the farms, simplifying work.
8. The presence of fertile soils on the rift valley floor has allowed growth of the vine trees.
9. Availability of sufficient water supply from the Rhine to irrigate and process the grapes.
10. The presence of a wide market both local and foreign has encouraged continued production.

## **GROWING, HERVSTING AND PROCESSING OF GRAPES INTO WINE**

*QN. Describe the activities that take place in the different vine growing seasons.*

Grapes are grown in neat gardens called vine yards, in which the vine trees are planted in neat rows.



During winter and spring that is between the months of December – march, there is pruning of the trees, application of fertilizers, spraying, weeding, and putting in place tree stands to support the vine trees.

During summer, harvesting of the grapes is done; they are collected, sorted and transported to the processing plants.

At the processing plant, juice is extracted from the grapes, the juice is allowed to ferment and this is usually between November to December.



By February the young wine is ready to be filtered, put in barrels and sent to the different distillers in centres like Rotterdam to manufacture wines.



### **PROBLEMS FACING VINE GROWING IN THE RHINE RIFTVALLEY**

1. Harsh weather conditions like the very cold winters that disrupt production.
2. Pests like warms that affect the fruits reducing levels of production.
3. Inadequate labour supply especially during harvesting lowering production levels.
4. Competition from other wine producing countries, reducing prices on the international market.
5. Soil exhaustion because of monoculture reducing crop production.
6. Soil erosion leading to loss of fertile soils given the steep nature of the landscape.
7. Soil pollution arising because of the chemicals in the artificial fertilizers added to the soils and pesticides.
8. Viticulture is capital intensive, hence very expensive to carry out, since labour needs to be hired, buying machines.
9. The steep escarpments have discouraged the use of machine in some parts.
10. Occasional flooding of river Rhine has destroyed vine yards, causing losses.

### **SOLUTIONS**

1. Market research is done to widen and find new market for the country's wine.
2. Dykes have been built along the Rhine to control flooding.
3. Spraying of the crops is done to control the pests and diseases.
4. Natural manures are use instead of the chemical artificial fertilizers.
5. Quality produce is emphasised to compete favourably on the world market.
6. Canals have also been dug to reduce the flooding problem.

7. Migrant labour is attracted on the farms to prevent labour shortages.
8. Terracing is done to control soil erosion and the loss of fertile soils.
9. On-site processing is done to minimise losses during transporting over long distances.

### **THE RHINE WATER WAY**

This water way is represented by river Rhine and its tributaries. It runs all the way from Switzerland through Germany, the Netherlands and finally pours its waters into the North Sea.

# ILLUSTRATION OF THE RHINE WATER WAY



## **FACTORS THAT HAVE CONTRIBUTED TO THE DEVELOPMENT OF THE RHINE WATER WAY.**

1. The great cooperation between the Rhine countries, in that each countries ensures that the section in their country is mentioned.
2. The physical presence of river Rhine itself and the many tributaries, has contributed to the development of the water way.
3. The presence of adequate skilled labour to construct canals and manage activities on the water way.
4. The extension of navigable stretches of the water way by constructing canals like the Dortmund-ems canal.
5. Melting of the glaciers in the Alps has provided adequate water supply for river Rhine.
6. The very rich hinter land represented by rich countries like Germany, France, has provided adequate water transport business for the river.
7. The deep river channel has made it possible for large vessels to use the water way.
8. The river is ice free all year meaning it's used all year round.
9. The presence of large sums of capital by the respective courtiers to build modern port handling facilities along the water way.
10. It's a cheaper way of transporting heavy goods hence its preferred, contributing to development of the water way.
11. River Rhine connects Western Europe to the outside world through ports like Rotterdam.

### **IMPORTANCE OF THE WATER WAY TO THE RHINELANDS**

1. It has improved international relations between countries that use the water way, like Switzerland, Germany and Netherlands.
2. It has eased the transportation of heavy industrial goods and raw materials in the region.
3. Industrialisation is realised because the river provides cheap water transport for finished goods and raw materials.
4. Urbanisation is realised along the water way with the coming up of ports like Rotterdam.
5. Employment opportunities have been created for a number of people like ship captains, giving people income.
6. The water way has encouraged the mining sector as it provides cheap water transport for the heavy ores and labour force.

