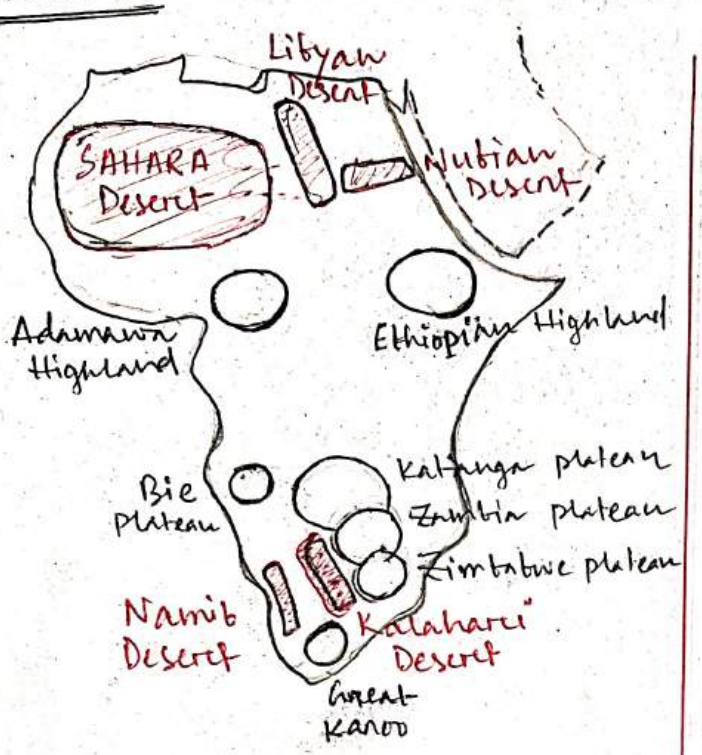
Africa

DESERT



Sahara Desert
largest hot desert

Reason of formⁿ : Sub-tropical High P Zone.
: cold current.

Namib Desert

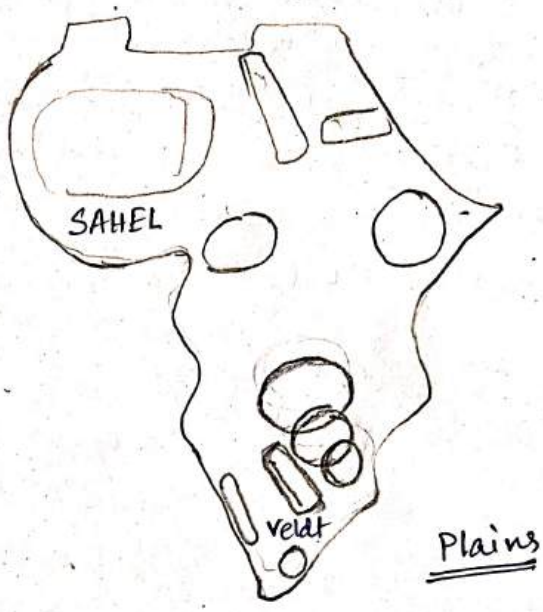
Reason of formⁿ : Off-shore trade wind.
: Cold Benguella current

Kalahari Desert
semi-desert

Rain-shadow effect.
Stony-rocky desert.

Bushmen tribes are found there, this tribe is the oldest surviving tribe in Africa.

Nubian Desert
Rocky Desert
Seperated from Libyan desert by Nile river.



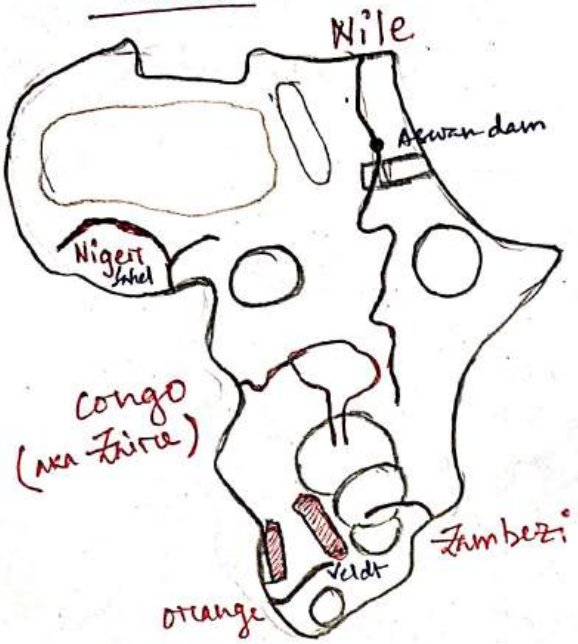
Plains

Sahel
one of the largest area of world suffering from mal

Veld
temperate grassland.
(South Africa).

other temperate grasslands
- Steppe → Asia
- downs – Australia
- Prairi – North America
- Pampas → Latin America

Rivers



River Nile
- Longest river
- tributaries: Blue Nile, White Nile

Blue Nile:
- origin Lake ~~Victoria~~ Tana

White Nile:
- origin Lake victoria

Cotton cultivation

Petroleum is found at the mouth of the river.

Irrigation, Navigation.
↓
Aswan Dam (Lake Nasser)

Port:- Port Said, Port Alexandria (Egypt)

City:- Cairo (Egypt), Khartoum (Sudan) Giza.

Congo River:-

Origin: Katanga plateau.

→ Located in equatorial region and surrounded by Equatorial rain forest.

→ Important tributaries:-
North: Uruungi
South: Kasai

→ Famous Boyoma Water fall.

→ Petroleum reserve at the mouth.

→ crosses equator twice.

Tribe: Pigmy.

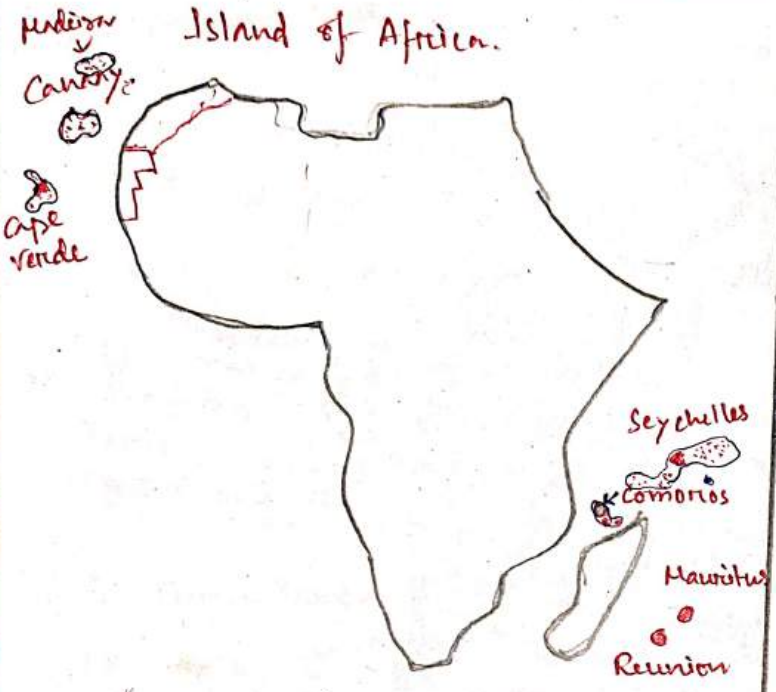
Largest river in terms of volume.

River Zambezi
Origin: Katanga plateau
famous victoria falls.

River orange
it's tributary vaal is famous for gold deposit.

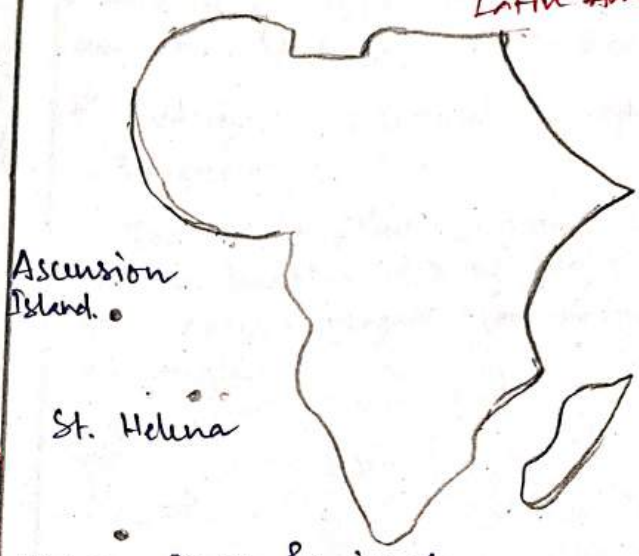
Africa

Island of Africa.



Madeira → Portugal.
Canary → Spain. (Canary currency)
Cape verde]
Mauritius] Nation-state.
Seychelles]
Reunion → France.
Comoros → France.

Island between Africa & Latin America



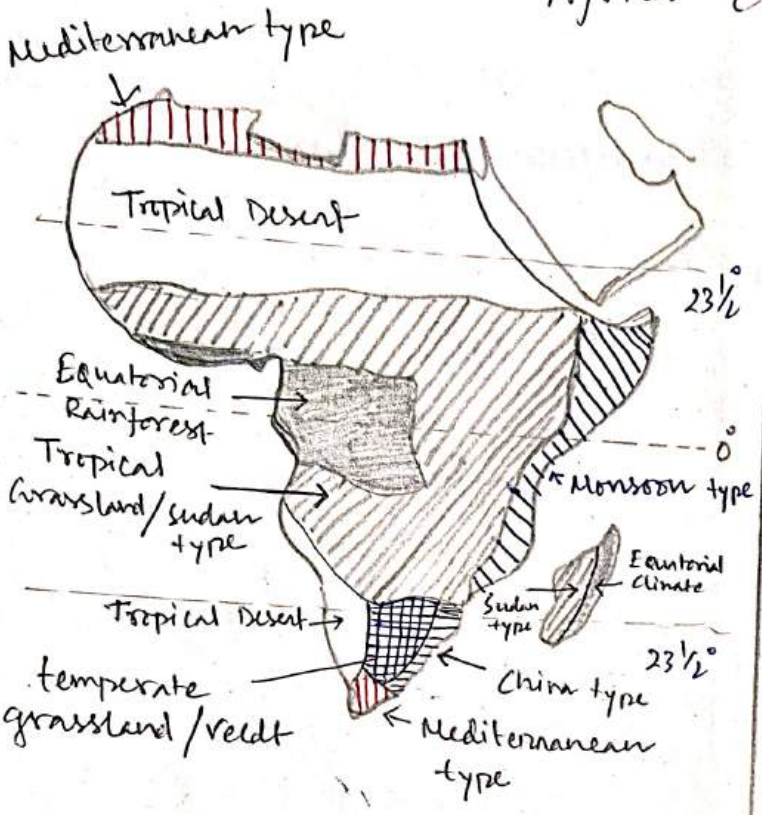
All off them are British overseas territory.

Ascension island → UK military base.

St. Helena island → exile of Napoleon
(battle of waterloo)

Tristan De Cunha → most remote island of the world.

Africa- Climate.



- transition type between Equatorial and desert type of climate.
- Extreme diurnal range of temperature.

Clear sky which promotes intense heating during daytime also causes rapid radiation at night.

Equatorial type of climate :-

- Hot-wet summer throughout the year.
- Rains almost daily.
- Abundance of heat and moisture facilitates growth of thick forest, i.e. Equatorial rain forest.

Sudan type of climate/Savannah :-

- Warm summer and mild winter.
- Rain occurs in summer.
- Distinct dry period.
- Region covered with tall and coarse grass is known as Savannah.

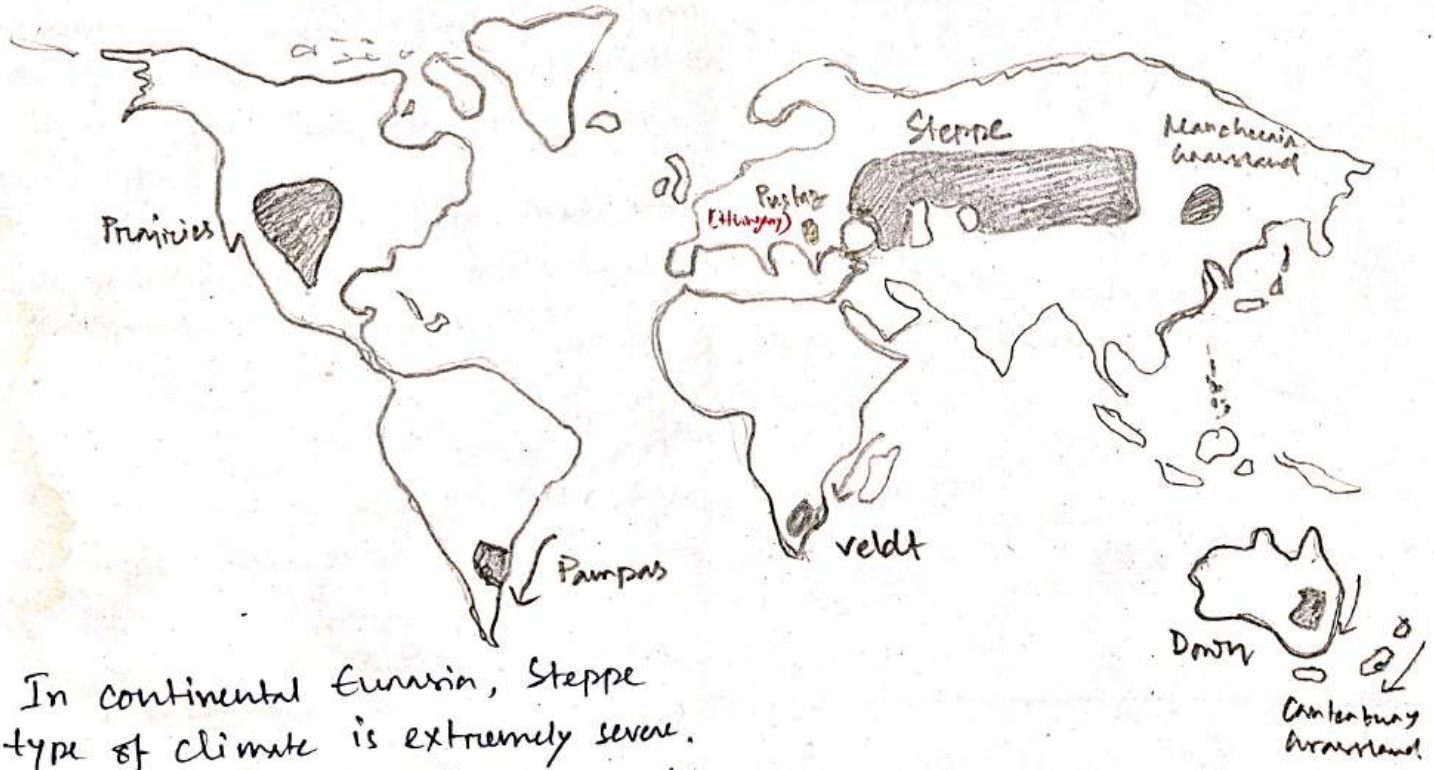
Desert type :

- Highest temperature of world is found here.
- Extensive desert, Sahara in the North, Kalahari in South.
- Hot and extremely dry
- Vegetation is either wholly absent or includes only scrub and bushes.

Mediterranean climate.

- Warm temperate western margin.
- Warm and dry summer mild and rainy winter.
- Annual precipitation is low became of continentality.
- Diff^n between tropical and temperate grassland is that, Temperate grassland is practically Treeless, Grasses are much shorter.
- Trees are very scarce became of scanty rainfall, long draught and severe winters.
- Chinook (local wind) in Prairies.

Temperate continental (Steppe) Climate : Temperate Grassland.



- In continental Eurasia, Steppe type of climate is extremely severe. Summers very hot, winter very cold.
- Due to maritime influence Steppe climate is not severe in Southern Hemisph.

Africa- climate.

Warm temperate Eastern margin (China type) climate

- Also known as temperate monsoon or China type.
- Experience more rainfall than mediterranean region coming mainly during summer.

Sometimes broadly divided into 3 groups.

China type | Gulf type | Natal type

Gulf type:- South-east USA, bordering Gulf of mexico.

Continental heating of interior in summer induces inflow of air from atlantic ocean. The climate resembles China type but less pronounced.

Natal type:-

Influenced by on-shore trade wind all the year round, monsoonal variation is not ~~also~~ seen.

Warm temperate eastern margin

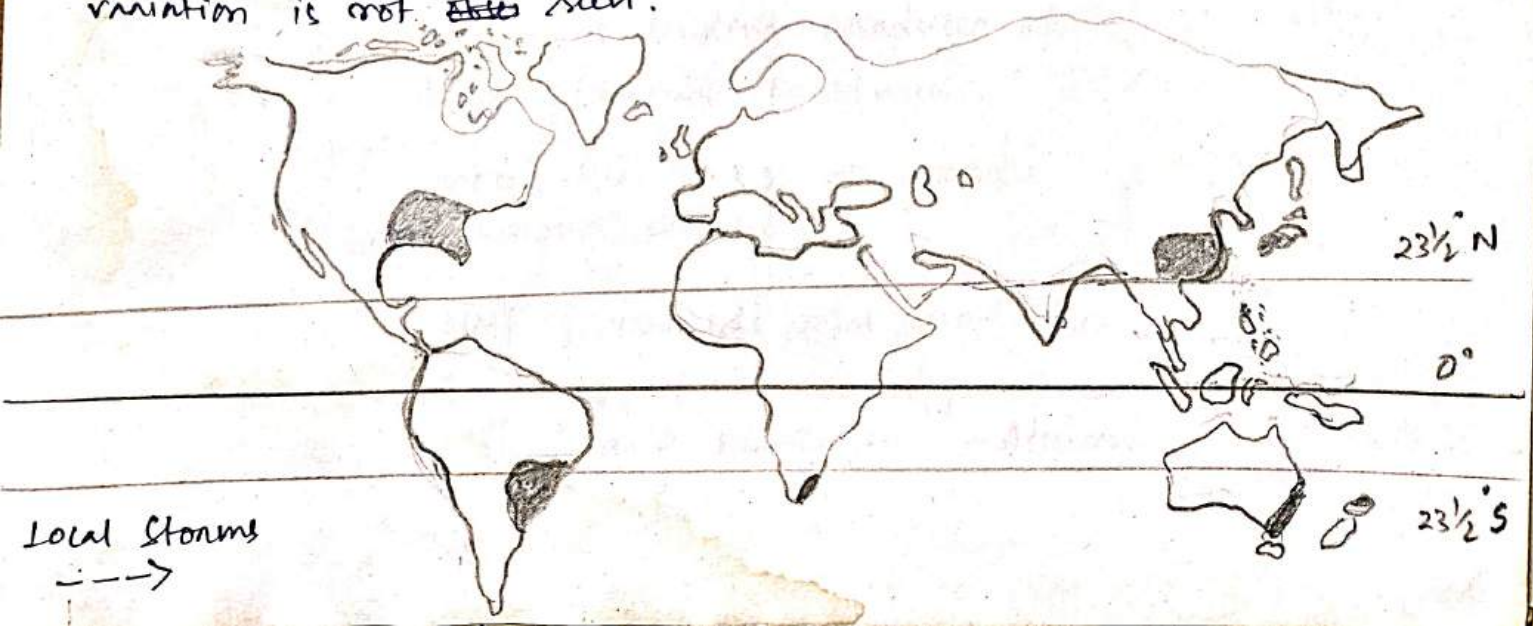
- Warm moist summer cool dry winter, modified by maritime inf
- Rainfall is moderate and support wide range of crops.

NATAL TYPE

- South-East trade wind brings even distribution of rainfall throughout the year.
- Small annual temperature range, without any really cold month.
- Luxuriant vegetation.

As perennial plant growth is not checked by a dry season or a cold season as in cool temperate region.

- Appears green all the time.



Local Storms
--->

Africa – Natural Resources

Soil :

→ only 10% of soil is suitable for crops.

→ Includes volcanic soil of East Africa, alluvial soil of Nile valley and certain soil in savanna.

→ very large part of central Africa is under forest cover.

Water :–

→ Large part of Africa is dry.

→ Waterfalls are often seen in the course of river because they flow from higher plateau to coastal area.

→ So they are non-navigable.

→ useful for hydro-electricity production.

→ Karimba dam on Zambezi.
Aswan dam on Nile.

Mineral :–

Africa is leading producer of Gold, Diamond, Platinum.

more than 95% of world's diamond production

Half of world's gold production.

South Africa is major producer of Gold and Platinum in Africa.

Africa has large reserve of Cobalt, Manganese, Chromium, copper, tin, bauxite and uranium.

There is lack of coal and Iron ore. which hampered modern industrial growth.

South Africa is leading producer of Chromium.
(Cr. is used in Steel to produce rust-free steel)

Congo and South Africa are main producer of

Copper → electric wire

Bauxite → ore of Aluminium

Uranium.

Petroleum is found in Nigeria, ~~Libya~~, Angola.

