

Distribution of natural Resources

Fish:- With increase in population and pressure on land, men had to turn to ocean. It is an imp. occupation in coastal areas. Fish has capacity to adapt itself to varied temp.

Distribution of fish can be done on a large scale in four regions

1) North West Pacific:- This zone extends from Bering sea in the north to Phillipine sea on the south. The warm current of Kuroshio and cold current of Ojashio meet in the continental shelf of region near coast of Honshu. It provide favourable condition for growth of plankton, which is the food for fish.

Japan is one of the leading fish-nation in this region. Besides Japan, large scale fishery is done in Baltic nations, Russia, China.

2) North East Pacific:- ~~From Arctic circle in the~~  
From Alaska to California along the west coast of <sup>America</sup> ~~Arctic~~. Here fishery countries are USA & Canada. Towards north, hinterland of coast is hills and has low density of population. However on the coast of USA San Francisco Region & California Valley <sup>are</sup> developed area having good harbours.

North East Atlantic :- Zone extends from arctic circle in the north to the borders of mediterranean sea along the Western Europe coast. Dogger bank of the North Sea is most imp. fishing zone.

The warm water of north Atlantic Ocean keeps the coast open through out the year. In coastline and lack of cultivable land in the coastal areas have been responsible for the development of fishing. Major fishing countries are Norway, Sweden, U.K, France, Iceland.

ii) North West Atlantic :- Extends between long island and new found land. Western boundary of this zone is formed by coastline of U.S.A & Canada. Grand Bank is famous bank for fishing. The warm water of Gulf stream meet cold Labrador current in this region. Lack of cultivable land; demand for fish in U.S.A & Canada.

### Major Problems of Fishing

- (i) Over fishing
- (ii) Ocean Renter
- (iii) Pollution.

# Grassland and Animal Rearing

## Grassland

(savanna) tropical  
 ↳ blue equatorial forest and hot desert; rain mostly in summer; located on highland of Brazil & orinoco basin in South America; north & south of zaire basin in Africa, highland of east Africa, north Aus & NE. They lack in ~~nutrients~~ nutrients.

Temperate (Steppe, prairie, downs, pampas)

↳ found in temperate belt of North & South America, Europe, Australia, Asia & plateau of south Africa  
 ↳ Grass is nutritious and useful for cattle; Steppe has short grasses.  
 ↳ livestock rearing is a developed economic activity in temperate region.

= low rainfall areas with short grasses are suitable for sheep. In areas with still lower rain fall goats & camels are reared.

Nomadic herding:- subsistence economic activity, found in three regions in the world.

- i) first region encompasses whole of Sahara, coastal areas of East Africa, Iraq, Iran, Afghan, dryland of China & Mongolia
- ii) southern boundary of tundra in Eurasia.
- iii) South West Africa and western part of Madagascar.

- Chief characteristic is dependence of animals entirely on natural vegetation. Herds neither grow fodder crops nor grasses. ; wander from one place to another.

In some part of the world their migration is seasonal and it is known as transhumance. (In tundra region & in India)

Regions of nomadic herding present harsh env<sup>n</sup> condition (too hot, too cold). Grasses are scanty, shrubs and bushes are also scattered. Carrying capacity per unit area is low. Social status of nomadic herds depends on no. of cattle heads. Hence competition for size of cattle, thus no. of animals exceeds the carrying capacity of grassland.

Commercial Animal Grazing :- Main objective is to earn money by sell of various product eg. milk, meat, wool, skins. Animals are reared on extensive grassland with scientific methods.

Five Regions :- 1) Vast prairies extending from north to south in west Canada, west USA & Mexico

2) Area extending from small part of Venezuela, and plateau of Brazil to south highland of Argentine.

3) Veldt region of SA 4) Temperate grassland of Aus & NZ

5) Vast area lying east of Caspian sea & north of Aral Sea.

- Cattle rearing is more imp in scientific commercial grazing but in some regions like west Europe, Mediterranean region, Aus, NZ, sheep rearing is very imp.

Commercial grazing done on scientific basis and great emphasis on breeding, genetic improvement, disease control.

Large areas are divided into parcels.

These parcels are open for grazing one after another so that there is time for regeneration of depleted grass. Fodder is arranged whenever grass is scarce. ~~Next~~ No. of animals is restricted acc. to carrying capacity of the pasture in order to avoid overgrazing.



## Non Renewable resources: Minerals

Iron Ore: Used in all types of machines, machine tools, construction of building, various means of transportation. It can be converted into any form as cast iron, sheets, magnetic iron, steel. Besides hardness, strength and durability are other major characteristics.

Distribution: former USSR, China, Australia, Brazil; U.S.A & India. Former USSR has been largest producer. Good quality ore with iron content is found in Kirovsk Rog, Kursk Magnetic Anomaly (KMA). An imp. iron producing area is Ural region. Imp. reserves are found in Kazakhstan also.

Traditional areas of iron ore region in U.S.A is great lake region and Alabama state. Mesabi is the most imp. mine. Large iron ore reserves are found in Shan-Tung region of Manchuria in China.