7. It has boosted agricultural development by providing irrigation water for agricultural fields.
8. It has boosted tourism bringing in foreign exchange to countries.
9. Countries also generate revenue by taxing ships that go through their borders.
10. Infrastructural development is realised with a number of roads and railway lines connecting to the water way.
11. Economic diversification is realised as countries generate revenue from the water way in addition to other economic sectors.

### **PROBLEMS FACED ON THE RHINE WATERWAY**

1. Congestion is common at the various ports along the waterway causing delays.
2. Water pollution as the ships and industries release waste into the water way.
3. High taxes on the shipment of goods making the water way expensive.
4. Silting of the water way and its tributaries making water transport difficult.
5. Occasional flooding along the waterway destroying property.
6. Poor visibility along the water way because of fog (smog) causing accidents.
7. Occasional accidents along the water way destroying property and life.
8. Urban related problems like high crime rates in ports like Rotterdam.
9. The water way is narrow in some sections making transport difficult.
10. Harsh climatic conditions like storms disrupt transport on the waterway.

### **SOLUTIONS**

1. Anti pollution laws have been put in place to control polluting of the waterway.
2. Regular dredging is done to prevent silting of the waterway.
3. Containerisation is done at the ports to control congestion.
4. Time tabling of ships is done to prevent accidents and control traffic.
5. By-pass canals are constructed to reduce congestion on the water way.
6. Very strong head lights are used on ships during fog to improve visibility.
7. Dykes are constructed to prevent flooding.
8. The radar system is used to manage traffic along the water way.
9. Waste is treated before being released into the waters to control pollution.
10. Continuous dredging is done to deepen and widen the waterway more.



## THE RHUR MINING AND INDUSTRIAL REGION

This region is located between rivers Lippe in the north and river Ruhr in the south.

The region is known for its coal deposits which have been responsible for the many industries in the region, since coal serves as the chief source of energy in these industries.

## A SKETCH MAP SHOWING LOCATION OF THE RHUR REGION



## FACTORS THAT HAVE FAVOURED COAL MINING IN THE RHUR REGION

1. The availability of large coal deposits has attracted mining investors to the region.



2. The presence of adequate market for the mined coal, locally by the many industries and neighbouring industrial countries that use it as a source of energy.
3. The so many rivers in the region like Ruhr have provided cheap water transport for the mined mineral.
4. The presence of the many industries in the region that have provided market for the mined coal.
5. Availability of adequate skilled labour that works in the coal mines.



6. The existence of the coal deposits closer to the earth's surface has made extraction of the mineral easy hence attracting investment in the sector.
7. The presence of high levels of technology like the use of heavy machinery like excavators to extract the mineral.



8. the positive policies of the Germany government, like attracting investment in the mining sector by giving investors incentives.
9. Availability of large sums of capital to buy the heavy mining equipment.

### **PROBLEMS FACING COAL MINING IN THE RHUR REGION.**

*QN. Explain factors that have led to the decline of the coal industry in Germany.*