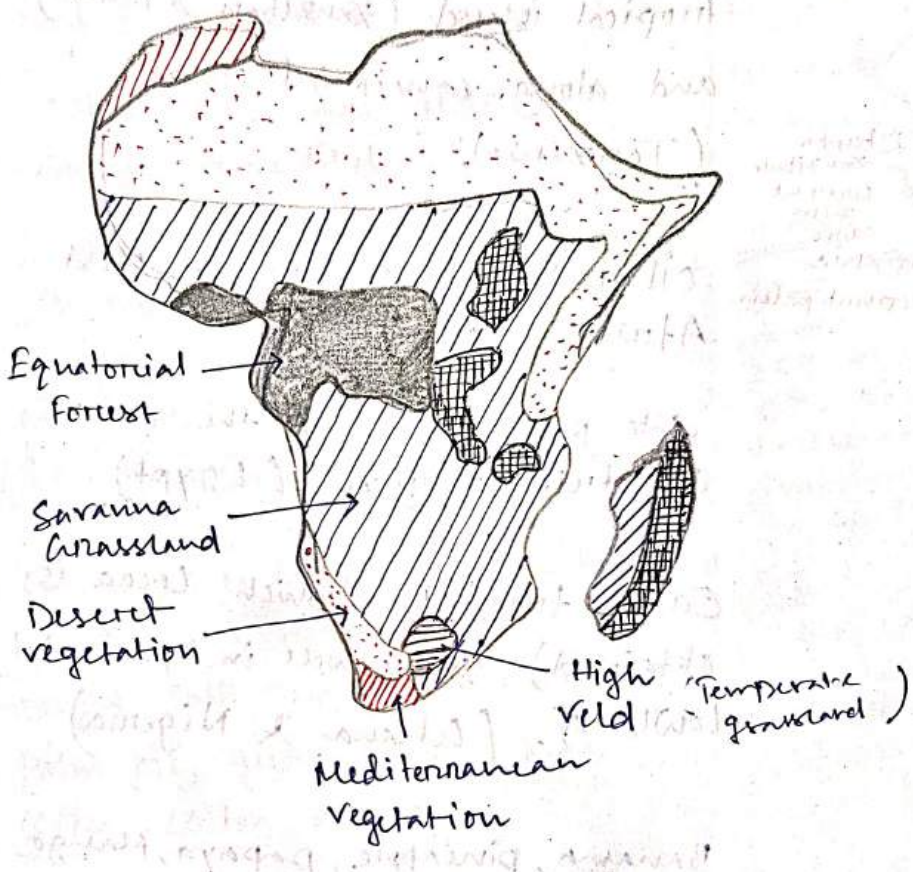
India exports petroleum from Nigeria, Angola, Sudan.

ONGC videsh : Libya, Nigeria, Mozambique Sudan, South Sudan.

IOC :

HPCL :

Natural Vegetation.



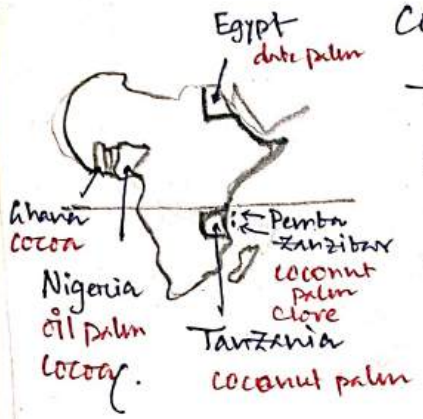
Forest and Crops.

Large part of central Africa is covered with thick forest.

They yield hardwood, used for timber. Ebony, Mahogany.

Rubber trees grow wild in these forest now planted and exported for commercial use.

Coconut ~~pta~~ palm, oil palm & date palm are found in Africa.



Coconut palms are found in tropical island (Zanzibar & pemba) and along equatorial coast (Tanzania).

oil palm is common in West Africa. (Nigeria)

date palm grows in the oases of drier region. (Egypt).

Cacao tree (from which Cocoa is obtained) grows well in equatorial lowland. (Ghana & Nigeria)

Banana, pineapple, papaya, Mango, Jackfruit is ~~common in~~ found in tropical region.

In Mediterranean region grow olives, peaches and grapes.

Most of food crops in Africa are root crops such as Yam.

Wheat, Rice are grown in small quantities.

Among cereals only Maize is produced to a mentionable extent.

Wheat is produced in Veld (i.e. temperate grassland) region.

Cotton is cultivated in Nile valley.

Amongst cash crops, important are Palm oil, ground nut, cocoa, coffee, cotton and sisal.

Tanzania is leading producer of sisal.

Sisal is a vegetable fibre that is used in making ropes and sacks.

70% Agro-export → cocoa

Issues

~~Short term~~ ~~driver~~

25% of cocoa & 6% of cotton is processed in ~~Africa~~ importing nation in stead of Africa.

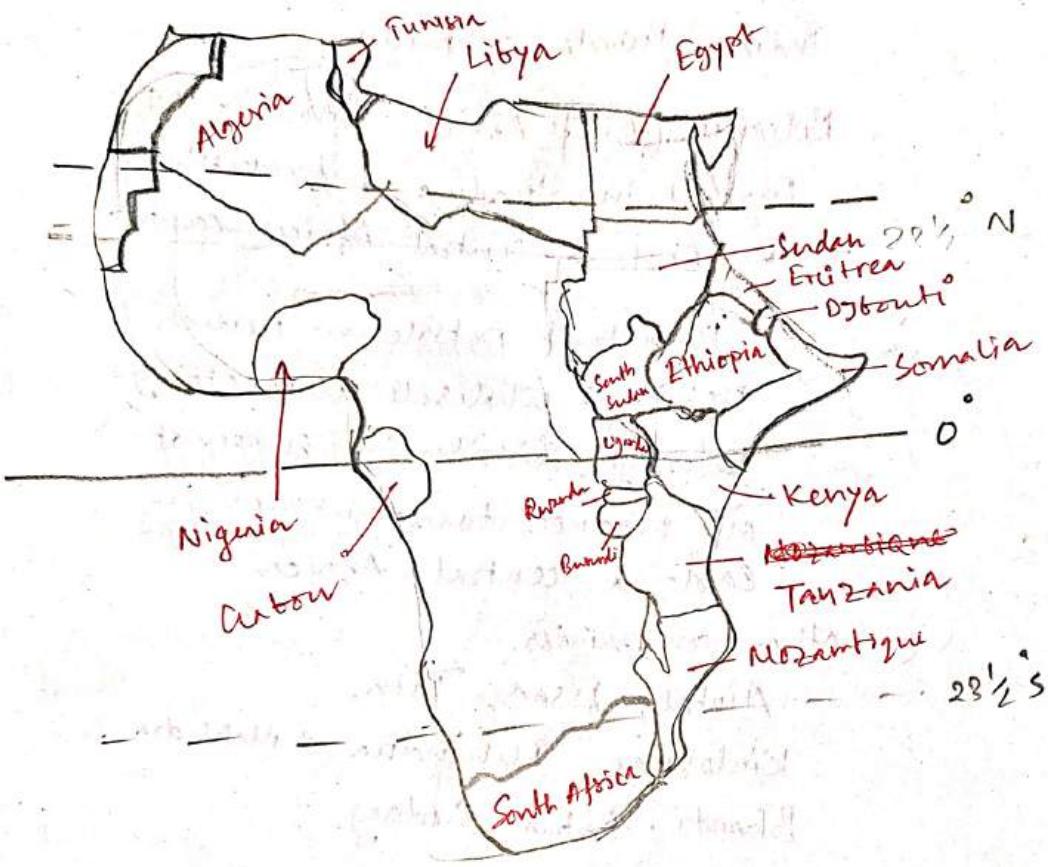
No value addition
↓ Industrial dev.
↓ unemployment

Issues with Agriculture

1) subsistence farming, small farm.

2) Low productivity (except Nile basin & mediterranean region)

3) 6% of farmland is irrigated. (mostly in Egypt, Sudan, South Africa, Madagascar and Morocco)



ONGC Videsh Libya
Nigeria
Mozambique
Sudan
South Sudan.

Indian oil Corporation Libya
Gabon, SA, Nigeria

HPCL Egypt

BPCL Mozambique.

Engaged in exploration and mining of petroleum products.

Indian Private companies

Reliance (Gulf Africa Petroleum corp)

Engaged in trading & marketting ~~in East & central African countries.~~

→ Import of petroleum products retail & wholesale marketting storage, distribution, supply of oil products to countries in east & central Africa.

Other companies.

Airtel, Essar, Tata, Kirloskar, Mahindra & Mahindra. Bharti, Datar, Godrej.

Coal

Coal India Limited has done aquisition of mining blocks in South Africa & Mozambique

Indian Diaspora.

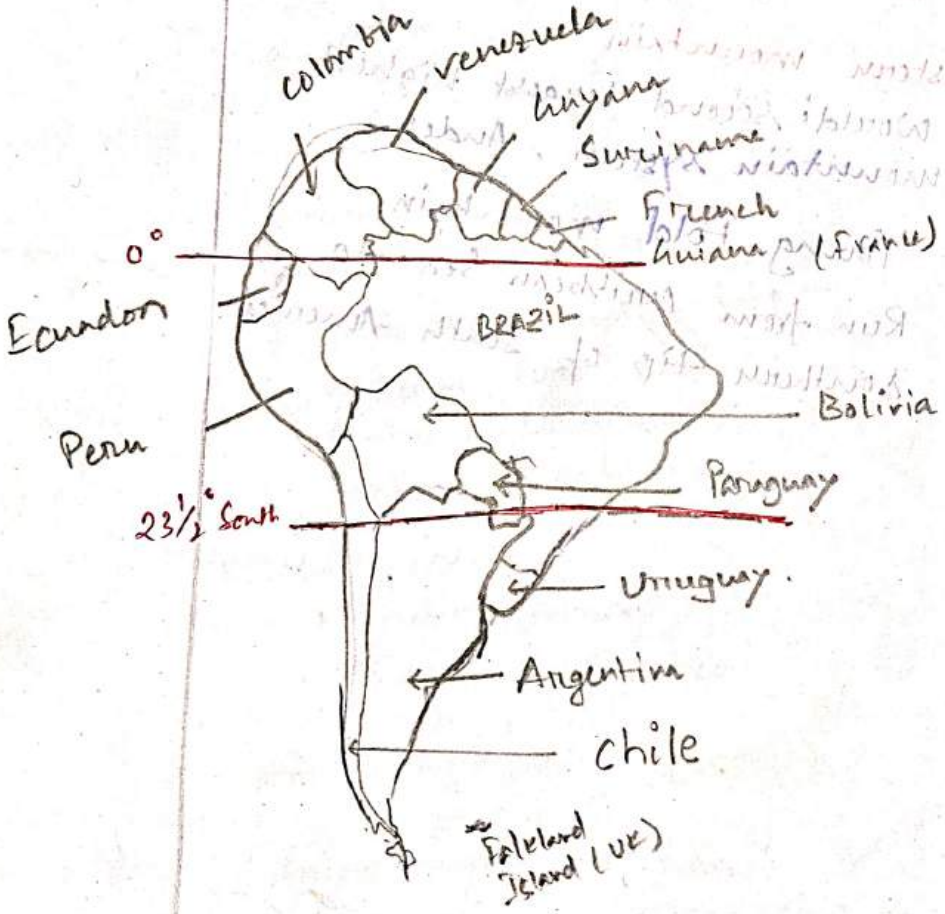
Mostly concentrated in East Africa (Kenya, Uganda), South Africa and African Island (Mauritius, Seychelles and Reunion).

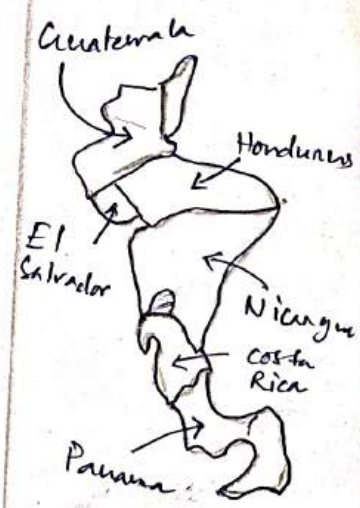
Guyratis dominates economy of East African nations.

South America

Continents in order to Largest to smallest size.

1) Asia
2) Africa
3) North America
4) South America
5) Antarctica
6) Europe
7) Australia.





South America, central America. Mexico, carribean island are together called Latin America.

'Latin' was language of Ancient Romans and predecessor to European language such as Spanish, Portuguese, French & Italian.

Central America

Guatemala,
Honduras
Costa Rica
Nicaragua
Panama

Physical Division

- Western coastal strip
- Western mountain
- Central plains
- Eastern Highlands

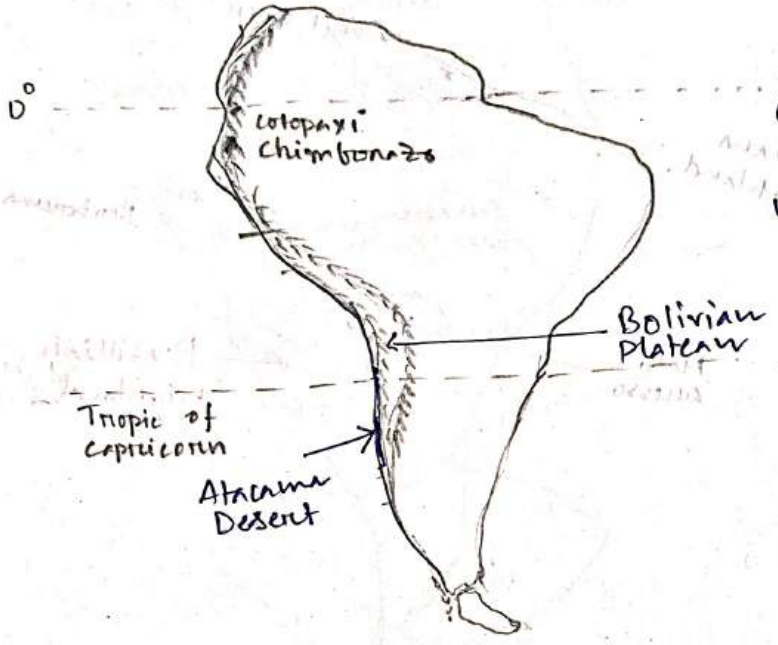
Western Coastal Strip

narrow strip of lowland along Pacific coast.
Stretches in N-S direction
Shows great variation in width.

Western mountain

World's second ~~largest~~ highest mountain system, Andes.
Young Fold mountain
Run from Caribbean Sea to southern tip of South America.

Northern Cordillera:



Cordillera!
Spanish term meaning extensive Chain of mountains

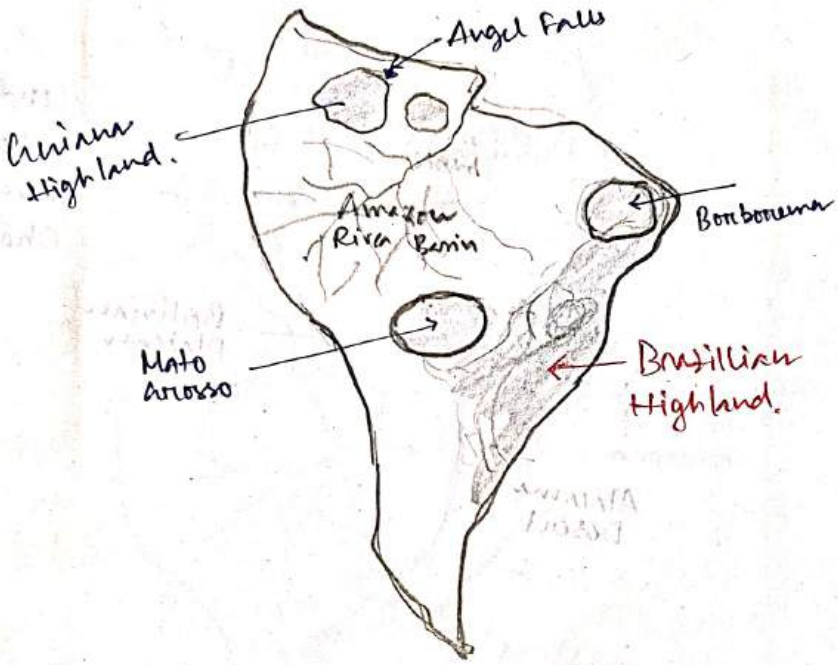
~~Cordillera~~
Top portion of Andes.
It is further divided into –
Western Cordillera.
Central Cordillera.
Eastern cordillera.

Volcanic peaks
Mount Cotopaxy
Mount Chimborazo.

Central Portion

Inter-montane plateau:
Bolivian plateau.
Atacama → world's driest desert.

~~No~~ Eastern Highland.



Guyana Highland.

Brazillian Highland

Extensions → Plateau of Mato Grosso
→ Plateau of Borborema

Angel Fall is the Highest waterfall in the world. (Venezuela).

Amazon basin is the lowland in between Guiana Highland and Brazillian Highland.

Importance

Guiana → tropical rainforest, Gold, diamond, iron ore reserve. Craton (old erosional)

Brazillian → Lava plateau, iron and gold reserve.

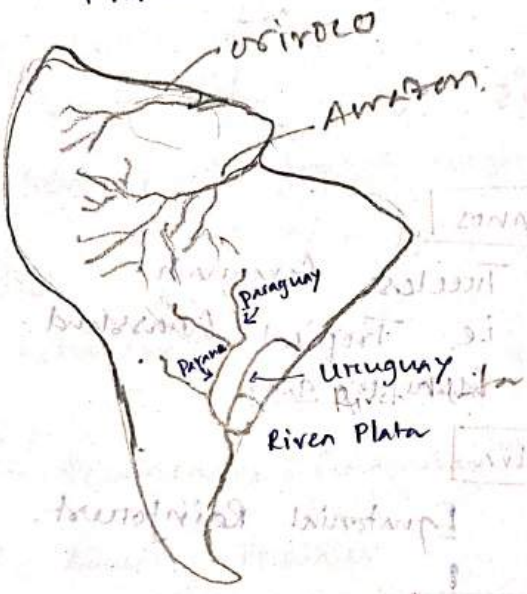
Mato Grosso → Ancient erosional plateau. Savannah, gold & iron reserve.

Central plain

Lie between Andes & Eastern Highland.

consists of basins of

Orinoco.
Amazon.
Plata.



Orinico : Petroleum reserve

Amazon : Largest river (by vol^m)
Petroleum at mouth
Lungs of world.

Facing deforestation due to cattle ranching and soyabean cultivation.

Uruguay :- Where Uruguay river joins Parana river - is called Rio de la Plata estuary.

irrigation and Hydro-electric power

Alto parana : From source to its Junction with Paraguay - known as Alto Parana.
numerous waterfall.
useful for Hydro-electricity production, irrigation. Wheat cultivation in pampas

GRASSLAND & Vegetation of North

Llanos.

Treeless Savannah
i.e. Tropical Grassland
Swampy grass

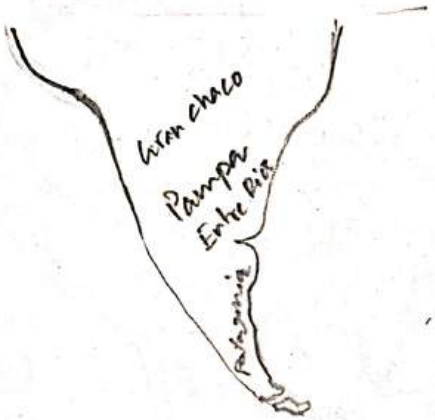
Selva

Equatorial Rainforest.

Catinga Deciduous, throny scrubland.
Water scarcity

Campos Tropical Grassland

Sertao Dry scrubland, scrubland
sparsely populated.



Gran chaco

Hot, semi arid forest region

Entre Rios

"between 2 rivers"

Pampas

temperate Grassland

ex:- America: Prairies
Asia: Steppe
South Africa: veld
Australia: Downs

Patagonia

Rain shadow region of Andes.

cold Desert

Mediterranean type :-

Rainy winter, Warm & Dry summer.
Vegetation consists forest with trees having thick and shining leaves (to resist summer drought)

Oak, Walnut, chestnut, Fig.

British type : Southern Chile.

Rainfall occurs all year round.
Climate is cool.

Region is has temperate, mixed forest where beech & Pine are valuable trees.

Resource and utilization

~~What~~

What and Maize are important food crops.

What is a crop of cool temperate region.
→ Argentina, chile.

Maize is native to South America. Maize requires warm climate with fair amount of rainfall.

→ Brazil, Argentina.

Coffee
Columbia, Brazil, Ecuador.

Cotton Brazil.

coffee, Sugarcane, cocoa and Banana are important cash crop.

They are grown in large plantation

Fisheries

South America accounts for about $1/5^{th}$ of world's total catch of fish.

Peru.

Animal Rearing :-

South America has extensive grassland.

Semi-humid area of Argentina, Uruguay and Brazil are most important cattle rearing areas.

In these areas original grasses was replaced by nutritions leguminous plant — Alfalfa.

South America is among world's leader in cattle and meat production.

Argentina's main industry is meat-packing and processing.

Nitrate is found in Atacama.
Chile is the largest producer.
It is an important source of manures and fertilizers.

Guano island, off the coast of Peru has world's most concentrated single source of natural manure.

Droppings of Guano, a seabird.

Apart from these, South America has sizeable reserve of
Bauxite,
Manganese,
Silver,
Antimony.

Most of these resources are exported due to lack of industries to use them.

Forest :-

South America : BRAZIL

Firing crackers to celebrate happiness despite in spite of pollution crisis of Delhi air.

Env

Only option out for public policy for environmental damage is to put emphasis on individual and social cost of inaction psychological cost of inaction to be explained through public awareness, popular outreach and Education.

Mineral Wealth :-

South America is very rich in minerals.

Huge deposit of mineral oil is found in Venezuela and island of Trinidad and Tobago. Brazil.

India imports from both Brazil & Venezuela.

~~Brazil has o~~
Iron-ore reserves of South America is also important.

~~Brazil → Iron ore~~

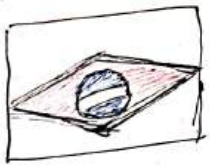
Important minerals are
Iron ore
~~Chi~~ Copper
Tin

Iron ore → Brazil.

Copper → Chile
(Chile is the major producer of copper in the world.)

Tin — Bolivia

South America : BRAZIL



Brazil got its present name from redwood tree, Brasil.

Greater part of the country is a vast plateau, known as Brazilian Highland.

Northern part of Brazil is an extensive, flat lowland built up by the Amazon.

in extreme North is some part of Guyana Highland.

Being in tropical region, season in Brazil is hot & wet throughout the year. small part in South extends into warm temperate zone.

Resources

Forest: Brazillian forest are among richest in the world. It provides timber, gum, resin, waxes, essential oils, cellulose, nuts.

Bark of cinchona tree is used for making quinine.

Rubber was first found in Amazon forest, Today its production is almost negligible.

2

Crops: Brazil is mainly an agricultural country.

Fertile soils and warm climate favours growth of different kinds of crops.

Maize, rice, beans, cassava and potatoes are food crops.

Coffee, cotton, sugarcane, cocoa and tobacco are cash crops.

Coffee is the most important. coffee is grown mostly on slopes of high plateaus in tropical regⁿ.

Brazil is one of the leading cotton producing countries.

Minerals and Industries

Brazilian highlands are rich in minerals.

Brazil is rich in high-quality Iron ore and Mica.

Brazil also produces Manganese and quartz crystal.

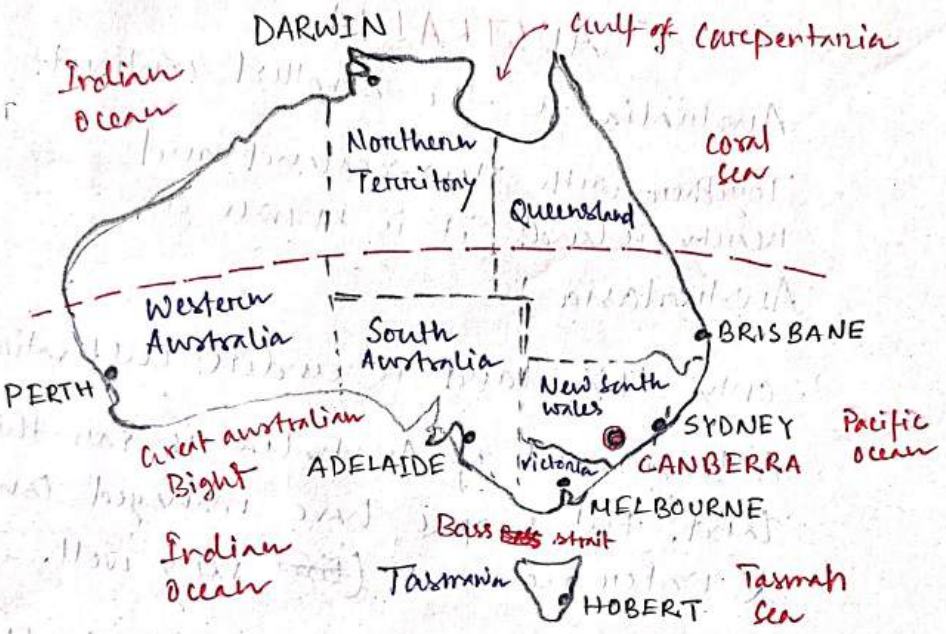
Brazil exports Iron ore & Manganese.

Brazil lacks good quality of coal which hampers development of Iron & steel industry.

Brazil is rich in water resources which helps in generating electricity

Textile industry is another important industry.

cities of Sao Paulo, Rio-de-Janerio Belo Horizente and Santos are important industrial centres.



Australia is divided into 6 self-governing states

Western Australia
Queensland
South Australia
New South Wales
Victoria
Tasmania

and 2 centrally administered territory.

Australian Capital Territory (ACT)
Northern Territory

Sydney is the largest urban area.

AUSTRALIA

Australia is the smallest continent. Together with New Zealand and nearby islands it is known as Australasia.

Only 4% land is under cultivation. A large part of Australia is rain-thirsty land, but people have managed land & water resources ~~[illegible]~~ very well.

Australia is mainly an Agricultural and Pastoral country.

~~B~~. Australia is known for its pastoral industries, which are pursued on modern & scientific lines.

Pastoral farming: Breeding & rearing of animal for milk, meat, wool & skin.

Most of the population is concentrated in Eastern & South-eastern region.

Australia was discovered by Captain James cook in 1770.

Today, Australia is 13th ~~major~~ largest economy.

9th highest per capital income

2nd HDI.

~~Demon~~
~~ERBM Act~~

Cont's AUSTRALIA

Physical feature:-

Broadly divided in 3 Physical division

Western plateau
Central lowland
Eastern Highland

Western Plateau

- vast plateau occupies nearly 2/3rd of the continent.
- Most of the plateau is Desert or semi-desert.
- Mostly it is flat and covered with small shrubs.
- In places isolated mountain ranges rise above general level.
- Plateau is made up of old rock similar to Deccan plateau.
- It is rich in minerals such as Gold and Iron ore.

Central lowland

- Extends from Gulf of Carpentia ~~to~~ in the North, across the continent to the Southern shore of Australia.

It consist of a few drainage basins. The Murray and the Darling are major rivers flowing through it. Flow through southern part of central lowland.

Most of the rivers fall into inland lakes.

Lake Eyre.

Due to scanty rainfall much of central lowland is dry.

Water is obtained from Artesian well. These wells are dug deep into ground and water flows out continuously and automatically.

Eastern Highland

Found parallel to east coast.

Extend from Cape York peninsula in the North to Tasmania.

They form long belt of elevated plateau known as Great Dividing Range.

Highlands drop steeply in east and gently in west towards central lowland.

Great Barrier Reef

Off the north-east coast of Australia extends very long ridge like feature known as Great barrier reef.

Length ~ 1900 km.

distance from coast varies from 30 to 240 km.

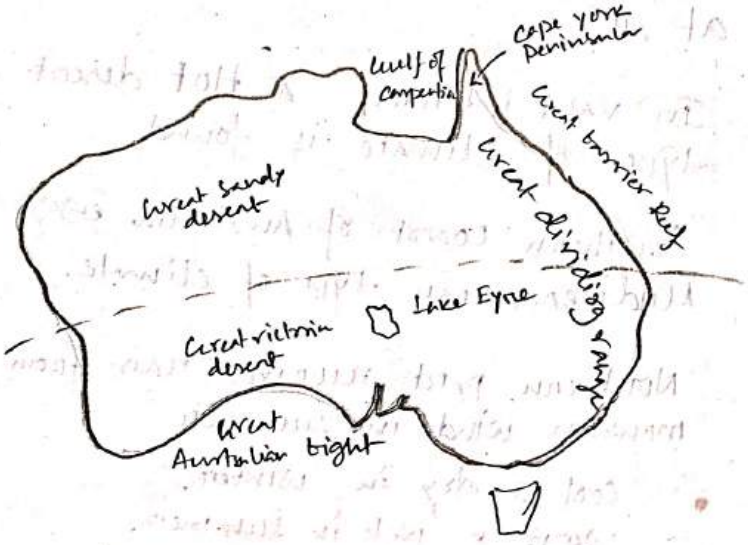
Formation :-

It is result of deposition of skeleton of corals.

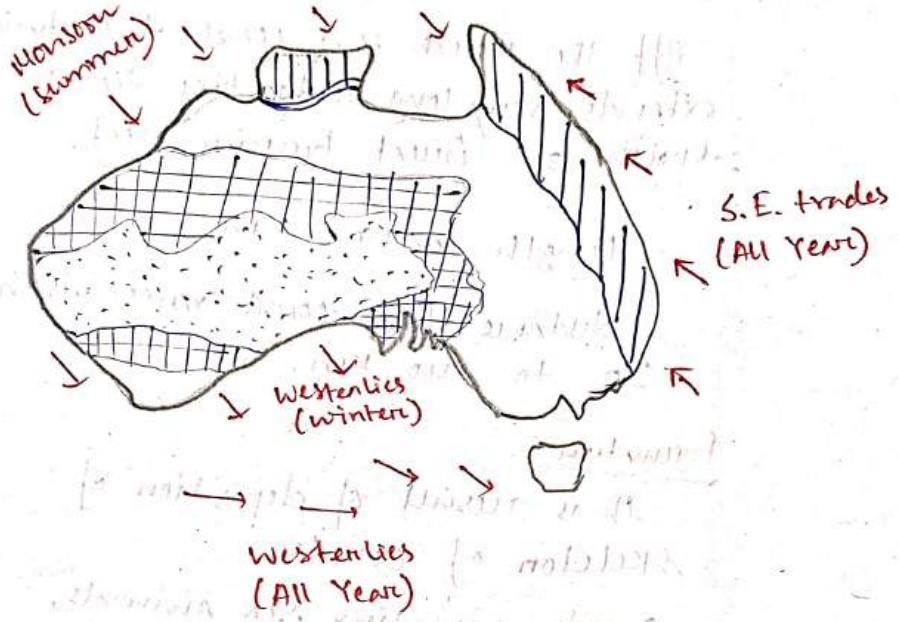
Corals are tiny sea animals, live close to rocky ~~mountain~~ sea floor in warm, clear, shallow waters in tropical region.

When corals die their hard skeletons remain fixed in place and new corals grow upon them.

This large accumulation of corals are known as Coral Reef.



CLIMATE



Rainfall > 100 cm

Most of Australia is dry.
Eastern, North-eastern & South-eastern part receive heavy rainfall.

Eastern Highland act as great barrier to these rain-bearing winds.

Very large part of central and western Australia have scanty or no rain at all.

In vast interior a Hot desert type of climate is found.

Southern coast of Australia enjoys Mediterranean type of climate.

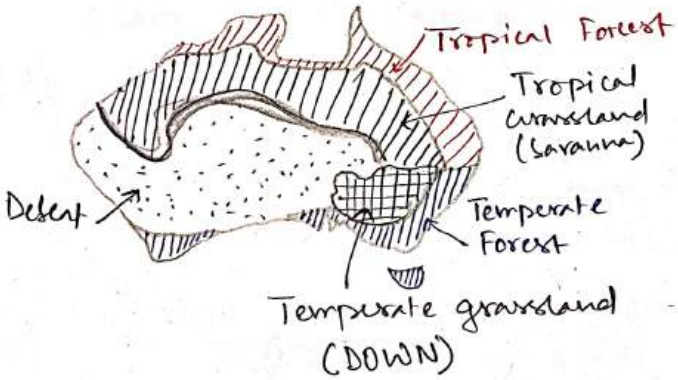
Northern part receives rain from monsoon wind in summer
Cool & dry in winter.
Warm & wet in summer.

VEGETATION

As Australia remained isolated for very long time some of vegetation & animals of Australia are quite different from those found in other parts of world.

Eucalyptus is most common tree.

Forest are found near the coast where rainfall is heavy.
Grassland & scrublands are found in drier interior part.



Tropical Forest Palm, bamboo, birch, cedar.

Temperate Forest Eucalyptus.
(tasmania, south-east, south-west Aus.)
~~temperat~~

Grassland ~~bor~~known for pastoral farming

Desert & semi arid part.

cactus, thorny grass in arid part.

Salt bush and mulga plant in semi-arid region.

Wildlife :-

Many of Australian animals are MARSUPIALS, these animals have pouch like fold of skin near the stomach in which they carry babies.

eg Kangaroo, Koala, Wallby.

Platypus is found in Australia animal-bird survives under water walks on ground, 4 legged animal lays egg like a bird.

~~Emu~~.
Emu, Kookaburra, Grebird are some examples of birds found in Aus.

CROPS

Agriculture is carried on South-Western & South-eastern parts and in eastern coast where rainfall is adequate.

Most modern & scientific method of farming are used here.

~~Moreover bec~~
Farms are big & population is small this favours use of machinery.

Wheat

Wheat is the most important food crop.

~~Next So~~

Wheat is also exported.

Barley, oats and maize are other food crops.

Pineapple, banana, papaya are grown in Tropical north.

Apples, orange, grapes are grown in Temperate south.

Sheep rearing → for wool

Cattle rearing →

Minerals & Industries

Largest producer of Bauxite.

Australia is one of the most industrialized country in the world.

They produce
- Iron and Steel
- Agricultural machinery
- Motor vehicle
- Electrical goods, chemical
- paper, machine tools.

~~Australia makes~~

Animal industry!
- cotton & woolen textile
- sugar, condensed & powder milk.
- tinned fruit & meat.

Most of manufacturing industries are located in Victoria and New South wales.

Only resources which has some potential for development is krill, very small fish.

Antarctica provides unique opportunity to learn about the Earth.

this continent is also called 'continent for Science'.

Antarctica : White continent.

About 99% of the continent remains covered permanently with ice average thickness being 2 to 5 km.

Much of Antarctica is rugged & mountainous.

Queen Maud Range divides the continent in almost equal parts.

CLIMATE

Lowest recorded temperature is $-95°C$ during winter.

Mid summer temp normally does not rise above $0°C$.

Summer: Nov to Feb
Sun never sets in this period.

Winter: May June July August
Sun never rises.

RESOURCE

Mosses, Lichens. ~~can support~~

Scanty vegetation can not support animal life.

~~Peng~~ Sea is bountiful

Penguin, sea bird, Seals are abundant
Whales are found in ~~Sound~~ & surrounding sea.

International law restricts killing of these animals.

NORTH AMERICA

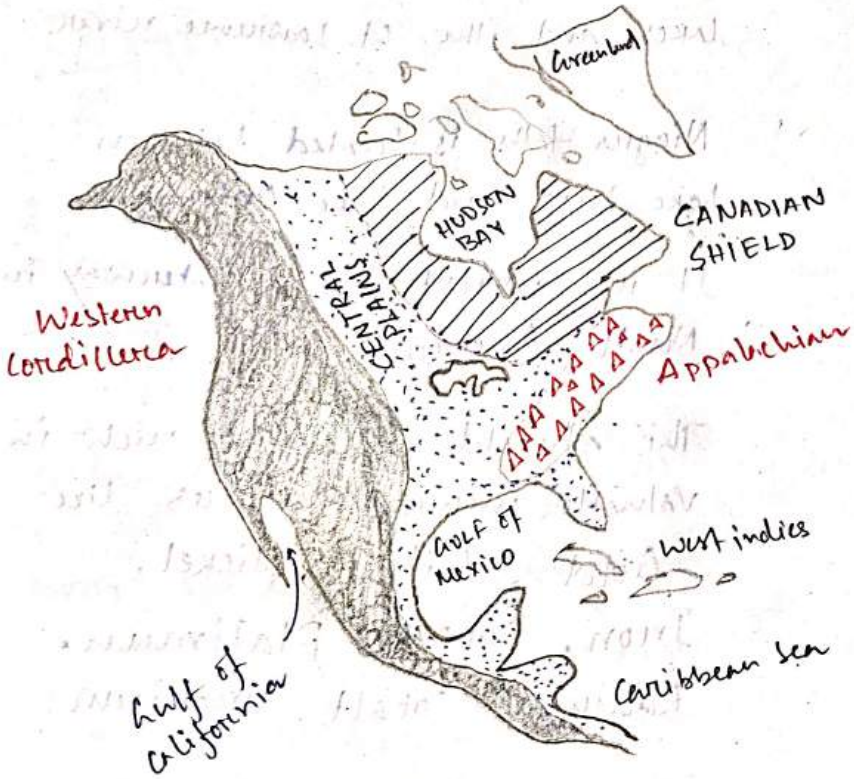
Third largest continent following Asia & Africa.

To the north the continent breaks into many islands.

Largest island in north-east, Greenland is under control of Denmark.

Physical Division

1. Canadian shield
2. The Appalachian Mountain or Eastern Highland.
3. The Central plain
4. The Western Cordilleras.



CANADIAN SHIELD:-

covers half of CANADA in North.

Former of Ancient Hard Rocks.

due to continuous erosion & wathering its avg. height has been reduced.

A large part of it is covered with swamps and number of lakes like Great Bear, Winnipeg. and the Great lakes (Lake superior, Lake Michigan, Lake Huron, Lake Erie and Lake Ontario)

Northern part remains covered in ice.

Southern part is lowland of Great lakes and the St. Lawrence river.

Niagra falls is located between Lake Erie and Lake Ontario.

It is busiest inland waterway in North America.

The ~~sheild~~ Shield is rich in valuable mineral resources like Gold, Silver, Nickel, Iron, Copper, Platinum, Radium, Cobalt, Uranium.

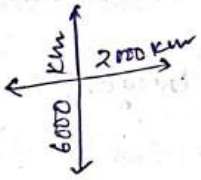
Appalachian Mountains
or
Eastern Highland

Over the years height of Appalachian has reduced by erosion due to glaciers & rivers

Hudson river flows through it

Coal, copper, lead is found here

Central lowland



It extends from delta of river Mackenzie in the North to edge of coastal plain of Texas in South.

Central and southern parts are a vast low and flat river basin of Missouri - Mississippi.

River basin has very fertile soil and rich in Agricultural resources.

Western Cordilleras

Its a mountainous region.

It stretches from North to South along entire length of the continent.

Highest peak is Mount McKinley. (In Alaska, height ~ 6187 m)

Western cordilleras consist of several parallel ranges.

Rocky Mountain

The coastal range

Sierra Nevada

These ranges enclose few intermontane plateaus.

The great Basin is the largest inter-montane plateau.

South of Great Basin is Colorado plateau. The Colorado river and its tributaries have deep cut valley in soft rocks.

Such very long & deep gorges with wall-like sides are known as CANYONs.

Famous is Grand canyon of Colorado.

Western cordilleras are covered with forest of fir, spruce & cedar.

Area is rich in Coal, Lead, Zinc, Gold, Copper.

Rivers

Important are

Colorado.
St. Lawrence.
Mississippi.
Mackenzie.

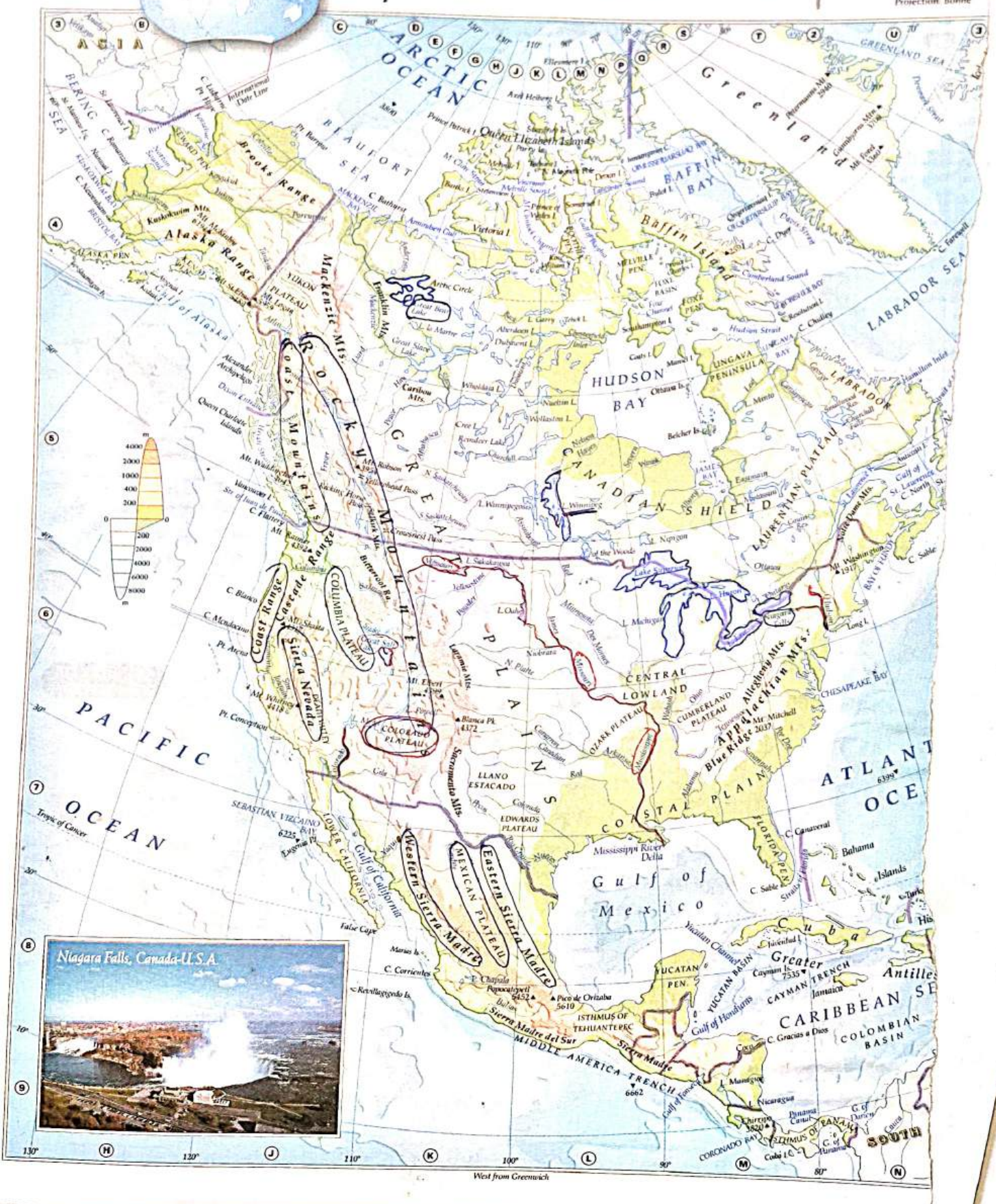
Swift flowing rivers from Appalachians have been used for hydro-electric power generation.