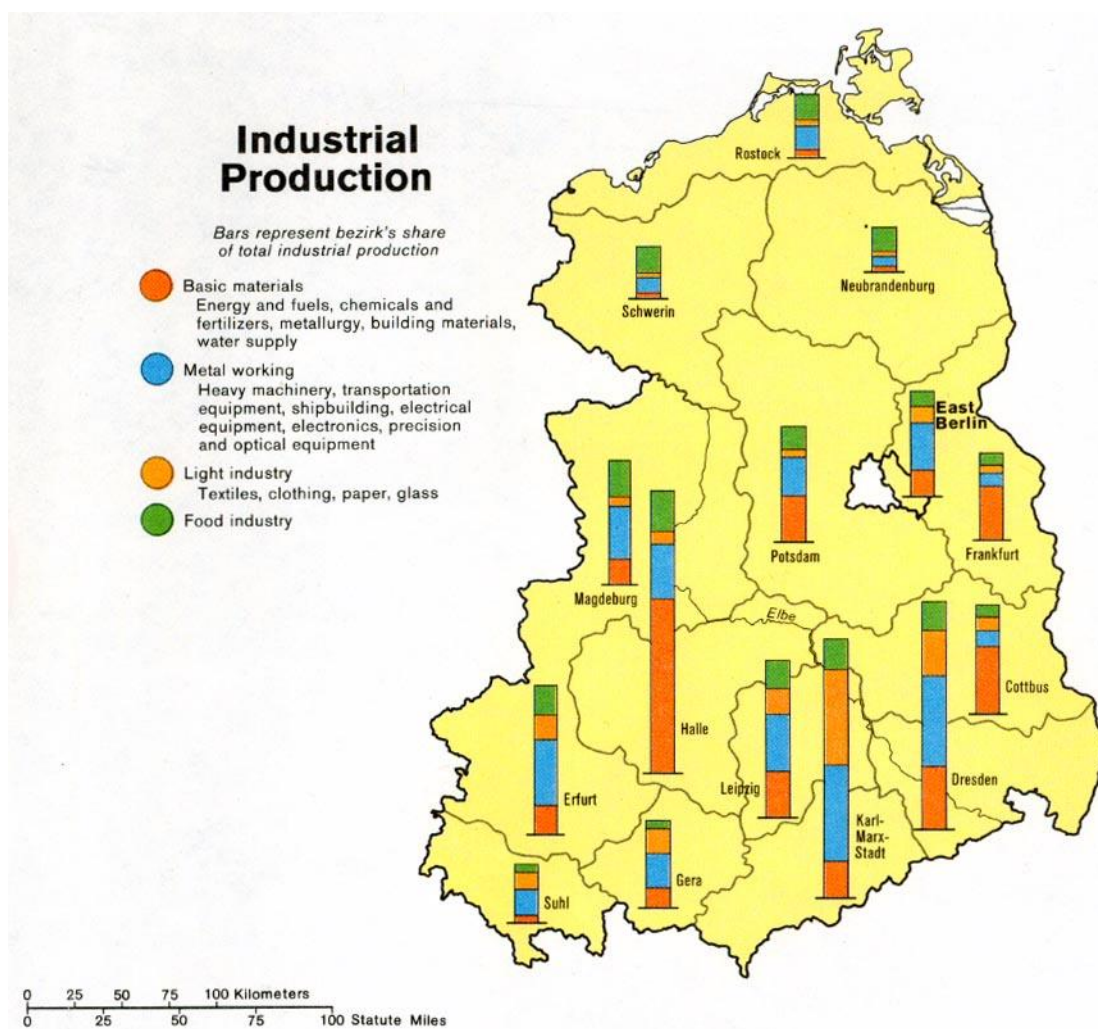
1. Competition from other cheap coal producing countries like USA, affecting profits.
2. Land degradation where pits are left behind after extracting the coal.
3. Environmental pollution when fumes are released into the atmosphere and wastes released into water bodies.
4. Competition from modern and efficient sources of energy like HEP, reducing demand for coal.
5. High production costs from the machines bought, whereas less profit is made because of the reduced demand for coal.
6. The introduction of modern equipment and machines that can't use coal as a source of energy like the gas cookers.
7. Inadequate labour supply as people move to better paying jobs, which stalls production.

8. Closure of mines because profits are no longer being made, this has contributed to less production.

## INDUSTRISATION IN GERMANY

It's one of the most industrialised countries in the world, and majority of her industries are found in the Ruhr region in towns like, Essen, Duisburg and Dortmund. Some of these industries include; textiles, iron and steel, chemical industries, engineering and oil refineries.

### A SKETCHMAP OF GERMANY SHOWING MAJOR INDUSTRIES.





## **FACTORS FAVOURING INDUSTRIAL DEVELOPMENT IN GERMANY.**

1. The stable political climate has attracted investors into the country.
2. The presence of high levels of technology, where computerised machines are used, makes work efficient and quick.
3. Availability of a developed agricultural sector that provides agro-based raw materials for industries.
4. Presence of plenty of water from rivers like Rhine, used in cooling and as a raw material.
5. Availability of a variety of mineral resources like iron ore used as a raw material.
6. Positive government policies like government encouraging establishment of industries after the Second World War.
7. The cheap water transport provided by the many rivers to transport heavy goods and raw materials.
8. Presence of wide market both domestic and foreign, hence encouraging more production.
9. Availability of large sums of capital to buy modern industrial machines.
10. Presence of adequate skilled labour to work in the different industries.

## **IMPORTANCE OF INDUSTRIALISATION TO GERMAN.**

1. Employment opportunities have been created for a number of people like machine operators, giving them income.
2. Economic diversification is realised, meaning increased revenue for the country.
3. Infrastructural development in form of schools, hospitals is realised around these industrial towns.
4. The country earns foreign exchange after exportation of industrial goods, money that is used to build roads.

5. People's standards of living have improved using income from the industrial sector.
6. Urbanisation is realised with the coming up of industrial towns like Essen and Dortmund.
7. Industries have ensured effective utilisation of available resources like minerals.
8. Friendly international relations have developed with countries that trade with German.
9. The country generates domestic revenue through taxing the industrial activities.
10. The industrial sector has promoted development of other sectors like agriculture since it requires agro based raw materials.

### **PROBLEMS OF INDUSTRIALISATION IN GERMANY.**

1. Industries pollute the environment when they release gasses and waste into the environment.
2. High costs of production because industries rely on expensively imported raw materials.
3. Competition for market internationally lowering profits.
4. Congestion at ports causing delays in delivery of goods and raw materials.
5. Occasional accidents in industries causing loss of lives.
6. Industrial establishment has caused loss of vegetation cover and encroachment on agricultural land.
7. Urban related problems like high crime rates in the industrial towns.
8. Inadequate land space for industrial expansion, limiting production levels.
9. Over exploitation of minerals like coal which has caused exhaustion of such minerals.
10. Price fluctuations arising from over production, which lowers profits.

### **SOLUTIONS.**

1. Satellite towns are created to decongest the industrial towns.
2. Raw material saving technology is introduced to lower costs on imported raw materials.
3. Anti-pollution laws are put in place to control pollution of the environment.
4. Afforestation is encouraged to replace the destroyed vegetation cover.
5. Regional cooperation is encouraged to widen the foreign market.

6. Containerisation and time tabling of ships is done to reduce congestion at ports.
7. Recycling and re-use of industrial wastes is done to reduce pollution.
8. Germany imports the scarce raw materials from the neighbouring countries.
9. Green belts (forests) are set up in industrial centres to ensure environmental conservation.
10. Quality produce is emphasised to manage competition on the world market.

## BELGIUM

Belgium is the second smallest country after Luxemburg in the Rhine lands. It approximately covers 30000sqkm making it an eighth (1/8) of Uganda and a thirty third (1/33) of Tanzania.

Although not directly crossed by river Rhine, Belgium forms part of the Rhine lands because it has tributaries of river Rhine like river Scheldt and Meuse.

Belgium is neighboured by France in the south and east, Luxemburg in the south east, Germany in the east and Netherlands in the north, North sea in the west.

### A SKETCH MAP SHOWING EXTENT OF BELGIUM





## **RELIEF OF BELGIUM.**

The country's relief can be summarised as gently rising from the North Sea coast to the south east coast of the country, with a number of river valleys occupied by rivers like Scheldt (schelde), sambre and Meuse.

The country is divided into three major relief regions that include;

- **THE FLANDERS**; this is next to the North Sea as one moves into the interior, characterised by clay and sandy soils.
- **THE CENTRAL PLATEAU**; this region is found in the middle of the country, characterised by loess fertile soils.
- **ARDENNES**; This region is found at the extreme south east of the country, characterised by limestone and sandstone soils/rocks.

## **LANGUAGE DISTRIBUTION IN BELGIUM.**

The country speaks a variety of languages and this depends on the physical location. For example;

- In the north of Belgium they speak Flemish (Dutch) which is a Dutch language due to the closeness to the Netherlands.
- In the south they speak French due to the closeness with France.
- In the west they speak German due to the closeness to Germany. And in the capital Brussels they speak French in addition to a number of languages.

## A SKETCH MAP OF BELGIUM SHOWING LANGUAGE DISTRIBUTION



### AGRICULTURE IN BELGIUM

The most outstanding characteristic of Belgium agriculture is that it is intensively managed.

The agricultural sector in Belgium produces 30% of the population's requirements and the rest is imported.

Agriculture in Belgium is predominantly mixed where animals are reared alongside growing of crops.