St. Lawrence and the great Lakes provide largest inland waterways. They link highly industrialized part of USA & CANADA.

Mackenzie flows northward to Arctic Ocean.

NORTH AMERICA — PHYSICAL

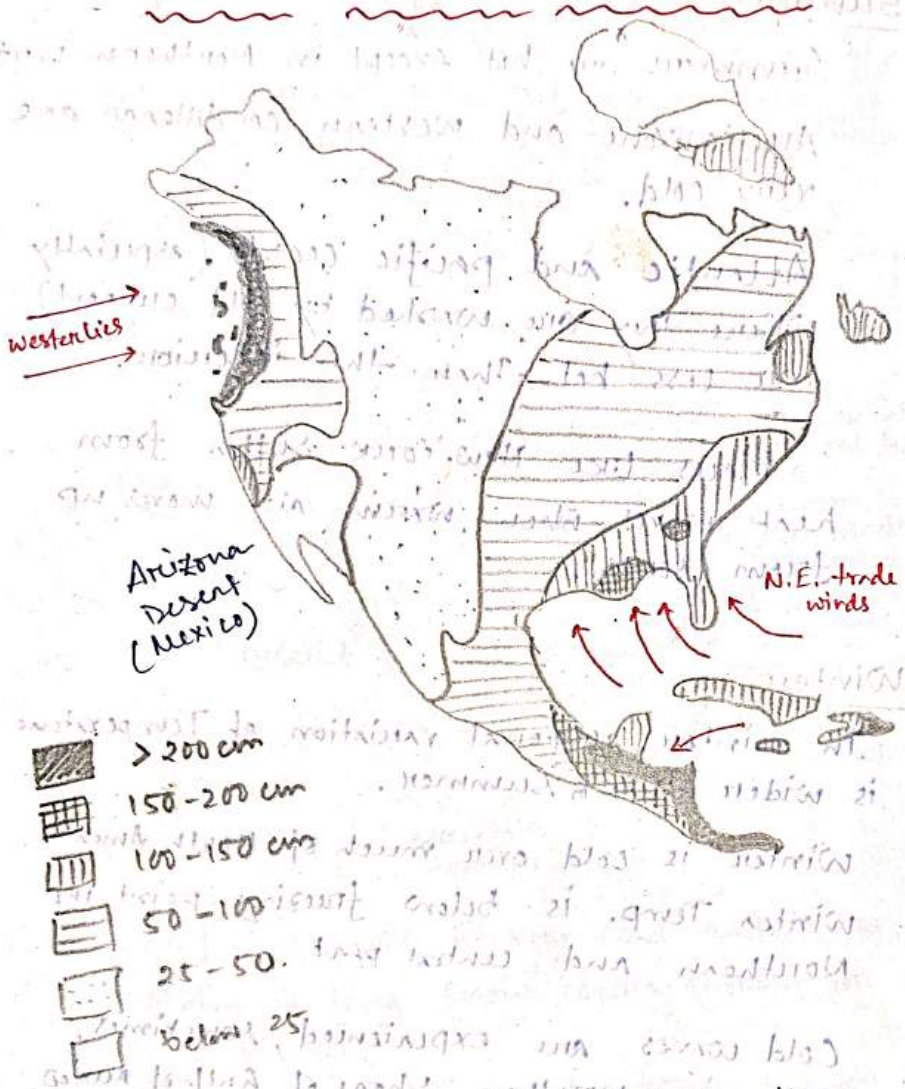
1: 35,000,000 (1cm to 350 km)
0 350 700 km
Scale
Projection: Bonne



Highest mountain

CLIMATE & NATURAL VEGETATION

Add ocean currents.



Westerlies bring heavy rainfall to the pacific coast throughout the year.

N.E. trade wind bring rainfall to the Highland of central America and the West Indies.

In between ~~the~~ western cordillera and Appalachian mountain lies central plains and ~~due to these relief~~ is open to the influence of cold wind from the North and warm wind from the South.

Fish are processed ...

Summer

Summers are hot except in Northern parts.

Arctic zone and western cordilleras are very cold.

Atlantic and pacific coast (especially where they are washed by cold current) are less hot than the interior.

Places like New York suffer from heat waves when warm air moves up from south.

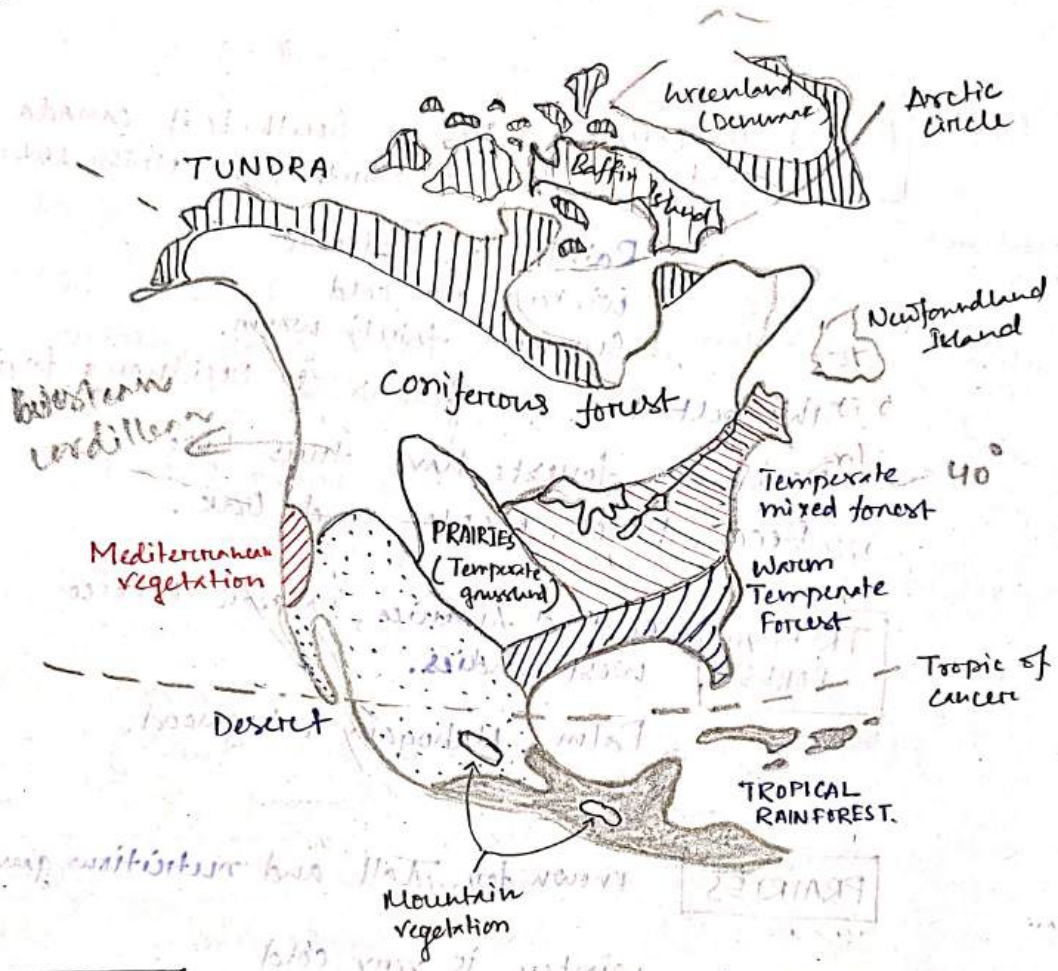
Winter

In winter, regional variation of Temperature is wider than in summer.

Winter is cold over much of North America. Winter Temp. is below freezing point in Northern and central part.

Cold waves are experienced, sometimes, even in northern shore of Gulf of Mexico.

VEGETATION



TUNDRA Climate is very cold and severe. Winter is long. Snow covers ground for 8-9 months.

Permafrost : permanently frozen sub-soil.

Mosses, Lichens, grasses grow here.

Animals: Polar Bear, Caribou Musk-ox, Raindeer

TAIGA wide belt of coniferous forest.

Balsam, Fire, white and Red Pine yields soft wood.

Winter is severe, Summer is short and warm.

Add examples

Tropical evergreen
→ Mahogiry,

Tropical deciduous
→

Temperate deciduous
→

Mixed Temperate Forest

Lies in South-East canada and North-East United States.

Rainfall is moderate
winters are cold.
Summers fairly warm.

This belt has coniferous & Deciduous forest.

Deciduous forests have trees like Beech, Birch, Maple and Oak.

TROPICAL FOREST

Central America, Eastern Mexico West Indies.

Palm, Mahogany, Logwood.

PRAIRIES

known for Tall and nutritious grass.

winter is very cold
Summer is hot.

Rainfall is light, occurs mostly in Summer.

DESERT

Extreme South-west of USA.
North-Western Mexico.

variety of cactus plant is found here.

MEDITERRANEAN

West coast of California.

Trees consist of olive, pine, orange and cork oak

Hot & Dry Summer
mild winter with moderate rainfall.

Resources and their utilization

North America is the most prosperous and highly industrialized region.

This is achieved due to vast natural wealth, application of high level technology and well-trained manpower.

Fertile plains have specialized in food production.
Grassland is utilized for dairy industry.
Coniferous and decidous forest supply soft wood for paper industry.

North America is rich in fisheries.
(Great Bank near the coast of Newfoundland Island)

Land Resources Maize, Wheat, Barley are important cereals.

Other important crops are Cotton, Tobacco, Soyabean and Linseed.

Half of world's **Maize** is grown here.

Maize grows well in region with ~~warm~~ hot climate and frequent rain.

In Mexico, Maize is the staple crop.
In USA maize is used to feed cattle.

Wheat is grown in Prairie region of CANADA & USA. ($1/5^{th}$ of world's wheat is grown in North America)

Cotton & **Tobbaco** is grown in southern part of Mississippi River basin.

~~Here, Sa~~

Here, Summers are warm with moderate rainfall.

Clear sky with abundant sunshine is ideal for ripening and picking of cotton balls.

Along Gulf coast Rice and Sugarcane are grown

Tropical lowland of central America is famous for growing Banana.

West Indies is known for Sugarcane.

United States of America

Due to favourable climate & location USA leads in Agricultural prod^n in North America.

Produces nearly ½ of world's Maize.

Most of maize is used to feed cattle, pig & Poultry.

It is second largest producer of Wheat.

Exports Wheat & Wheat flour in large quantities

Important feature of Agriculture here is growing one predominant crop in large area.

About $1/3^{rd}$ of world's cotton is grown here.

USA is also leading producer of Tobacco.

Canada

Wheat is chief crop.

Canada is also a leading exporter of Wheat.

Oat, Barley, Rye, Rapseed are other important crops.

Forest Wealth

Coniferous forests cover most of CANADA, northern USA and Western Cordillera.

They are great source of softwood.

Pulp and paper are imp. forest produce.

In Southern part of Temperate region, deciduous trees grow along with coniferous trees.

Wood of OAK and willow trees is used for making furniture. Sap of Maple tree is sweet and yields sugar.

Tropical rainforest yield good quality hardwood such as Mahogany.

It is used for furniture making.

Canada produces 1/3rd of world's newsprint

Lumbering is one of important occupation of people of Canada.

People work in forest. They fell trees, help in logging, spliting and hauling lumbers. These forest activities are collectively known as Lumbering.

Water power North America is very rich in water power resources.

St. Lawrence river, Appalachian region and valleys of the Tennesse, the Colorado and the columbia rivers are producing sites.

Ningra Fall is great source of Hydro-electricity.

Vast areas of shallow seas near the coast abound in fish are called Fishing Banks.

Fisheries Shallow sea around North-Eastern coast is abound in fish.

Great Bank near Newfoundland is famous.

on pacific coast, Tuna & Salmon are main catches.

Fish are processed and tinned for domestic use & export.

Minerals and Power resources

North America is a major producer of Petroleum, Natural gas, Nickel, Zinc, Asbestos, Gold, Silver, Copper and Iron Ore.

Canadian Shield contains deposits of Nickel, Iron ore, Gold, Platinum and Copper.

Lake Superior is ~~the~~ known for High-grade iron ore.

Appalachian Highlands contains large amount of Anthracite and high-grade bituminous coal.

Gulf coast & Atlantic coastal plain produce much of world's petroleum and Natural gas.

Western Cordilleras have vast deposit of copper. Mineral gas, Natural gas, coal and rock phosphate is also found here.

United States of America

One of the largest producer of Silver and Copper.

Major deposit of Iron ore : Lake Superior.

USA is also a leading producer of Petroleum. Major oil fields are located in the central plains and along the Gulf coast.

Natural gas, found with petroleum is also produced in large quantities.

Extensive pipeline have been laid down to carry oil and gas to many cities.

One of leading producer of Hydro-electricity.
Most of power plants are located in mountainous areas of the West.

Also has several Atomic energy plant.

CANADA

Canada is among the chief exporters of iron ore.

Mining is one of the primary industry of Canada. Minerals found here are Asbestos, Nickel, Potash, Uranium, Gold, Silver, Copper, Iron ore, platinum, cobalt, titanium, gypsum and Molybdenum.

About 70% of its total power is generated by water.
Development of water power has made CANADA a leading industrial country.
~~Highest~~

INDUSTRIES

USA Huge mineral deposit, varied agricultural crops and animal products provide raw materials, there is enough fuel or power to run big factories. It has ample capital and skilled labour. The are excellent means of transport and big market for its industrial goods both within the country and abroad. These factors have been responsible for USA's rapid industrial growth.

USA is largest producer of Industrial Goods, Chemicals and Basic metals.

Iron and Steel is most imp. industry.

Industrial goods include Automobile, heavy armament, Railway wagons, locomotives, machine tools and machines.

~~Oil refi~~

Oil refining and petro-chemicals are other major industries. ~~Also PAP~~

~~USA has~~

Papers and Food processing industries are other large scale industries.

Most of the industries are located in the North-Eastern part of United States.

Leading manufacturing centres are Boston, New York, Philadelphia Detroit, Chicago.

Los Angles is an important industrial centre on the western coast.

USA exports Armament, Aircraft, Machinery, transport equipment, electrical equipment grains and food item.

The chief imports are crude oil and industrial raw materials.

CANADA

About 1/3rd of total population in Canada depends directly on its manufacturing industries.

Important industries are

- Manufacturing of transport equipment.
- Pulp and paper.
- Machinery and chemical products.
- Petroleum refining.
- Meat processing.
- Smelting of ore.

EUROPE .....

Europe can be considered as a Peninsula of Eurasian continent.

Peninsula is a large stretch of land surrounded by sea or water bodies on all sides except one through which it is connected to a large landmass.

Area-wise Europe is 6th among 7 continents.

Europe is seperated from Asia by the Ural mountains, Caucasus mountains and the Caspian Sea.

Europe is made up of several islands and peninsula.

Its coastline is highly indented and provides good sites for natural harbours and ports.

Many of bays and seas surrounding Europe are shallow and offers best fishing grounds.

Europe is drained by many navigable rivers.

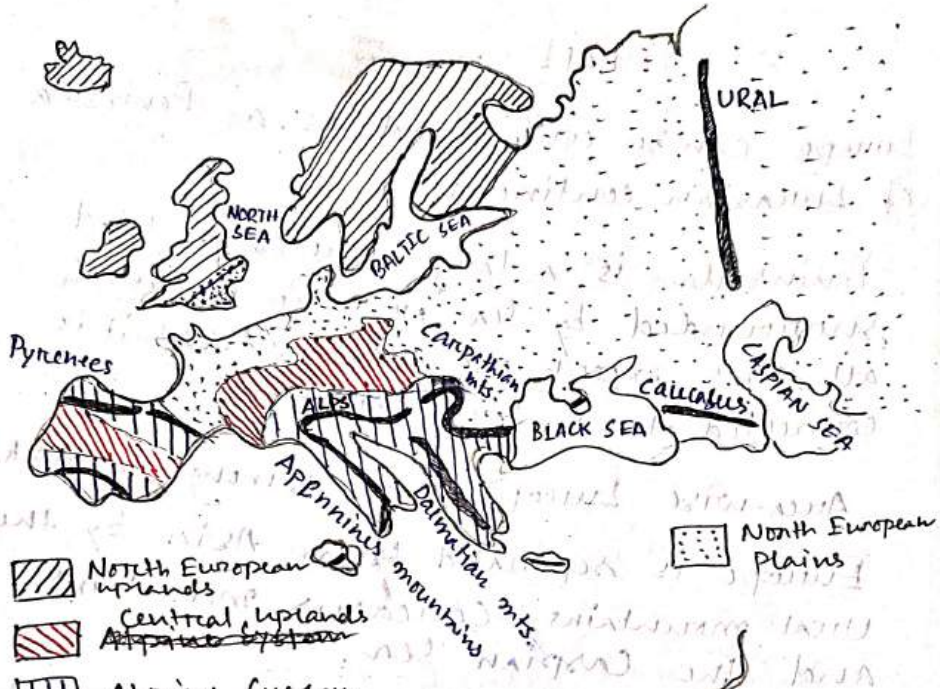
Iceland, Norway, Sweden and Denmark are collectively known as Scandinivian.

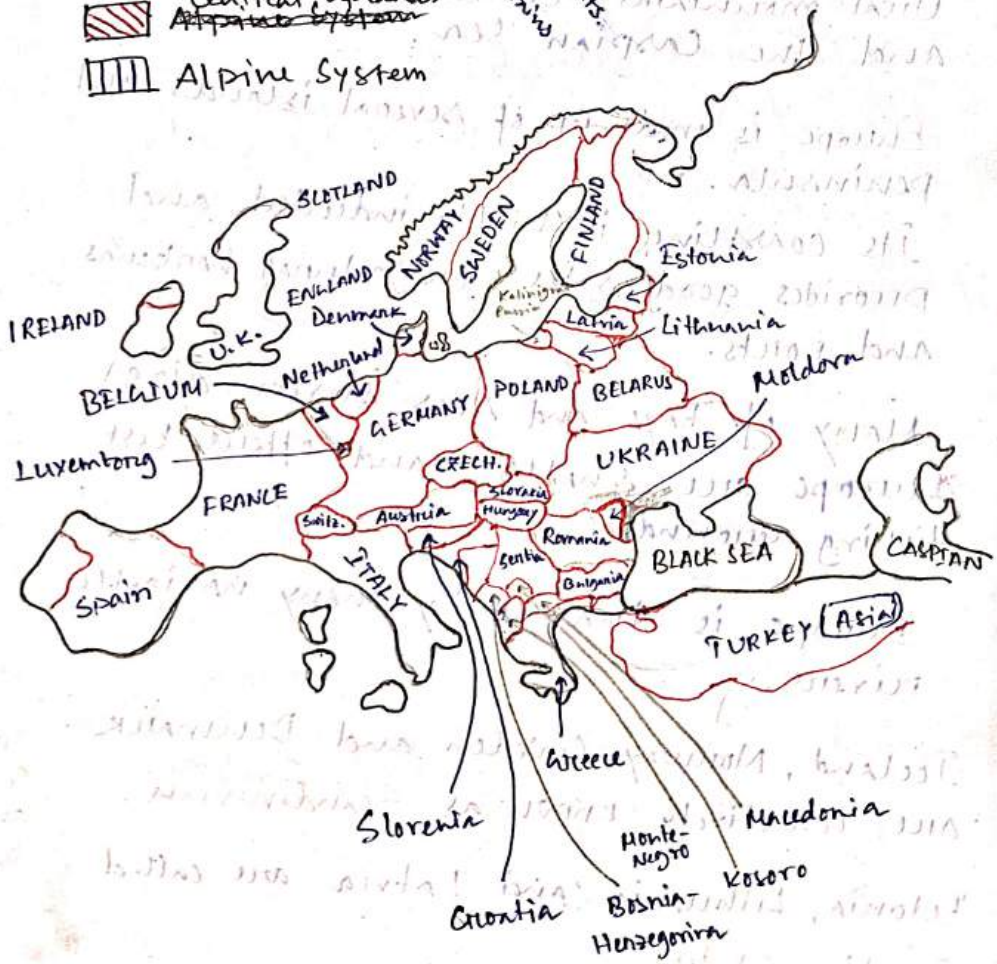
Estonia, Lithuania and Latvia are called Baltic States.