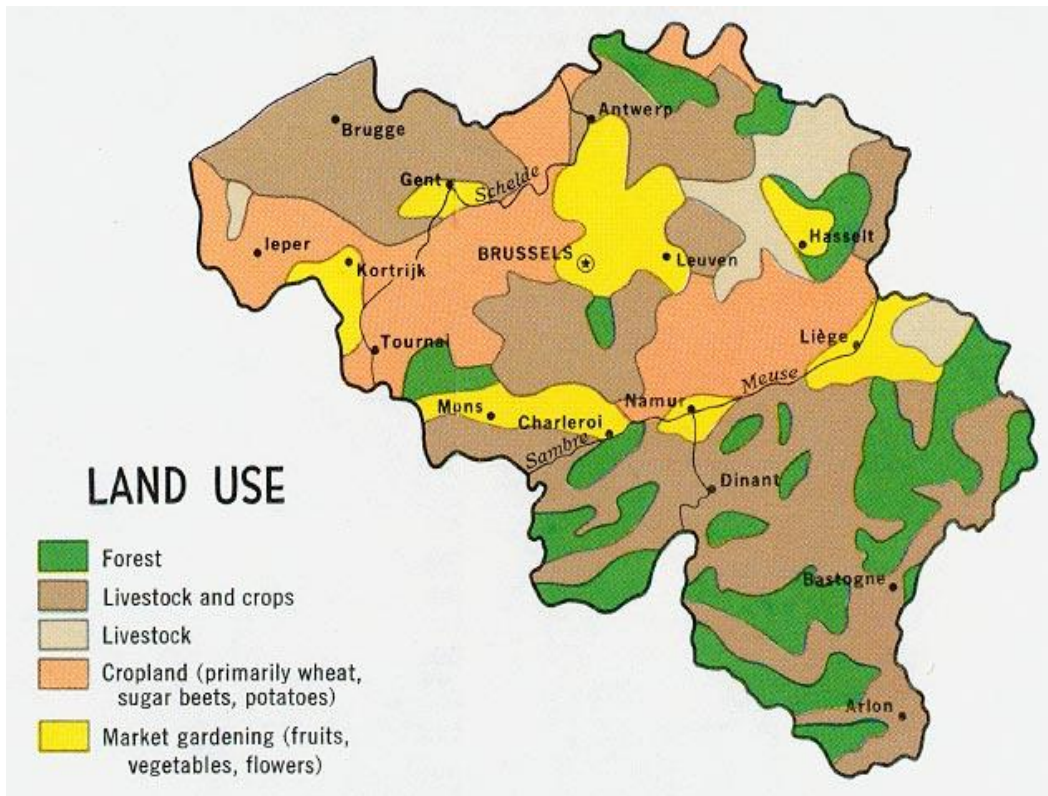
Farming is much practised in the central plateau because of the fertile soils.

Major crops grown include; wheat, maize, carrots, tomatoes, grapes, strawberries, peas, beans, tobacco, among others.



Wheat

**A SKETCH MAP SHOWING AGRICULTURAL PRACTICES IN BELGIUM**



## **CHARACTERISTICS OF DUTCH AGRICULTURE**

1. The farms are predominantly mixed where animals are reared alongside growing of crops.
2. The farms are intensively managed to ensure maximum production.
3. The farms are highly mechanised.



4. Scientific methods of farming are applied on the farms, like spraying and addition of fertilizers.
5. Horticulture farming that is growing of fruits, flowers and vegetables, is the most practiced.



6. Production from the farm is mainly for the market.

## **FACTORS THAT FAVOURE AGRICULTURAL DEVELOPMENT IN BELGIUM**

1. The flat landscape that allows use of machines hence simplifying work.
2. Availability of plenty of capital to buy farm equipments.
3. Presence of an efficient transport network to transport crops to the markets.
4. The presence of plenty of natural pastures on which to graze the animals.



5. The factor of specialisation has allowed improvement in quality and quantity produced.
6. Presence of fertile soils in the central plateau whose nutrients allow growth of the crops.
7. Presence of well drained soils that have enabled growth of the crops.
8. Availability of vast land space on which to practice the different farming types.
9. The moderate temperatures in summer and winter given the country's coastal location have allowed proper growth of crops.
10. The continued research done has enabled coming up with better crop and animal varieties.



### **CONTRIBUTONS OF AGRICULTURE TO BELGIUM**

1. Employment opportunities have been created for famers giving them income.
2. Industrialisation is encouraged because of raw materials obtained from the agricultural sector.

3. It is a source of food in form of wheat, maize to the people of Belgium.
4. Urbanisation is realised with the growing of cities like Brussels, since it acts as a market centre for the farm products.
5. Infrastructural development is realised in form of roads, schools and hospitals.
6. Friendly international relationships have developed between Belgium and importers of her produce.
7. It is a source of foreign exchange after exportation of produce, which money is used to build roads.
8. People's standards of living have improved using income from the agricultural sector.
9. Economic diversification is realised meaning increased revenue collections for the country to build schools.
10. Government collects domestic revenue through taxing the farming sector, money that is used to build hospitals.

### **PROBLEMS FACING FARMERS IN BELGIUM**

1. Pests that attack crops, leading to reduced agricultural production.
2. Crop diseases have also discouraged increased production.
3. Inadequate land space for agricultural expansion has lowered production levels.
4. Prolonged droughts during summer cause water shortages.
5. Labour shortages especially during harvesting, contributing to low crop yields.
6. Competition from other countries like Netherlands especially as regards horticulture, lowering profits.
7. Price fluctuations on the international market because of competition and over production, which lowers profits.
8. The poor infertile soils in much of the country apart from the central plateau, has discouraged increased agro-production.
9. Given the small sizes of the farms, it's difficult to use machines hence leading to low production.

### **SOLUTIONS**

1. Regular spraying is done to limit pests and diseases.

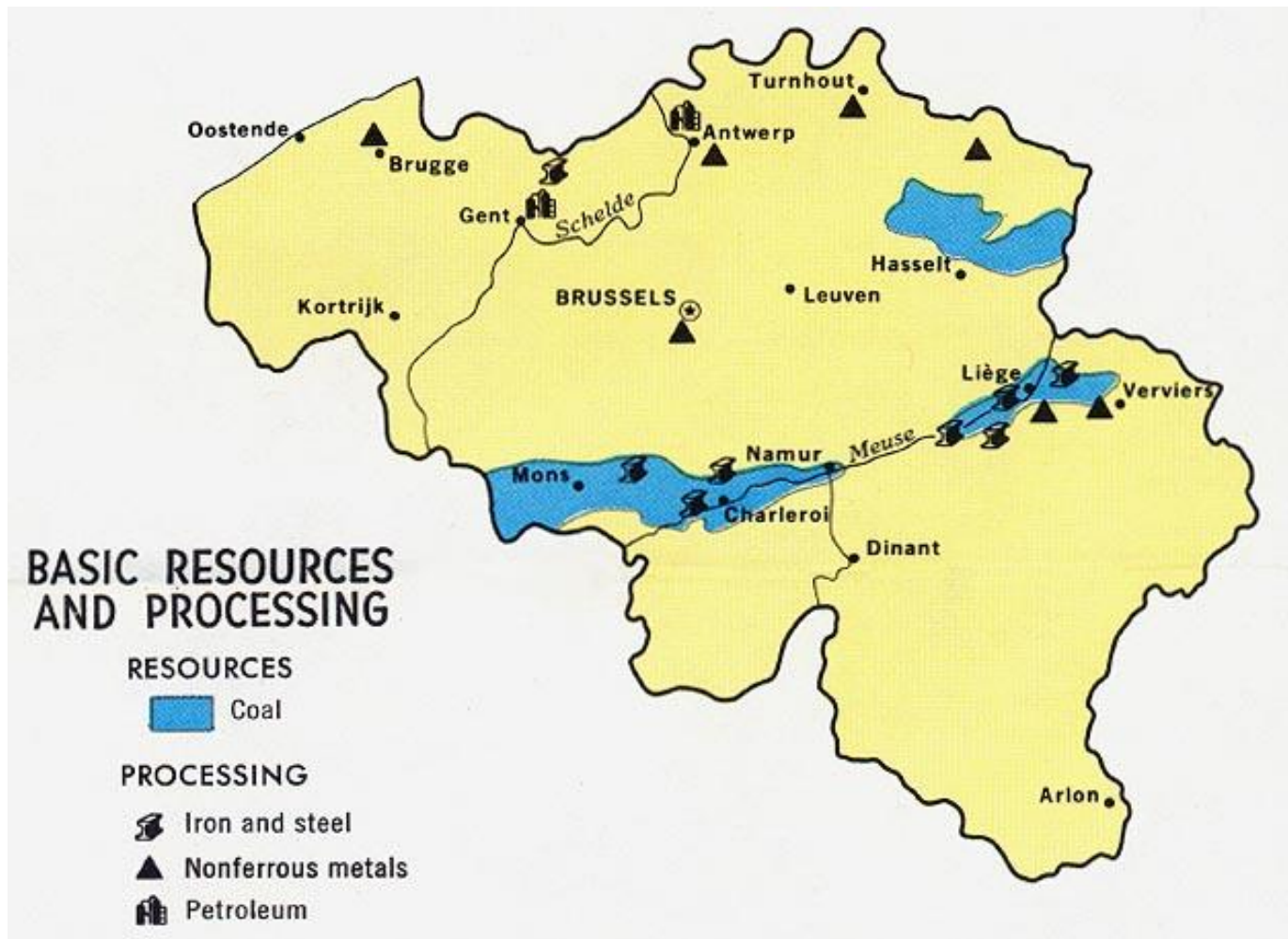
2. Land consolidation is done to increase the size of the farms and increase production.
3. Irrigation farming is carried out during the drought season to mention production.
4. Migrant labour is brought in to supplement on the local labour force.
5. More i
6. More land is being reclaimed from the sea, to increase on available land space.
7. Fertilizers are added to the soils to improve on fertility and increase production.
8. Better quality produce is emphasised to solve competition problems on the world market.
9. Workers conditions are improved to ensure continued supply of labour.