Belgium, Netherland and Luxemburg are called Low Countries.

Serbia, Montenegro, Slovenia, Croatia, Bosnia-Herzegovina, Macedonia, Bulgaria, Greece, Romania and Albania are called BALKAN States.

Irish Republic, Northern Ireland, Scotland, Wales and England forms British Isles.





Physical Features

Europe can be divided into 4 Physical division.

1. NORTH-WESTERN HIGHLANDS
2. NORTH EUROPEAN PLAINS
3. CENTRAL UPLANDS
4. ALPINE SYSTEM

North-Western Highland

Northern part of this highland is called Fenno-Scandian Shield.

These shield rocks are oldest exposed rocks
Glaciers have scrapped off Sedimentary rocks.

Fairly rich in minerals like Iron & Copper.

And almost without fossil fuels (coal, oil, gas) which are associated with sedimentary rocks.

Soils are coarse and less fertile.

Western edge of the shield is buckled into mountains.

Along Norwegian Coast, they reach into Atlantic ocean creating Fiords.

Fiords are deep valleys cut by glaciers and now filled with ocean water.

(FIORDS are deep inlets of sea standing between high cliffs.)

North-European plains

This plain is broadest in East and narrows down towards west.

Its landscape is low, flat and gently rolling.

It is an important farming area.

London basin and paris basin are example of hill being eroded into basin.

This plain is drained by large navigable rivers. such as

The Seine

The Rhine

The Danube

The Dniper

The Don

The Volga

In several places of the plain high-grade fossil fuels (coal, oil, natural gas) are found. These deposit extend into North sea where oil exploration and production is taking place on a large scale

The central upland

Variety of mountain, Hills and plateaus make up the central upland.

The Meseta in Spain and Portugal Massif central and Jura mountains in France and Black forest in Germany and several low ranges in Czech and Slovak republic are part of this region.

Two important rivers flowing in this region are Rhine and Rhone. Rhine flows northward while Rhone flows southward. A canal connects these river making it possible to cross the continent.

The Alpine System

It is a chain of High mountains stretching from Atlantic ocean in West to Caspian Sea in east.

It further extends into Asia.

It is a system of fold mountains and have series of ~~parra~~ parallel ranges.

Age-wise it is as old as Rocky mts in North America and Atlas mts. in Africa.

These mountains have high peaks, steep slope and deep valleys.

Important mountain ranges are The ALPS, the Pyrenees, the Carpathian and the Caucasus.

Highest mountain peak of Europe Mount Elbrus in the Caucasus.

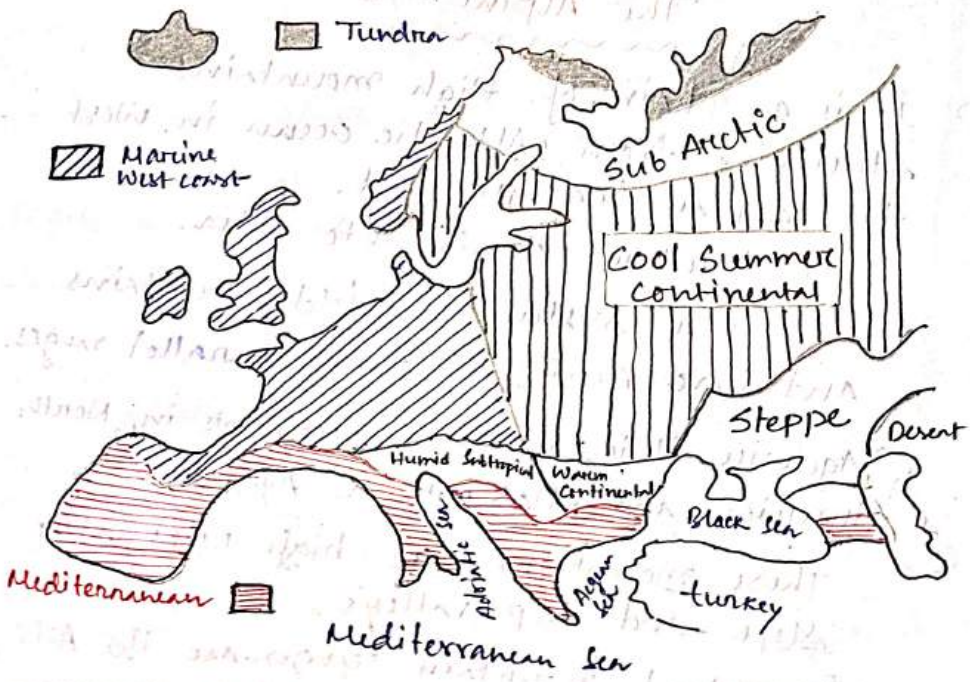
CLIMATE

Major part of Europe lies in Temperate region.

Europe lies in the zone of westerlies. ~~Most~~ wind blows from south-west.
Since there is no mountain lying in North-South direction these winds blow deeper into Europe and modify the temp.

Warm North Atlantic drift keeps sea along western coast ice-free.
Westerlies blowing over these currents carry warmth inland. They carry moisture and bring rainfall.

As westerlies are permanent winds, Rainfall is well distributed all through the year. Rainfall is heavy in west and decreases towards east.



West European type

Summer is warm and winter is cool due to moderating influence of westerlies and nearness to sea.

Temperature remains equable and rainfall is well distributed throughout the year.

Continental climate

In central and Eastern Europe summer is hot and winter is very cold.
Rainfall is also less.
This is because moderating influence of the ocean reduces eastward.

Wide variation in the annual range of Temp.

Mediterranean

Southern Europe comes under influence of offshore winds during summer.
So Rainfall is confined to winter alone.
Summers are long, hot and dry.
Winters are warm and wet.

Vegetation

Here, trees are required to withstand long summer drought. Hence Trees are small in size but have deep roots.
Leaves are small, thick and glossy.

Some trees have thick and pulpy bark.
Olive, fig, grapes and oranges are common.

Tundra

Area north of Arctic circle experience extremely cold climate.
Land is covered with snow most of the year.
Precipitation is scanty and in form of snow.
Summers are short with long and warm days. Sun is visible even at midnight for a brief period.

Vegetation consist of Lichens, moss and few stunted trees.

Taiga

South of Tundra lies the Taiga region.
It is a region of coniferous forest.
Trees are tall and straight with cone-like shape.
Pine, Spruce, Fir are common trees.
They provide valuable softwood.
Fur animals like sable, Mink and squirrel are found here.

South of Taiga belt lies the belt of mixed forest.

It has some coniferous trees and mostly broad-leaved deciduous trees.

Oak, Ash and Poplar are common.

Steppes

In South-East Europe an extensive grassland named Steppes are found.

Compared to Prairies these grasses are shorter.

Most of this grassland has been brought under cultivation.

Resources

Europe has large proportion of well-watered lowland which has been brought under cultivation.

Netherland has reclaimed land from sea by making big embankment along sea front. They are called Dykes. Water from enclosed land called Polder is pumped out into sea

Hills and less fertile land are used as Pasture. Scientific methods are followed in rearing of cattle.

Natural beauty has developed tourist industry.

Wheat is most important crop. Wheat is grown in area of fertile soil with cool & long summer with abundant sunshine.

Important wheat producing areas are Ukraine, Paris basin, Low countries, North European plain, plains of Hungary, Po valley in Italy.

Other foodcrops grown in less fertile are Barley, Rye and Oats.

Sugar-beet (used for making sugar), Potato are important root crops.

~~Farm activities are done using scientific methods and Machines~~.

Farm activities are Machinized.
Scientific methods are practised e.g Testing of soil to know its composition, using hybrid seeds, fertilizers and insecticides.

Large number of Agro-based industries have developed in the region. e.g.

- converting wheat into flour
- Bakeries
- Sugar mills
- Extraction and preservation of fruit juice.
- Fruit pulp and preparation of Jam and Jelly.
- Fruits and vegetables are dehydrated and frozen for export.

Animal

1/5th land of Europe is under pasture. Cool and moist climate has favoured luxuriant growth of grass, especially in central Europe.

Carefully bred cattle ensure high yield of milk, it is used for preparing a number of milk products such as butter, cheese, dried and condensed milk.

Denmark is noted for its dairy industry.

Pigs are reared for pork & bacon.

Poultry farming gives meat & eggs.

Sheep rearing is done in drier part for mutton and wool.

Large part of forest cover in Europe is confined to Scandinivan, Alpine system and taiga region. Timber and wood-pulp are important forest product Newsprint, paper, Rayon are produced from woods.

Coal is found in Great Britain and In the region from North-eastern France to Poland.
Also found in Spain, Russia, Ukraine.

Petroleum is found in region of sedimentary rocks. The important oil fields are in The North Sea, Romania, Georgia, Armenia, Azerbaijan and Russia.

Iron ore is found in France, Ukraine Azerbaijan, Sweden, United Kingdom, Germany, Russia, Spain.
Manganese, Copper, Bauxite, Sulphur and Potash are other minerals found here.

Major centre of Iron and Steel industry are United Kingdom, France, Germany, Ukraine and Russia.

Some of the small countries have developed their industries by producing diversified small articles which are of high quality and high value.
Austria, Switzerland, Czech, Slovak, Belgium Netherland. They are known for their electronic instruments, watches, metallurgical and glass articles and chemicals.

Dogger Bank and Great Fisher bank are important fishing ground.

Major fishing countries are Norway, Sweden, Iceland, Denmark, Britain, Netherland, France, Germany, Spain Portugal.

Norway practise deep-sea fishing using very advanced and well equipped vessels

River, canals provide system of Inland waterways. (Thames, Seine, Danube, volga, Rhine (busiest) are important waterways

Hydro-power producing countries are Spain, Italy, France, Switzerland, Norway Sweden.

United Kingdom

With its rich deposit of Coal, Iron ore, mineral oil and natural gas became one of the earliest industrial nations of the world

Aluminium is used for making Aeroplane, ~~wa~~ electric wire.

Its Iron & Steel industry is well developed.

It has exhausted its coal and iron ore reserve. So it imports iron ore ~~today~~.

Atomic energy for commercial purpose has been ~~used~~ produced first in UK.

Huge deposit of oil & natural gas is found in North Sea. UK is one of the leading oil producing countries.

Wide varieties of industries have developed here. e.g. Iron and Steel
Engineering goods
Electronic, chemicals
manufacturing of Railway wagon, automobiles, Aeroplanes and Ship, processed food and beverages, fish and dairy products.

It has fine network of roads & railways. It is linked in mainland through under-sea passage.

Industrial centre + Seaport :

Liverpool, Glasgow, Newcastle, Southampton.

Other important industrial cities are Birmingham, Sheffield, Manchester.

GERMANY

Germany is rich in coal (Lignite), Iron, lead, copper and potash.

The Ruhr is the biggest and richest coal production area.

Ruhr is a small tributary of Rhine. This region has many industries and often called heart of industrial Europe.

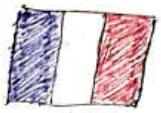
Iron-ore is found in some other areas.

Large number of industries such as coke furnace, chemical industries, Iron and steel industry, cement, machinery, automobiles and textile factories have developed in the region.

Textile industries are built upon availability of power & transport. ~~Mixed~~ cotton and ~~textile~~ silk industries are importance in western part.

Highly finished goods such as optical glass and cameras, specialized scientific instruments and chemicals are produced in Saxony region.

Most of central and southern part of Germany is used for ~~farm~~ agriculture where mixed farming is practised.



FRANCE

Iron and steel industry has developed in the Lorraine field and northern coalfield.

Textile industry of France is very important. France has silk industry (Rhone valley), cotton industry (Northern coalfield) and woollen industry (in North).

France has well developed cattle industry. it is one of leading producer of cheese, butter and milk in Europe.

1/4th of total area lies in form of meadows and pasture land on low hills & plateaus. Pasture land with good rainfall are well-suited for rearing animals.

Coastal plains and river valleys are most suited to Agriculture.
Wheat is grown mainly in northern part of Paris basin.

France is famous for its vineyards. Champagne is produced from grapes grown in the district of Champagne.

wide variety of fruits – olives, figs, peaches, plums, pears and oranges are grown in Mediterranean region.

RUSSIA

In december, 1991 15 independent states were formed which were earlier Republics of USSR.

Except 3 baltic states, other 12 states have formed commonwealth of Independent States.

Ural mountain, Ural river, Caspian Sea divides Russia into European & Asiatic parts.

Physical Division

Plains of European Russia

These are among most extensive plains in the world.

These fertile plains are drained by several rivers. Most important is the Volga.

West Siberian Plain

Situated between Ural and Yenisey river.

The lowland is sloping gently towards Arctic ocean. Rivers like Irtysh, Ob, Yenisey flow through this plain and fall into Arctic ocean.

Large part of these plains are marshy land.

Central Siberian plateau

Lies between River Yenisey and River Leni. The plateau rises to a height of 500 m. It is deeply eroded by rivers and much of it is covered with forest.

Mountain and upland

~~Ureals is old mountain but~~

There is a mountain rim all along Russia's southern and eastern border. While Ural is old mountain, the mountains of the South and the east are young fold mountains.

The mountains are high and rugged. This part, including Kamchatka peninsula is a region of earthquake and volcanic activities.

Climate

winters are cold and long.

Interior part has continental type of climate with high annual temp. range.

Except for European part of Russia, rest of the country is little affected by moderating influence of the ocean.

Average days of snow cover in a year vary from over 240 days in northern and eastern parts to over 80 days in westernmost part.

i.e. Intensity of winter decreases from East to West but no part is free from snow cover during winter.

~~It~~ Snowfall may be as long as for 9 months in Siberia.

The northern lowlands are exposed to cold polar winds coming from North.

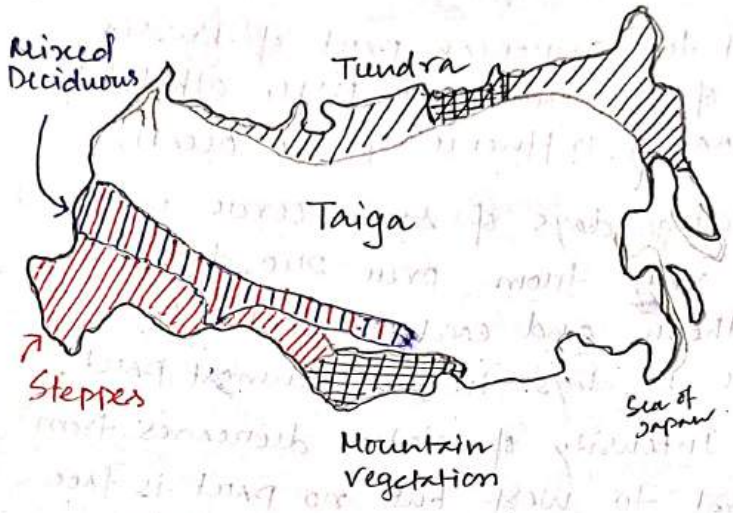
During winter, the inland and coastal waters over large areas freeze.

There are very few all-weather ports.

Amount of precipitation decreases from West to East. Russia receives rainfall during short summer season.

Heaviest rainfall occur in caucausus mountain during winter.
(due to Mediterranean climate, and moisture is gained from black sea) ~~& exp~~

Vegetation



Resources and their utilization

After ~~1971~~ 1917 revolution, Russia and other republics of USSR followed centralized planning.

Different sectors of economy such as Agriculture, Industry, Business, Transport and communication were owned and managed by the State.

Natural resources were utilized in a systematic manner using highly developed technology.

Since 1990, Russia have followed mixed economy and helped in developing private sector.

Agriculture.

Although a very small % of Russia is ~~used for~~ under cultivation but still it is quite large compared to other nations.

Growing season is short and hence only one crop may be grown in a year.

Before 1990, All agricultural land was owned by the State.

Half of the land was given to collective farms. Collective farms were managed through co-operatives. Farmers were paid in cash or in kind depending on their labour.

~~Half~~ Rest of the land belonged to the State. State farms were set up as large model farms to show what could be done with machinery and modern scientific method.

During 1980 due to frequent drought and inadquate storage facility the food situation deteriorated. and USSR had to import grains.

Since, 1990s people have been given permission to own and manage plots of Agricultural land privately.

Important crops grown in Russia are
Wheat (grown in fertile soil of Steppe)
Rye and oats (grown in North in less fertile soil)
Maize, sugar-beet and potato.

Whole of Siberia is unsuitable for cultivation.

Cattle, Pigs, Sheep and Reindeer are reared in large number for their milk, meat, wool and fur.

Most of forest cover is in Siberia and in fareast Russia

Large quantities of Timber and softwood are produced here.

Mineral and Power Resources

Russia contains large deposit of several minerals and power resources.

Iron ore is found in Ural, Siberia. It has huge reserve of Iron, Manganese, Bauxite, Gold. Other important minerals lead, tin, zinc, copper, Platinum.

Coal is the most important power resource of Russia.

Petroleum and natural gas are other power resources.

It has vast water-power resources. It has many large dams producing hydro-electricity.

Important oil-fields are located in the region between the Urals and the Volga, Azov-Black Sea area and West Siberia.

Industries

Heavy industries have major share in total industrial production.

Russia is one of the largest producer of Iron and Steel.

Russia manufactures Tractors, Heavy machines, Blast Furnaces, Arms & Ammunition, Chemicals, Ships and Aeroplanes, Textile, Electrical and electronic goods.

Food-processing industries are also important.

Chief industrial regions are in and around Moscow and St. Petersburg (formerly called Leningrad), the southern Urals and West Siberia. and the far eastern area.

Transport

Moscow and St. Petersberg are connected to industrial centre of Siberia by the Trans-Siberian railway, the longest railway in the world.

River and railways are chief mode of transport. Most of the rivers are interconnected by canals.

Asia is world's largest continent and most populous.

It accounts for 1/3rd of world's land and 3/5th of world's population.

PAMIR KNOT A web of mountain ranges extend in all direction from this region in south-central Asia.

physical feature

Five major physical divisions are

- The Northern Lowlands
- The Central Mountains
- The Southern plateaus
- the Great river valleys
- the Island groups

The Northern Lowlands

In the northern part of the continent a vast lowland lies between Urad on the west and the Leena river in the east. It is called Siberian plain.

Western part is flat and made of Sedimentary rock.

Eastern part is an eroded plateau.

Drained by the Ob, Leena, Yenisei.

They rise in highlands of central Asia and flow northwards.

Due to prolonged winter in the polar region the lower course of the rivers remain frozen for several months. The water flowing from upper course gets blocked and spread over large area making the land marshy.

LAKE Baikal :-

Holds 20% of all fresh water on earth.

World's deepest lake.

Siberia.

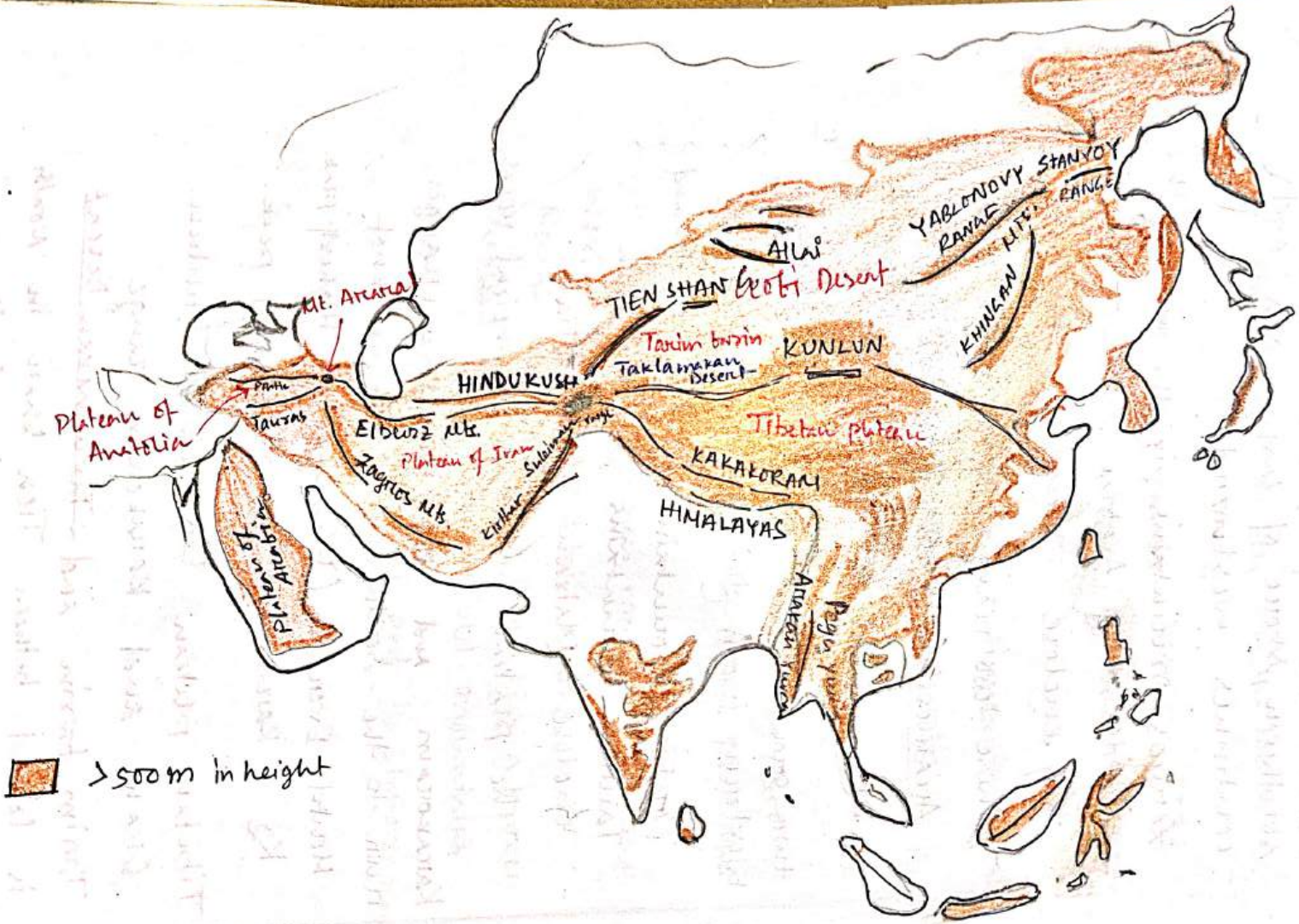
The interior heartland of Asia is land-locked and desolate.