### **INDUSTRIALISATION IN BELGIUM.**

Major industries in Belgium include, chemical industries, iron and steel ,engineering plants, textiles , among others

Industrial development in the country is based on the large reserves of coal, which is a source of energy in the industries.

**A SKETCH MAP SHOWING MAJOR COAL FIELDS AND INDUSTRIES IN BELGIUM.**



**FACTORS THAT HAVE FAVOURED INDUSTRIALISATION IN BELGIUM.**

1. Presence of vast land space to allow establishment of the industries.
2. Availability of large coal reserves that serve as a source of energy in the industries.
3. Availability of cheap water transport on rivers like Meuse and Scheldt that eases movement of goods.
4. Presence of a wide market that is both local and foreign, hence encouraging more production.
5. Availability of adequate labour supply especially skilled, to work in the industries.
6. The presence of alternative energy sources like H.E.P, SOLAR, GAS, used to run machines in the industries.



7. Availability of a variety of mineral resources like iron ore, used as raw materials in the industries.
8. Belgium's strategic location along the north sea, makes exportation and importation of goods easy.
9. Presence of high levels of technology like use of computerised equipment, making industrial work easy and efficient.
10. Availability of large sums of capital to buy industrial raw materials.

### **PROBLEMS FACING INDUSTRIES IN BELGIUM**

1. Lack of adequate land space for industrial expansion, hence limiting production.
2. Overdependence on imported iron ore which is expensive hence increasing cost of production.
3. Exhaustion of minerals especially coal, limiting energy supply in the industries.
4. Environmental pollution from the industries, causing high costs when buying anti-pollution devices.
5. Delays at the ports because of congestion.
6. Competition from other industrial nations causing fluctuation of prices on the international market.
7. Wearing and tearing of industrial machines which are expensive to replace.
8. Very high transport costs are incurred when transporting goods from the interior by road to the country's ports.
9. The use of outdated technology in some industries in Belgium, slowing down production.

### **SOLUTIONS.**

1. Production of precision goods is emphasised because they require less raw materials hence less costs to import such raw materials.
2. Regional cooperation is emphasised to widen market for the manufactured goods.
3. More land is reclaimed to increase on available space for industrial expansion.
4. Automation in the industries is emphasised to improve efficiency.
5. The scarce minerals are imported like iron ore from France.
6. Recycling of iron scrap is done to reduce costs on importation of iron ore.
7. Industrial wastes are treated to reduce pollution.

8. Alternative fuel sources are introduced like nuclear, gas, H.E.P, to supplement on coal.
9. Economic diversification is done to reduce over reliance on a given sector and maximise profits.

### MAJOR TOWNS AND PORTS OF BELGIUM

#### **BRUSSELS;**

This has been the capital city of Belgium since her independence in 1830.



## **FUNCTIONS OF BRUSSELS**

1. It's an industrial centre with industries like, chemical plants.
2. It's an administrative centre with many government offices.
3. It's a centre for diplomatic missions, with embassies of a number of countries.
4. It's a residential centre with many apartments that house people.
5. It's a tourist centre, having a number of attractions like parks and museums.
6. It also serves as an inland port on a tributary of river Scheldt.

## **REASONS FOR THE DEVELOPMENT OF BRUSSELS**

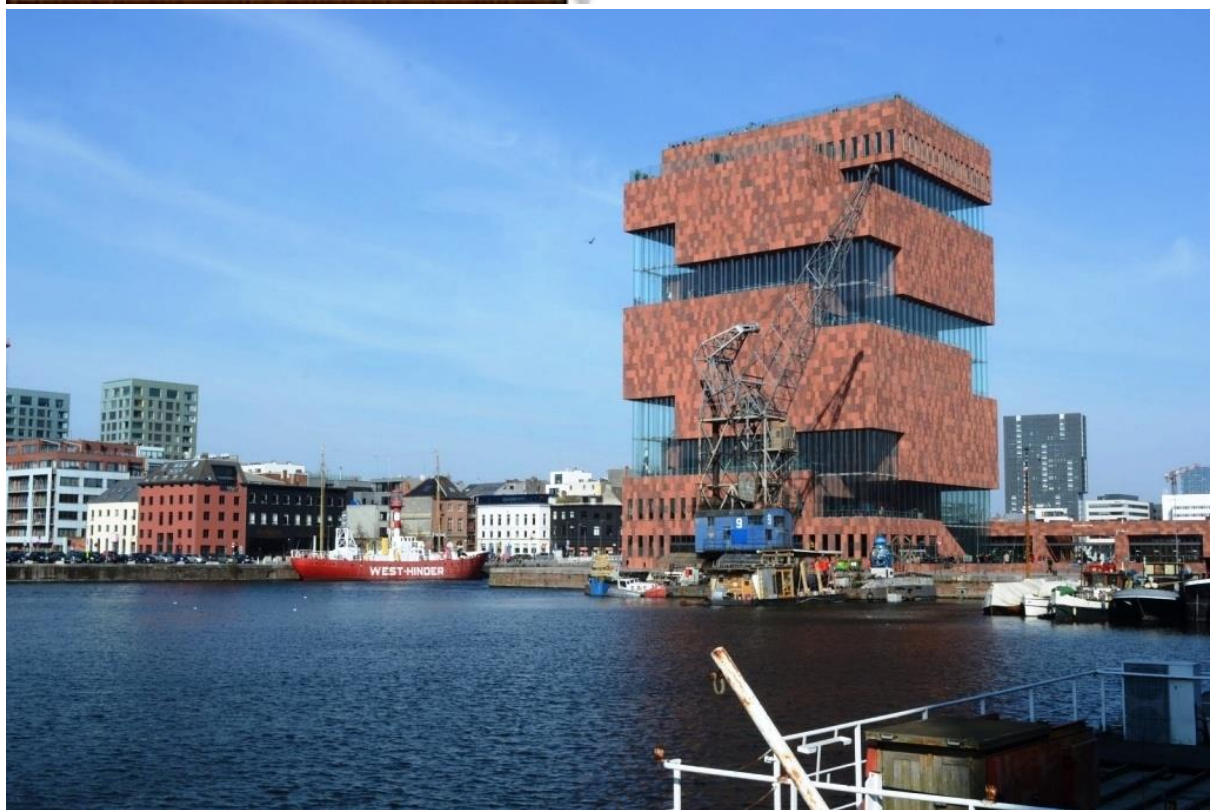
1. Its strategic location in the centre of the country makes it easily accessible from all corners of the country.
2. Its location within the fertile central plateau has encouraged development of agriculture and the city.
3. The developed infrastructure like roads, railway lines, air transport, has encouraged development of the city.
4. The presence of a number of administrative headquarters of a number of international organisations has favoured the city's development.
5. The many industries in the city have attracted trade encouraging development.
6. The modern port handling facilities contribute to its development.
7. The wide market contributed by the large city population has encouraged development.

## **ANTWERP.**

This port town is built along river Scheldt and it has direct access to the North Sea. River Scheldt on which the river is established is deep enough to allow large water going vessels to reach the port town from the sea.

The port handles 80% of Belgium's goods, some of which include, iron and steel products, chemicals, textiles, vehicles, etc.

Antwerp is a city port as well as an industrial center with industries like sugar refineries, ship building, oil refineries etc.



### **PROBLEMS FACING TOWNS IN BELGIUM**

1. Environmental pollution, especially air pollution from the many industries.
2. High crime rates in the cities because of the many un employed youths, causing insecurities.
3. Overcrowding leading to slum development, congestion and easy spread of diseases.
4. Traffic congestion causing delays because of the many vehicles on the road.
5. High rates of un employment caused by rural urban migration.

6. Occasional accidents on the roads leading to loss of lives and property.
7. Racial segregation is common especially in Brussels.