[2] The Mountains

Pamir plateau is the meeting place of several mountain ranges.
These ranges form the Pamir knot.
Pamir plateau is the highest plateau of the world and known as '~~Roff~~' Roof of the world'.

From Pamir knot,
The Hindu Kush extends to the west
the Tien Shan to the north-east
the KUNLUN to the east, the Karakoram
the Himalayas to the South-east direction.

Each mountain ranges consists of a series of ranges. and some enclose Plateaus and uplands.



From the Hindukush in west, two mountain ranges diverge.

Elburz mountains, in the north, touches southern shore of caspian sea and continues westward.

Zargos mountains, in the south, extends along Arabian sea.

They enclose Plateau of Iran.

These two ranges again converge at Arcamenian knot (Armenia)

aka. Knot of Mount Ararat.

two group of mountains again diverge western from this knot.

Pontic mountains in the north and Taurus mountains in the south enclose Plateau of Anatolia.

The plateau is made of ancient rocks.

Karakoram and the Himalayas ranges run to the south-east of Pamir knot.

Mount Everest (Himalayas) → Highest peak

K_2 (Karakoram) → 2nd highest peak.

Tibetan plateau lies between Kunlun Shan and Karakoram range

Tarim basin and ~~Taklamakan Desert~~ is located between Tien Shan in North and Kunlun range in South.

At the eastern part of Tibetan plateau all mountain ranges turn southwards forming parallel chain.

To the south-east of the Tibetan plateau, mountain ranges lie in North-South direction.

Some of the ranges (Arakan Yoma, Pegu Yoma) continue southward through Myanmar.

One of the ranges continues through Andaman and Nicobar islands upto Sumatra and Java.

Some ranges continue through Maly peninsula before turning into Borneo and extending upto Phillipines.

In between Tien Shan mountains in the west and mountain chains in North-east Siberia, there lies a broken crescent of ancient fold mountains the Altai, the Yablonoi and the Stanovoi range.

3 The Southern Plateau

Located south of the central mountain belt.
made of old rocks.

Plateau of Arabia
Plateau of Yunnan (China)
The deccan plateau

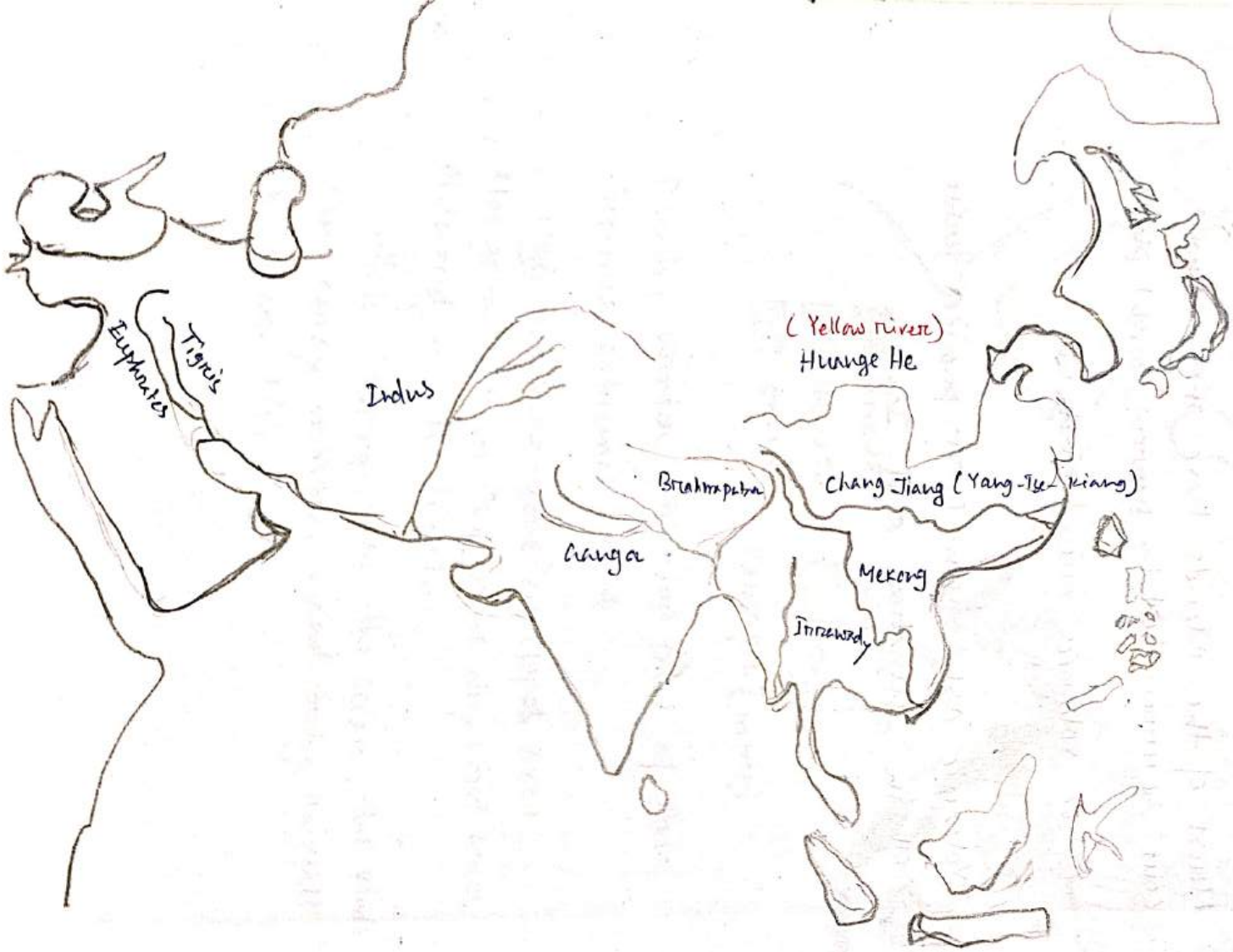
They form major part of Peninsulas ~~which~~ projecting southward from mainland.

4 Great River valleys

In between mountains and plateaus, there are located some of the most fertile river valleys of the world.

a. Ganga - Brahmaputra
b. Tigris - Euphrates
c. The Indus
d. The Irrawaddy
e. The Mekong
f. Yang - Tse - Kiang
h. Huang - Ho

Some of the rivers are older than the mountain ranges which is evident from the deep gorges the rivers form along their route in the ranges.



The island groups

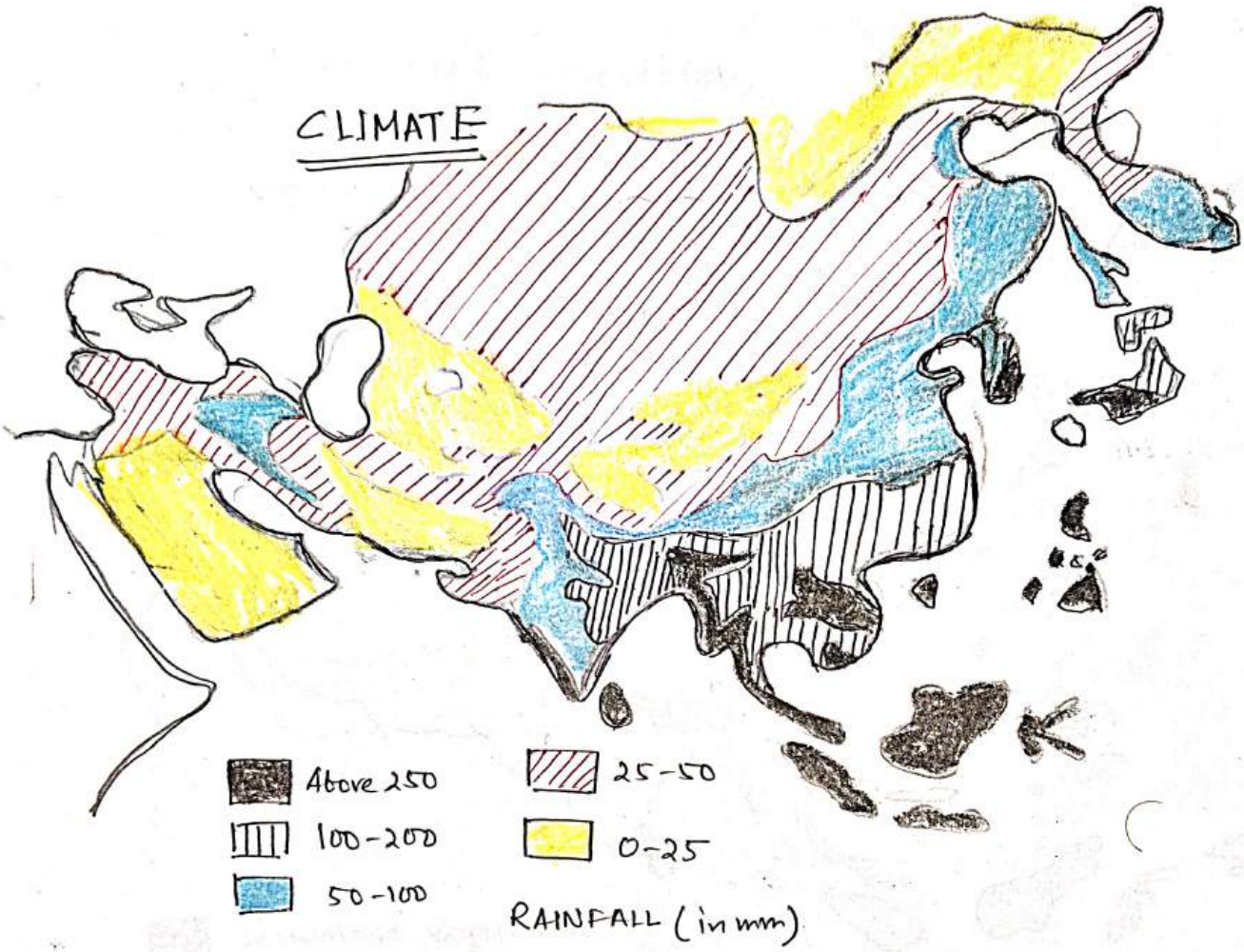
Three major island groups are
Indonesia, Phillipines, Japan.

Moust of the islands have mountainous core surrounded by narrow coastal plains.

Active volcanoes are found in

Volcanic ash from past provides fertile soil in Sumatra and Java.

CLIMATE

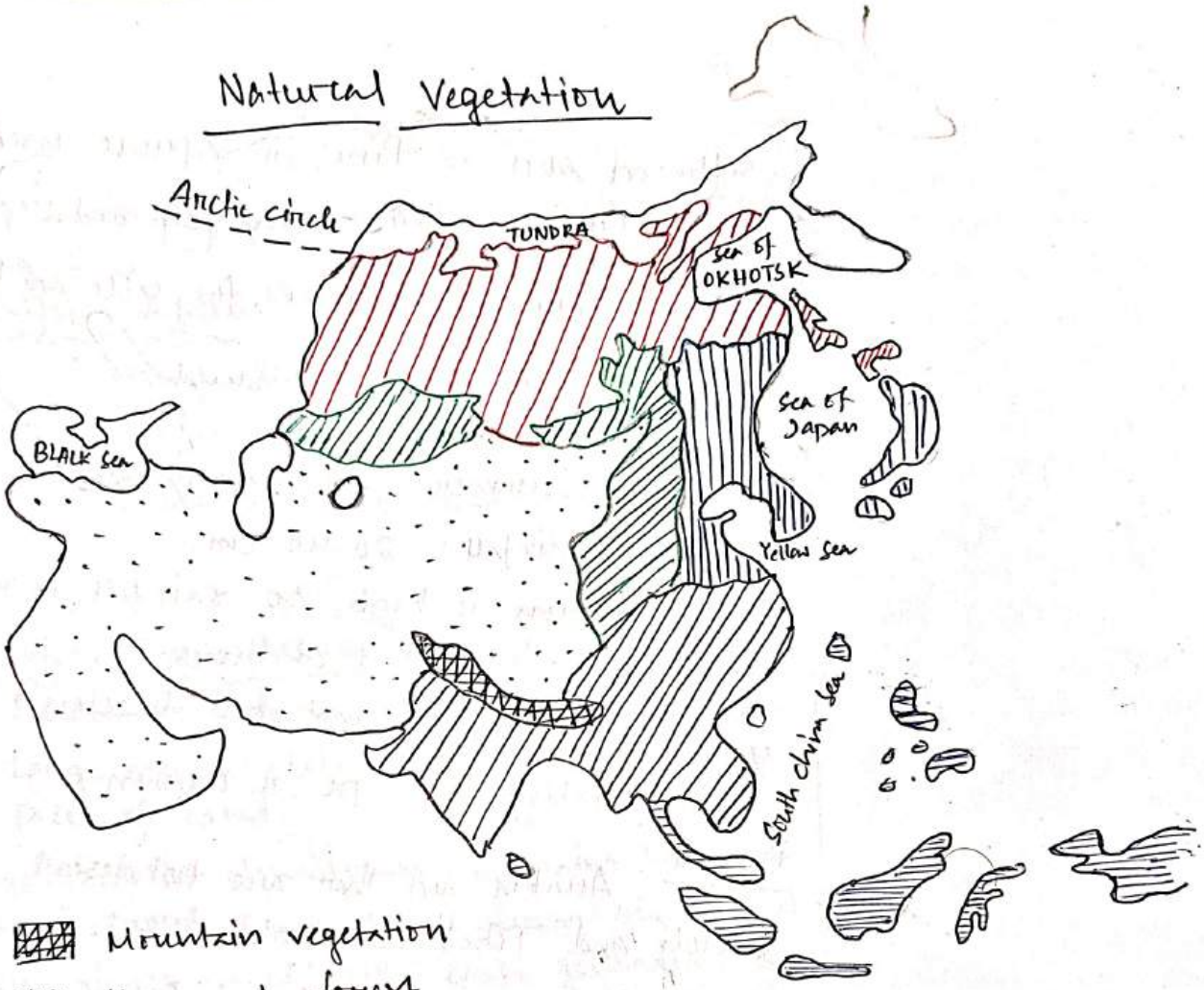


During winter, interior part of Asia, becomes extremely cold.

High pressure zone developes over Mongolia. From this zone dry wind blows outward in all direction.

While blowing over the ocean, the winds can carry moisture and bring rainfall in areas like.

Natural Vegetation



- Mountain vegetation
- Monsoonal forest
- Equatorial rainforest
- Steppes
- Temperate mixed forest.
- Desert vegetation
- Taiga

Tundra: Mosses and Lichens.
Reindeer is most important animal.

Taiga: belt of coniferous forest
severe winter
warm summer

Evaporation is little, so small amount of precipitation is sufficient for growth of trees.

Softwood such as Pine, fir, spruce used ~~for~~ as timber and for making pulp and rayon.
Fur-clad animal like mink, fox, sable are found.

Steppes: Temperate grassland.
winter is cold.
Summers are fairly hot.

Annual rainfall: 20-40 cm.
Evaporation is high, so rainfall is not sufficient for growth of trees.
Grassland is luxuriant but treeless.

Grass-eating antilope is common.

Desert: Arabia and Thar are hot desert.
Gobi and Tibet are cold desert.

Common animals are Camel, Ass, gazelle.

Yak is found in higher plateau region.

Monsoon forest: Summer is hot and humid.
winter is mostly mild and dry.
example of trees found here are Teak, Sal, Sandalwood.

Temperate woodlands :- In north-east Asia, Climate is cooler. Here grows temperate deciduous and mixed type of forest.

Equatorial rainforest :-

Agriculture

All major types of farming practices are done here.

Shifting Agriculture :—

It gives very low yield of crops.

A lot of forest wealth is wasted.

Where it is practised?

Intensive Agriculture :—

Predominant form of agricultural practice.

Large manual labour is used on a small piece of land.

Large Population density in the plains and river valleys of Asia and small farm size which gets fragmented with each generation are the reasons behind practice of Intensive agriculture.

Yield is generally high depending on soil fertility and availability of water.

A farmer may produce 2-3 crops a year in same field. Crop Rotation is practised to maintain soil fertility.

Crop rotation

ex:- Rice or wheat cultivation is followed by a legume such as Arhar, it replaces N_2 lost.

Extensive Agriculture :—

West Siberia, Central Asia.

Farming operations are conducted with the help of machinary on large farms.

Scientific methods are used hence crop production is high.

India, China, Sri Lanka

MAJOR CROP

Rice, Wheat and Millets, pulses, oilseeds, sugarcane, tea, cotton, Jute and Rubber.

Rice Rice requires hot and humid climate. Rice is mainly grown in Monsoon Asia. India, China, Bangladesh and countries of South-east Asia.

Wheat main crop of the Sub-tropical and temperate part of the continent.

West Siberia
Kazakhstan
China
Northern India
Pakistan
countries of South-west Asia.

Coarse Cocain

Jowar, Bajra, Ragi are grown in semi-arid regions.

Pulses and oilseed

Sugarcane It requires hot and moist climate. and well-drained fertile soil.

Pakistan
India
China
Thailand
Indonesia

Tea Requires hot and moist climate on well-drained fertile hill slopes.

India
Srilanka
China
Japan
Indonesia

Cotton Grown in dry climate

China

Central Asian countries (Kazakhstan, ~~Kyrgyzstan~~, Turkmenistan, Tajikistan, Uzbekistan)

India
Pakistan

Jute Needs high temp. during growing season. Jute is cultivated in fertile soil of Ganga - Brahmaputra delta.

Rubber Malaysia is known for its Rubber plantation.

Indonesia
Thailand
India, China, Sri Lanka

Forest Monsoon forest provides Sal, Teak, Bamboo.

Mineral Resources: Distributed very unevenly.

Iron is found in Russia
China
Azerbaijan
India

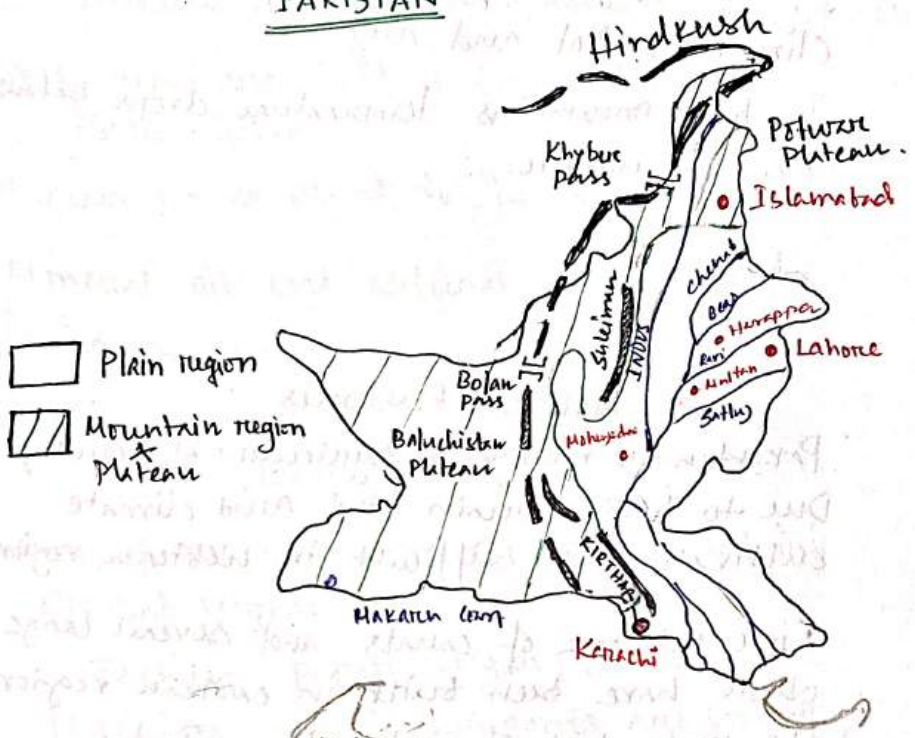
Mica, Bauxite are mainly found in India.

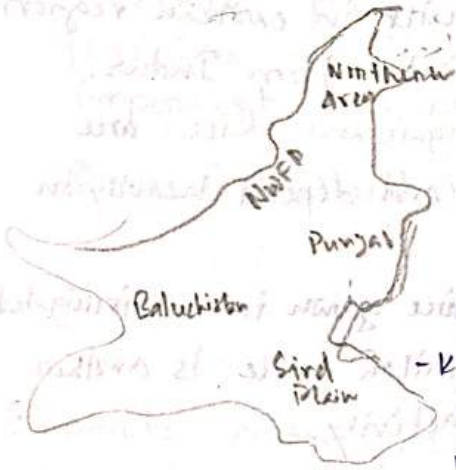
Coal deposits Russia
China
India

Mineral oil and natural gas countries of central Asia, South-West Asia South Asia.

Tin Malaysia

PAKISTAN





Mountain ranges along with Himalayas seperate South Asia from rest of Asia.

Kyber pass in Hindu-Khush and Bolan pass in Kirthar range are important.

Potwar plateau is located south-east of Hindu Kush. Region is dry, only few streams are found here.

Rivers are perennial and bring huge ~~wa~~ amount of water.

Climate is hot and dry.

In high mountains temperature drops below 0°c in winter.

Natural Resources

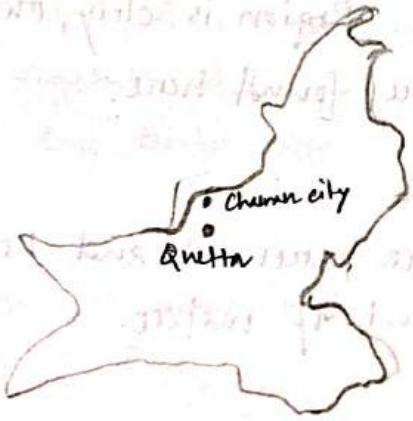
Pakistan is mainly a agricultural country. Due to hilly terrain and arid climate cultivation is difficult in western region.

Fine network of canals and several large dams have been built in eastern region to make use of water from Indus.

Wheat, cotton, Sugarcane, Rice are important crops and depend heavily on irrigation.

Bajra and oilseed are grown in non-irrigated areas. Rearing of milch cattle is another way of economic activity.

Quetta, Kalat, Chamen city are known for growing fruits.



Few mineral resources are found here.

Coal, Iron ore, Gold is found in Baluchistan.

Nuclear power plant is in Karachi.

Mineral oil and Natural gas is found in some places.

Industry

Most of the industries are concentrated in Punjab region.

Textiles, paper, Sugar, cement, fertilizer and leather goods are some of important industries.

~~Some~~ Industrial town Karachi
Faisalabad
Sialkot

Exports cotton yarn. and cloth, carpet, Rice, leather and sport goods.

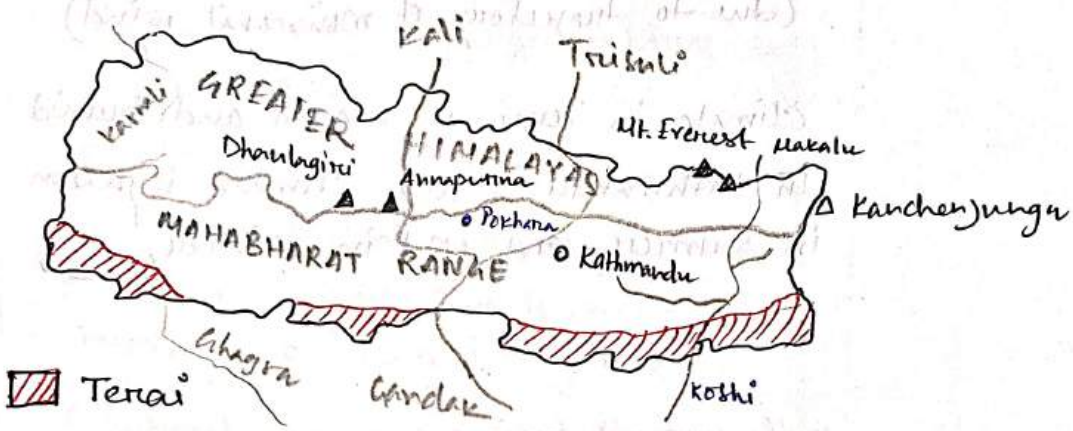
Imports Mineral oil and other minerals Chemicals, vegetable oil, Machineries and Automobile.

Road and railway network is dense in Indus basin. especially in Punjab.

A Railway line links Peshawar to Karachi.

NEPAL

Physical Division :-



Terai : Southern most part is a low-lying plain called Terai.

It is highly vulnerable to flooding during the monsoon.

It is marshy and forest cover.

Mountain region : In the northern ~~most~~ part Himalayas are situated.

Greater Himalayas, the highest range of Himalaya lies along northern border.

Mt. Everest, locally known as Sagarmatha (8848 m.) is world's highest peak.

To the south lies Mahabharata range or Lesser Himalayas.

Central part is occupied by small valleys such as Kathmandu and Pokhra.

Rivers originate in Himalaya. They flow in east-west direction. then turn southward to join Ganga.

Climate

Temperature decreases from South to North.
Rainfall decreases from East to West.
(due to trajectory of monsoonal wind)

Climate in Terai is warm and humid.
In Kathmandu valley climate is warm in summer and cold in winter.

Vegetation

In Terai region grows moist deciduous forest. on its western margin where rainfall is less, ~~the~~ grassland is found.

Towards north on Himalayan slope temperate forests are found.

On lower slope pine and oak trees are found. Fir and Birch are found a little higher.

Natural Resources and ~~Agri~~ Economic Activities

Agriculture is the ~~prime~~ main economic activity though it is very underdeveloped. Subsistence type of agriculture is practised here.

Due to high growth rate of population and small percentage of Arable land (only 30% of total land is cultivable) pressure on land is very high.

Traditional methods are used for agriculture, due to limited irrigation facilities agriculture depends heavily on monsoon.

Foodgrain ~~cro~~ dominates (~70%) of total agricultural production.
Rice, Wheat, Maize, Millet, Barley are principal crops.

Major cash crops are Sugarcane, oil seeds, Tobacco, Potato and Jute.

FOREST

Timber, Medicinal plants, herbs are valuable resources obtained from Forest.
Fuelwood is the major source of Energy.

Mineral resources are very few.
Mica is mined in east of Kathmandu
Small deposit of Lignite, copper, cobalt and iron are also found.

Nepal is one of the least industrialized countries in the world.

Why? ⓐ Absence of infrastructure such as efficient transport network.

ⓑ unavailability of skilled labour.

ⓒ Absence of reliable power supply.

Nepal has great potential for generating Hydro-power.

~~But the potential has not been used.~~

Traditional cottage industries constitute more than ½ of total industrial production.

Tourism is the most important industry and major source of earning foreign currency.
Though tourism is concentrated in limited areas mainly in Kathmandu valley, Pokhra and along few trekking routes.

Nepal is one of world's poorest nation.
Approx. half of the population live in ~~also~~ absolute poverty.

Southern belt experience hot and humid climate.

Inner Himalayas enjoy cool temperate climate.

High northern region has a severe alpine climate.

Bhutan has some of the greatest bio-diversity in the world.

Wildlife varies from tropical to extreme cold polar animals.

Natural Resource and Economic activities

Snow-fed, perennial rivers flowing through the rugged terrain give huge potential to develop hydro-electricity.

Chukha Hydroelectric project has been built with the help of India.

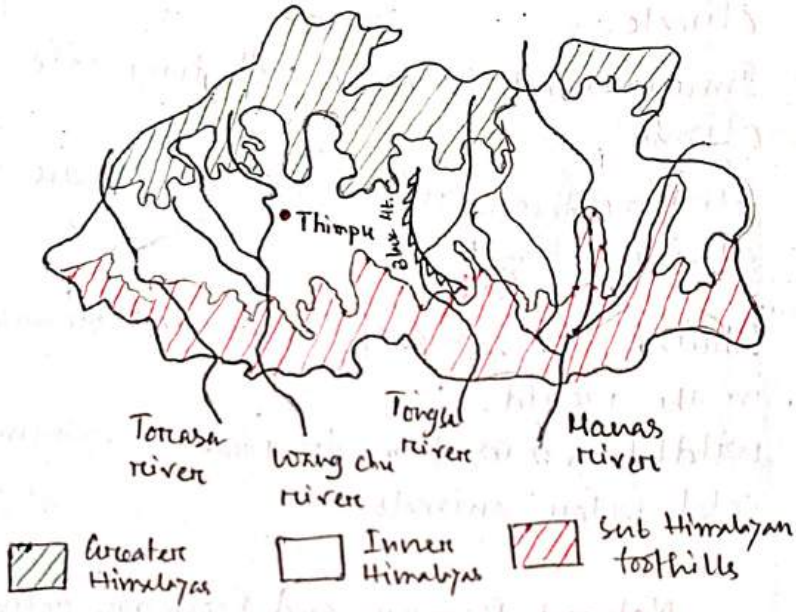
Forest covers approx. 60% of total land.

Accessible forests in South have been over-exploited.

Forest based industries produce plywood and boards.

Bhutan has large deposit of Limestone and dolomite.

BHUTAN



Bhutan is almost entirely mountainous.

Terrain is most rugged in the world i.e. elevation increase from 150 m to >7000 m in less then 100 km distance.

From plain area in the South called Duars, land rises towards the North.

Highest peak is Gangur Punsun (7561m)

Flat land is limited to duars and river valleys which lies in North-South.

cultivable land is very small. Soil in river valleys are thick and fertile. Major crops are Rice, Wheat, Maize, barley and potatoes. cultivation of fruits like Orange, Apple is quite important.

Agriculture is ~~main~~ most important economic activity.

It includes farming and rearing of livestock (including Yak and sheep).

~ 90% people depend on subsistence type of farming.

Farmland is owned by women and they have high status in the society.

Almost all rural household own cattle. No. of Cattle owned is measured as prosperity of a Household.

Cattles are used as draught animals as well as for dairy product such as milk and butter.

Higher regions are sparsely populated. The southern duars valley and eastern region around Tashigang are most densely populated.

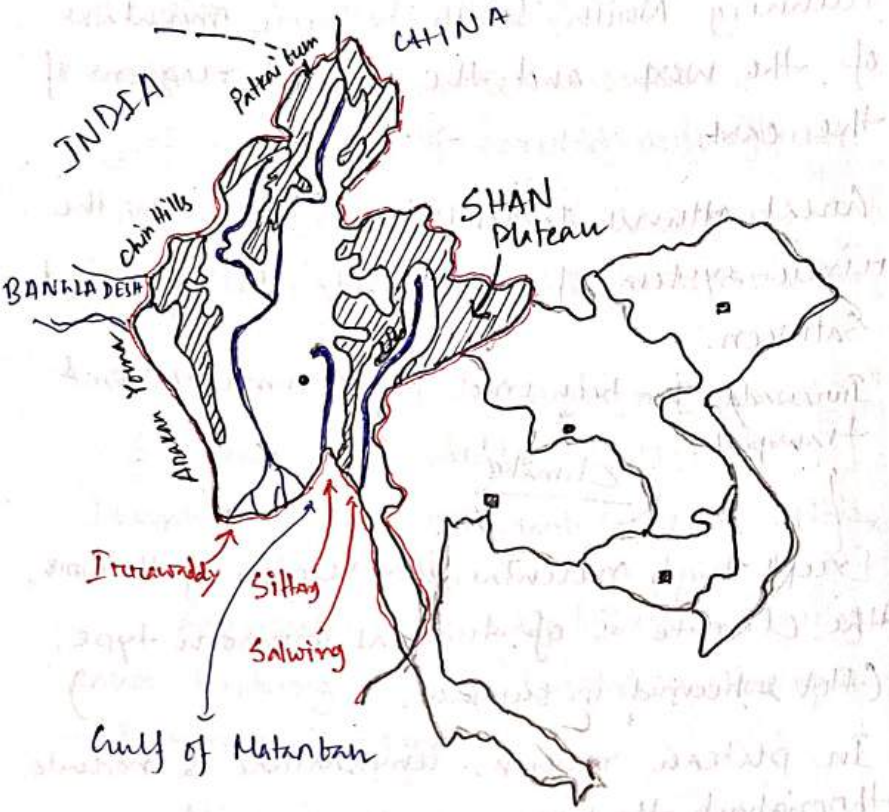
Bhutan was isolated till 1960s.

Economically, Bhutan is a poor country. It has developed significantly through planned development programmes.

During last 40 years, infrastructure such as road, communication and electricity have been developed. And also there was commendable progress in social amenities such as Education and Health facilities.

Bhutan's plan ~~to~~ is to develop its economy without damaging its environment even if it means slowing down the process of modernisation.

MYANMAR



Physical Feature

Like a horse-shoe, mountains surrounds Myanmar on three sides.

[1] The young fold mountains in the north and the east are southward extension of the Eastern Himalayas.

From North to South they are known as Patkai Bum, Naga Hills, Chin Hills and the Arakan Yoma.

Altitude decreases towards the south.

[2] Eastern part is an area of upland and low hills.

Shan plateau is an extensive plateau.

3 The central Myanmar is a long trough running North-South between mountains of the west and the upland regions of the east.

Great alluvial lowlands are formed by the river system of Irrawaddy, Sittang and Salween.

Irrawaddy has been used for communication & transport.

Climate

Except high mountainous region of the North, the climate is of tropical monsoon type. (Hot & humid in summer,)

In plateau region, temperature is moderate throughout the year.

Coastal areas as well as Irrawaddy delta receives heavy rainfall from S-W Monsoon.

Rainfall is less in central lowland interior.

Dense tropical monsoon forest is found in rain-heavy coastal regions.

In interior part open cover of vegetation and in places, thorny scrubs are found.

Natural Resources and Economic activities

Forest is major natural resource.
½ of total area is covered with forest.
Teak, found here, is of the best quality and attracts great demand from all over the world.
Rubber grows in hot, humid coastal rgn.
Sundari in delta region.
Lumbering is important economic activity.

Agriculture including Livestock rearing and Fishing is the largest sector of the Myanmar economy.

Rice is the main crop.
(occupies ½ of cultivated area).

~~Fruits~~
Maize, pulses, sugarcane, Jute, cotton tobacco are major crops.

Minerals

Myanmar is rich in mineral resources
Eastern plateaus have deposits of Silver, Lead, Zinc.

Precious stones such as Sapphires, Emerald and Rubies are found on Shan Plateau.

Pearls are found in Gulf of Martaban.

Mineral oil is found in central part of Irrawaddy river valley.

Coal deposits are also found.

Though, Industrial development is restricted due to

Shortage of Power

Infrastructural backwardness (want of rail & road transport).

<u>Export</u>: Forest product.
Rice
Pulses
Minerals

<u>Import</u>: Machineries, Medicines, Vehicles
Textiles.

The pace of economic development is slow here, also Urbanisation is quite low.

BANGLADESH

Almost all of Bangladesh lies in the Ganga-Brahmaputra delta.

It is a level and low-lying very fertile alluvial plain, formed by silt brought by rivers.

Rivers often change their course due to alluvial deposits.

Because of shallow river beds, floods are common.

Coastal region is a marshy land.

In delta region many small island have been formed due to river deposit near the coast.

South-east part of Bangladesh is hilly. The Chittagong hills are continuation of Hill ranges of Myanmar.

Cox's bazar is the largest sandy beach in the world.

Rivers and their tributaries criss-cross the country.

Climate

Tropical monsoon climate

Winter is short, mild and dry.

~~Heavy rainfall~~ Temperature remains high for most part of the year.

Heavy rainfall is received from S-W monsoon.

Coastal regions are often affected by tropical cyclones.

Natural Resources

Agriculture accounts for 1/3rd of GDP and 1/2 of employment.

Average farm size is small.

Rice, Jute are major crops.
Wheat, Sugarcane, tobacco, tea, pulse, oilseed, potatoes

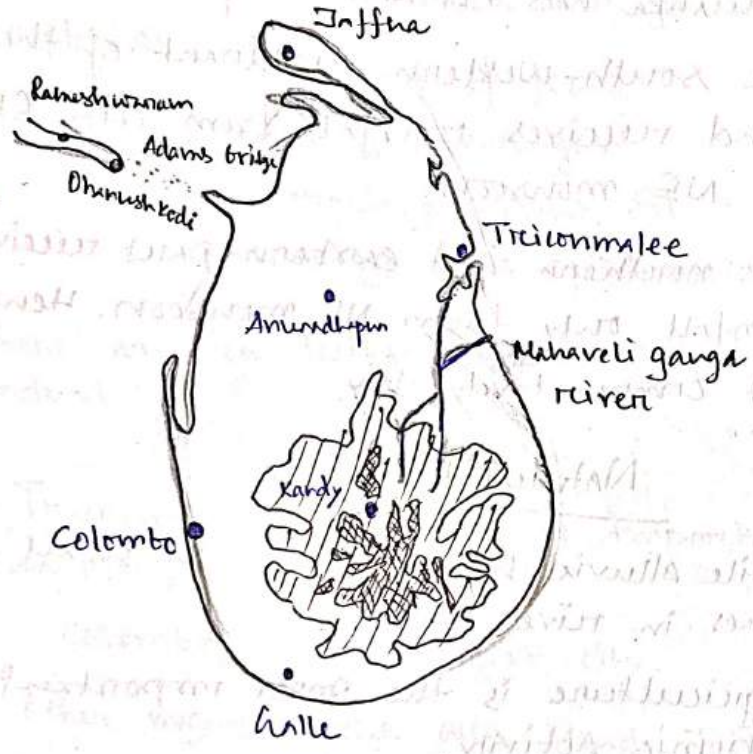
Bangladesh has small manufacturing sector.

In small scale and cottage industries fibres are made from Jute and handicrafts from Bamboo.

Jute and cotton textile industry, Tea, paper, cement, chemical fertilizer and light engineering are major industries

SRI LANKA

(Democratic Socialist Republic of Srilanka)



Srilanka is seperated from India by the Gulf of Mannar and Palk strait.

Almost entire island (except Jaffna peninsula a costal strip in North-west) is made of hard rocks.

Eastern coast and river valleys have alluvial deposits.

South-central part is the highest land From this upland, the land falls by step to a rolling coastal plain.

~~The plain is narrow in west and South-west~~

Rivers are short and flow readially outwards from upland area.

Srilanka has hot and humid climate.

The south-western quadrant of the island receives rainfall from both SW and NE monsoon.

The northern and eastern part receives rainfall only from NE monsoon. Hence it is comparatively dry.

Natural Resources

Fertile alluvial soil is found in small patches in river valleys.

Agriculture is the most important economic activity.

Rice is main food crop.

Major cash crops are Tea, Rubber, Coconut.

Cocoa, spices are grown for export.

Srilanka is poor in mineral resources.

Very small quantity of iron-ore deposits are found here.

Beach sand yields ilmenite, monazite and Zircon.

Graphite, Gemstones are Srilanka's most valuable mineral products.

Fishing is important occupation.

Most of the industries are based on products of Agriculture and forest, such as Processing of food
making beverages
extracting coconut oil
making coir products.

There are few leather, plastic and chemical industries.

Tricommalee, colombo are important sea ports.

colombo is the largest city.

Other major towns are Kandy, Jaffna Anuradhapur.

Tamils have settled in the northern and eastern part of Srilanka.

1

CHINA

Shanghai is the largest city
It is also largest port and big textile centre

Beijing is the capital.

Other important cities are Tianjin, Shenyang, Wuhan and Guangzhou (canton).

Physical Division

China has complex physiographic features.

20% of its land is covered by Mountains And Plateaus.

15% of its land is plain

remaining 65% is covered by Hills and low plateaus.

China's relief can be seen as 3 semi-circular steps with decreasing height from west to east.

First Step

The western part is mountainous and rugged.

High mountain ranges with snow covered peaks such as the Kailash, the Kunlun range is found here.

Tibetan plateau (Xi Zang), located between Kailash and Kunlun is world's largest plateau.

Avg. height is over 4000 m

Second Step

Formed by Tarim basin, Inner Mongolian plateau, Loess plateau, Sichuan basin, Yunnan-Guizhou plateau.

Avg. height is between 1000-2000 m.

Cold and dreary desert of Taklamakan is located in Tarim basin.

Loess plateau is made of fine yellow dust called 'loess'. The dust has been brought and deposited by strong winter winds blowing from the desert in the interior.

Third step

Eastern part of China stretching from edge of Greater Khingan, Taihang shan and Wu-shan mountain range to the coast forms this part.

Avg. height of the plain is 500-1000 m.

It includes river valley of Huang He (Yellow river) Yang-tse-Kiang / Chang-Jiang and Xi Jiang interspersed with hills.

RIVERS

The Indus, the Satluj and the Tsangpo originate very close to each other in Western Tibet.
They make deep gorges while crossing the Himalayas.

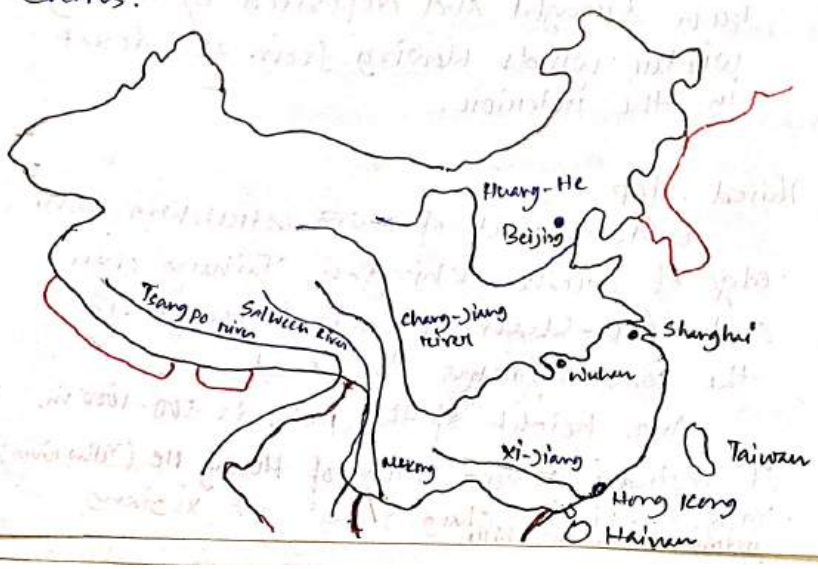
Kiang ~ River
Yangze river aka Yang-Tse-Kiang is known as Chang-Jiang in China.
It is longest in Asia, third-longest in world.

The Salween, the Mekong originate from eastern part of tibet plateau.
They flow into South-east Asia.

The Huang-He, Yang-Tse-Kiang (Chang-Jiang) the Xi-Jiang, flow eastward through China and drain into the Pacific.

Valley of Chang-Jiang is largest and provides transport & irrigation.

Huang-He drains Northern China and carries large volume of yellow silt.
Due to silting, the river used to change its course frequently and flood the region.
Flooding has now been controlled by building dams.



China is an agricultural country.
Intensive agriculture and horticulture have been practised for over 4000 years.
Chinese farmers are highly skilled in farming.

Traditional threats from flood and droughts have been managed by soil conservation, afforestation, irrigation and drainage projects.

Fertilizers, improved seeds, pesticides has also increased high stable yield.

Rice is main crop grown in central and southern China.

Wheat, Soyabean and Millets are main crops of northern china.

China is major producer of Rice, Wheat, Maize, Millets.

Chinese silk and tea are world famous.

Silk, Cotton, Tobacco, Tea are important cash crop.

Pigs, chickens and ducks are widely reared as domestic animals.

Horses, camels, sheep and goats are raised in arid grassland.

Cattle are few and dairying not of much significance.

Fishing is practised both on the coast and in flooded rice fields.

Climate

Temperature decreases from South to North.
Rainfall is caused by South-East monsoon.
Amount of rainfall decreases from South to North and also from East to West.

In South and South-East,
Summers are Hot and wet.
Winters are mild
Rainfall is heavy.

Further North, in Chang-Jiang basin
Summers are warm and rainy
Winters are cool
Annual rainfall is moderate.

In northern part,
Summers are warm.
Winters are very cold.
Annual rainfall is scanty.

Natural Resources and Economic Activities

~~Though~~ Large part of China is mountainous and arid, cultivable land is scarce.
In many place Terrace farming is practised.
Even this land is decreasing in area to meet growing demand for houses, roads and factories for increasing population.

China has one of the smallest area of cultivable land per person.

China had to adopt strictest population control programme to check its fast growing population.

Small families are encouraged by increasing rights to Education and work opportunities for women. and by using economic reward and penalties.

I 4.

Mineral

China is rich in several resources. such as Coal, Iron ore, tin, turgsten.

Most provinces of North-China have coal field.

Rice deposit of coal and Iron ore helped to develop its Iron & steel industry.

Natural Gas and on-shore oil fields are also available.

Industrial development began with manufacturing cotton textile, followed by silk and steel industry.

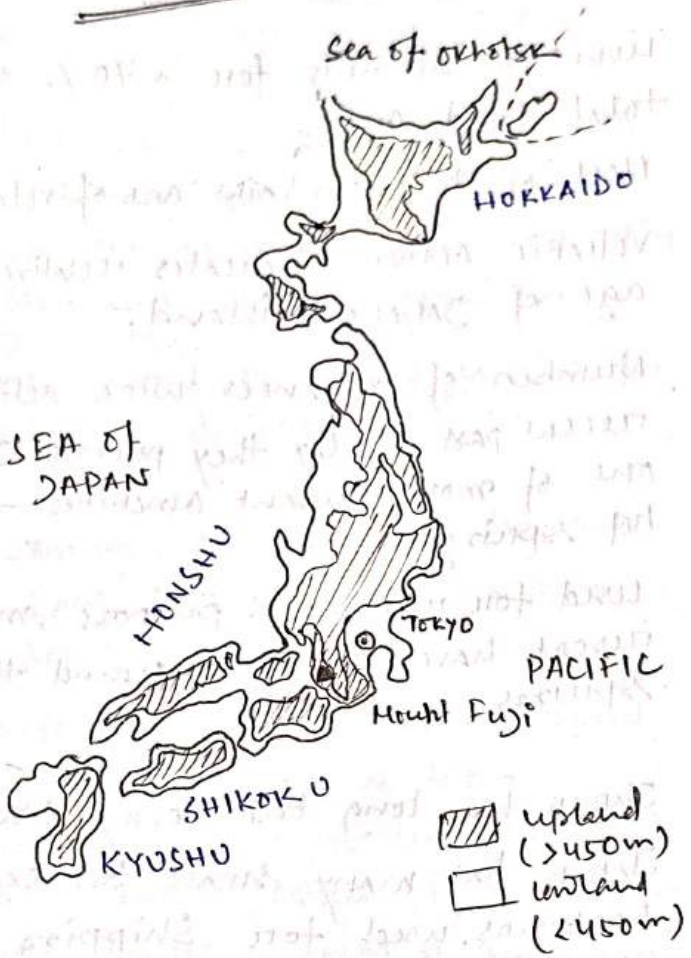
Other important industries are

- Chemical
- cement
- Machineries
- Agricultural implement
- transport vehicles
- Paper industry

ENERGY

Nearly 3/4th energy is produced from Coal. Other sources are oil & natural gas (20%) and hydro-electricity (5%)

JAPAN



'NIPPON', the land of rising Sun.

It is a country of ~3900 islands.

Of these only four are large & important.

these are Honshu
Hokkaido ↓ Size
Kyushu
Shikoku

Physical feature

Mountains accounts for ~70% of Japan's total land area.

Most of its mountains are of volcanic origin.

Volcanic activity indicates relatively young age of Japanese island.

Number of volcanoes were active in recent past, today they provide Japan's one of most pleasant amenities – mineral hot springs.

used for recreational purpose, many tourist resort have been built around these hot springs.

Japan has long but rocky coastline.

Japan has many small but excellent harbours, used for Shipping and Fishing.

Japanese topography provides beautiful landscape and dramatic scenery.

Snow-capped mountains, sparkling lakes, waterfalls, deep gorges, swift flowing rivers, fine forest and bamboo groves.

Climate

Japan lies in Temperate zone. Hence its climate is mild.

Northern part is colder than South. Winds blowing from Siberian region causes heavy snow and rain in Northern and Western part during winter.

Snow-covered mountains provide for winter sports sites.

In Summer, oceanic wind from South-East bring rain to Eastern and Southern part.

During September, violent tropical rain storms originating from Phillipines Sea or in neighbourhood of Caroline islands called Typhoons strike southern coast of Japan frequently.

Combination of plentiful rainfall and temperate climate produces rich forest and luxurious vegetation.

The cold ocean current (Oya Shio) from North and warm current (Kuro Shio) from South meet on eastern coast. It causes thick fog and creates ideal condition for fish to thrive.

Terrace farming is widely practised
Farm size is small but they are intensively cultivated.
Machineries are used for farming operations. reducing manual labour.

Advanced techniques, improved seeds and heavy use of fertilizers and pesticides have made Japanese farms among most productive ones in the world.

Rice is main crop. It constitutes 1/3rd of Agricultural produce.
Wheat, Barley, Soyabean are other important crops.

In past several years Japan has diversified its agricultural production.
Animal husbandry, cultivation of fruits and vegetables are practised in good scale.

Japan is located at the junction of 3 Plates - Pacific plate, Phillipines plate and Eurasian plate. Reason behind volcanism, Tsunami.

Japan has very limited mineral resource.

Japan is world's largest importer of coal and natural gas.

It is 2nd largest importer of oil.

It thrived due to its knowledge economy.

Population, cities and industries are located in its eastern coast, because western coast is mountainous.

South-East Asia

Malayasia, Indonesia, Thailand (southern) grows Rubber and Palm oil.

Indonesia is the largest producer of Palm oil.

Coconut and sugarcane are grown in Phillipines.

Cocoa is grown in phillipines, Indonesia and vietnam.

All are crops of Equatorial region.

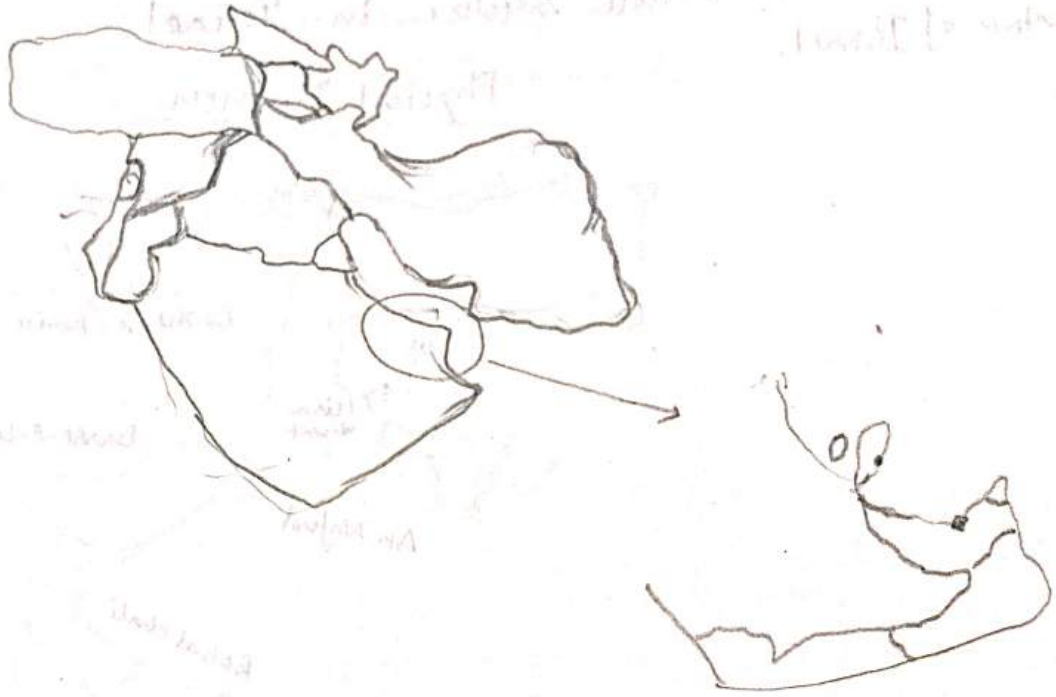
Petroleum reserve

Myanmar, vietnam, Malaysia and Indonesia.

Important mineral here is Tin.

Thailand, Malayasia and Indonesias combined reserve of Tin accounts for half of world reserve of Tin.

WEST ASIA



Except Lebanon, All countries are Islamic country. In Lebanon 40% are christians. And among muslims Shia and Sunni muslims population is almost equal.

Saudi Arabia, Yemen, Oman, ~~Iraq~~, Jordan are Sunni dominated.

Syrian muslim majority is Sunni but its president Assad ~~is a Shia muslim~~. belongs to minority Shia.

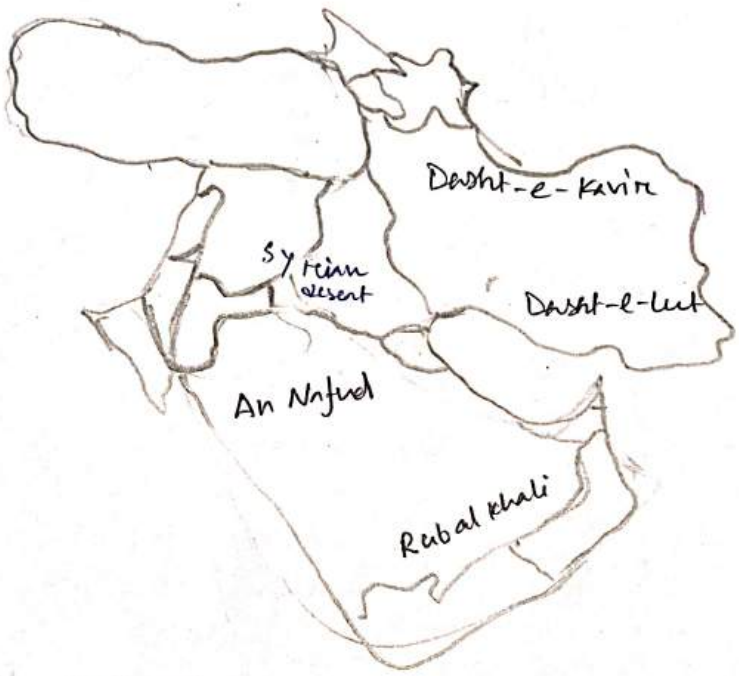
Hezbollah is Shia islamist militant group based in Lebanon.

~~US Senate is~~

Influence of Jewish lobby in US Senate has promted USA to be partner of Israel.

Funded by Iran, Hezbollah propagates Anti-Zionist propaganda and conducts terror strike in Israel.

Physical Division



Arabian deserts : Rub Al Khali
An Nafud.

These are sandy deserts. (Sand dunes)

Iranian desert: Dasht-e-Kavir
Dasht-e-Lut

Rocky and salty (Like Kacch)

Mosul and Baghdad is located on Tigris.

~~Combi~~

on the mouth of Persian Gulf, the Joint stream of Tigris and Euphrate is known as Shatt-Al-Arab.

'Basra' port is located on shatt-al-arab.

Distribution of Industry Around the World.

TIMBER, PAPER and PULP INDUSTRY

Regⁿ: Northern Hemisphere High Latitude

Industry Location

Industry is set up in 3 places
- (a) Near Raw material site
- (b) Near Market
- (c) In between them, depending on Transport, Energy, Labour convenience.

Factors Affecting Location of Industry

1) Nature of Raw Material.
   consider ~~wie~~ loss of material in transport, also longevity of raw material.

2) Availability of Energy

3) Transport

4) Labour → largest assembly for iPhone is in China, not in USA.

5) Market Demand.

6) Physical Geography

7) Availability of Capital

8) Government Policy

9) Availability of Technology.

Primary Industry: Agriculture
Fishing
Forestry
Mining and quarrying.

Secondary Industry:

Manufacturing industry that produces using raw material obtained from primary industry.

Heavy Industry:

Engineering Goods, Metal Goods, Heavy chemicals, Locomotive, Ship-building.

Light Industry: Electronics
Plastic
textile
cosmetics.

Tertiary Industry:

Facilitates selling of product of Primary and Secondary industries.

Transport, Tourism, Education, Entertainment, Consultancy, Administration, Healthcare etc.

Lumbering Industry

Lumber / Timber Wood that has been processed into beams and planks.

Factors affecting location of this industry.

Raw material :-

When wooden logs are processed in the saw mill significant weight loss occurs.

Barely 40% of the ~~log~~ log are used and rest discarded as waste.

Pulp mill and saw mills are located near jungle to avoid transport cost of wasted material.

Transport / River :-

wooden logs are bulky and difficult to transport.

River gives cheap and convenient mode of transport.

e.g. In Myanmar, logs are floated down Irrawadi river.

Paper / pulp mill requires clean water free from chemical and pollutants.

So Lumbering industry is set up in jungle away from polluted rivers.

Timber producing countries.

USA
India
China
Brazil
Canada
Indonesia.

Lumbering is a large scale commercial organized activity in CANADA.

Raw material :- Softwood - Easy to chop.

Coniferous forest - trees of same species are concentrated in one area making mass exploitation easier compared to tropical area.

Transport :-

During winter, the jungle is covered with snow. Slippery surface makes transport easier.

~~Rail~~ Forest is less dense than tropical Forest provides easy access.

Connected by railroad

Market :-

Adjacent to Economically developed ~~east~~ regions

Demand for timber is high.

Labour :- Prolong winter limits Agricultural activity. ~~During winter~~

Mechanized lumbering - using Chainsaw, Bulldozer.

Qn) Discuss the limitations to set up commercial lumbering in Tropical Forest.

→ For the following reason commercial lumbering is developed in Temperate forest.

1) Though some trees in tropical forest are extremely valuable but they are scattered in forest. Cost of gathering is high. Whereas in Temperate forest trees of same species are concentrated in a particular area, so easy to exploit them for lumbere industry.

2) Road connectivity in tropical forest is difficult due to dense vegetation and rain. In temperate area frozen ground helps in transport.

3) In Amazon and Zaire basin some trees are so heavy that they drown in water, so difficult to transport them.

In Temperate forest trees give softwood, they can be easily floated down river stream.

4) Sparse settlement, non-industrialized region (in Africa). So demand is less.

PAPER AND PULP INDUSTRY

Canada is one of the largest Newsprint producer of the world.

Québec and Ontario provinces → Largest conc. of paper-pulp industry.

Geographical Factors (Favourable)

Raw material: softwood from large forest area.

Transport: River, Road transport are well-developed.

Energy: Mountainous terrain and fast flowing river helped in developing Hydro-electric power. Easily available and cheap power.

Labour: Mills are highly mechanised and requires little manpower. Cheap hydro-electricity helps running the machines.

Market: USA is the biggest consumer of paper in the world.

BRITAIN

Timber output is negligible. It imports pulp from Canada & Sweden.

Easy transport, Mills are located near the coast.

NORWAY, SWEDEN, FINLAND

→ Cheap hydro-electric power.

→ Mechanization of operation compensates lack of labourers.

→ Rivers flow towards port. Easy transport.

South-East Asia

Malaysia
Phillipines]

Myanmar
Thailand] woods are transported through river towards coast.

Q.n) Along which coast, western or eastern, fishing is more developed in India?

→ Western coast.

1. wider continental shelf.
2. commercial varieties like Prawn and Mackerel are mostly confined along west coast.

NORWAY

(a) Extensive continental shelf.

(b) Long, Fiorded coastline with many offshore island.
Good site for fishing.

(c) Climate and soil is not favourable for Agriculture.

(d) ~~Skilled at~~ People are skilled at fishing. ~~Historically Norwegians are seafaring~~ ~~seafaring age~~.
From the time of vikings, Norwegians are ~~scaling~~ dominating the seas.

Well-established shipbuilding industry.

Cheap hydroelectricity

Cold climate — Easy to preserve and store.

JAPAN

1. Shallow water in Sea of Japan.
   meeting of kuroshio (warm)
   oyashio (cold) currents.

2. Indented coastline with
   more than 3000 island.

3. Mountains → Less area for cultivation.
   people shifted to fishing.

4. Steel industry and Marine
   engineering developed in coastal areas
   because Japan imports coal and
   iron ore. Japan is also technologically
   very advanced.
   They have been helpful in building
   sophisticated fishing vessel.

5. Fish is main source of protein.
   due to lack of livestock/dairy farming.

Science & Tech :- Chandrayan-2
① consist of Lander, Rover and - —
② ③ Rover will not collect samples from surface

COMMERCIAL FISHING INDUSTRY

North America
Europe
Norway
Japan

Dogger bank
Great Fisher Bank

Grand Bank
George Bank } USA

Nova Scotia
Newfound land } CANADA

Factors :-

Plankton availability :-

Planktons are food of fish.
Phytoplankton requires sunlight.
They develops well in continental shelve and shallow sea because of sunlight penetration and mineral from coastal water.

~~Phyt~~ Planktons reproduce more in cooler waters.

Ocean current

Where cold current meets warm ocean current, It is favourable for generation and growth of plankton.

Q.) Why commercial fishing is well-developed in North Europe and North America compared to Asia? (except Japan)?

→ **Climate**:- cool temperate climate is favourable for storage and preservation of fish. Tropical areas are hot and moist, fish cannot be stored for long.

Coastline coastline of Europe & N. America are indented providing natural harbour and ports.
Asian coastline are relatively smooth and continental shelves are narrower.

Capital commercial fishing requires large ship, high-tech equipment to scan fishing water for optimal location and processing & packaging unit in the ship itself.

Such vessel and technology requires massive capital investment. which is available in Europe, America but not much in Asia.

Species variety In tropical region of Asia, multiple variety of fishes occur in small group. Not good for large scale commercial exploitation.