In Europe, best quality iron ore is Sweden. Courmeil in France is second most imp. mine. In Africa, Liberia, SA, Algeria are imp. producers. In Western Australia; India (Jharkhand, Orissa, Chh.) ; In Brazil, Venezuela.

Copper:- Used largely in electrical industry becz of its electrical conductivity. Useful due to its ~~malleable~~ malleability and ductility.

Distribution :- Chile, U.S.A, former USSR, Canada, Zaire, Poland & Peru countries are major producer

- In South America, Chile major, then Peru; In U.S.A copper is found in western part from Canadian border in the north to Mexican border in the South. Arizona is largest copper producing state.

Among Africa, Zaire and Zambia;

Ural region of Russia; Southern Georgia and Armenia b/w Black Sea & Caspian Sea; India (Singhbhum, Hazaribagh, Jharkhand)

Bauxite:- Australia occupies first place, Guinea (Africa), Jamaica, Brazil are next; mostly mined in tropical region; In U.S.A. from Arkansas; not so developed in former USSR;

China, Malaysia, Indonesia, India are leading bauxite producing countries in Asia.

## Energy Resources :-

Coal :- During 1st phase; major source for industry & Rail; then in 2nd! for energy then in 3rd! again energy  
↳ found in sedimentary rocks; major quality is its combustibility & volatility;

Distribution :- China, USA, former USSR, SA, India, Australia, Germany, Canada, U.K.

↳ Coal mining area in China are found in North. In U.S.A. It found in Eastern part. The Appalachian coal region extend from north western of Pennsylvania to Alabama.

Donetsk basin in Ukraine; Karaganda in Kazakhstan. coal region of Europe extend from north eastern France to Poland. Franco Belgium coal field, Ruhr, Silesia are major coal belts in Australia, located in New South Wales. Africa has little deposits.

- U.S.A, Russia federation, China have 60% of reserves  
A.C. & India are also in top ranks.



Mineral Oil. Possibility of its occurrence is generally in regions of sedimentary rocks.

In North America, first drilled in Pennsylvania, later extended towards Texas, Kansas, Venezuela leading in South America, Peru, Chile, Argentina are minor producers.

Caucasian region consisting area of Georgia, Armenia, Azerbaijan. is traditional producer. Oil has been found in north of Caspian Sea and Sakhalin Island.

Iraq, Saudi, Kuwait, Iran, UAE, Qatar; Mineral oil resources of ~~Ind~~ Indonesia (Sumatra, Java) developed by Dutch. In India (Assam, Gujrat, Bombay).

Known oil reserves of Africa are limited. Libya, Nigeria, Egypt are major producers; In Europe,

oil first found in Rumania; large reserve have been found in North Sea which is shared by UK, Denmark, Norway, Germany, Netherlands.

Japanese oil fields are located in Hokkaido and Honshu islands while most of Chinese oil fields in Chan Jiang valley and Shanxi province. In Myanmar, oil is drilled in Irrawaddy & Chindwin valleys

Natural gas. Russia, Iran, Qatar

Uranium:- Canada & U.S.A are leading producers.

Uranium is found near uranium city on the northern bank of Lake Atabasca & Port Radium of Lake Great Bear. Colorado Plateau has rich reserves.

It is also found in SA, Aus, Zaire, Malagasy, Germany, Sweden. former USSR. Uranium deposits in India are found in Chaga & Singhbhum, Nellore, Palghat of Kerala.

Thorium:- Major source of thorium are thorite, allanite & monazite. SL & Malagasy are main producers; In India (Pb, AP); monazite reserves are found in Brazil, Aus, Malaysia, Montana, North & South Carolina, California & Florida states of U.S.A.

Water Energy:- Norway, Switzerland, Canada, Sweden, NZ have harnessed their water resources to generate energy. About 75% of electricity utilized in South America is hydro generated.

Japan, Russia & U.S.A are leading

in hydro power generation; India has started number of multi purpose projects. Damodar Valley, ~~Bhakra~~ Bhakra Nangal, Hirakund, Rihand, Nagarjun Sagar

# Major Crops of the World

Rice :- Mainly the crop of monsoon lands in tropical regions. Also grown in river valleys and deltas of sub-tropical and temperate regions.  
 ↳ Req. warm & humid climate; temp. not below 22°-30°C & Rain about 100 mm.

Distribution :- Crop of monsoon land of Asia. In 1993, 90% of total area under rice was found in Asia. India, China, Japan, Indonesia, Thailand, Vietnam, Cambodia, Bangladesh, ~~Myanmar~~ <sup>Malaysia</sup> are major rice producing countries.  
 Besides Asia, a little rice is produced in Egypt, Italy, Brazil, Turkey, USA, Spain, France.

The northern limit of rice cultivation in China is demarcated by Qinlingshan mountain ranges & river Huang Ho. Rice production is confined to south of this line. In Japan, rice area is confined to coastal plains of Honshu, Kyushu & Shikoku Islands.

Wheat :  $\left\{ \begin{array}{l} \text{Winter wheat} \\ \text{Spring wheat} \end{array} \right.$

↳ Any plain where grass can grow is suitable.  
Req. 110 to 75 cm rainfall; loam is most suitable soil.  
Weather should be cool & sufficient moisture req.

Distribution :- In former USSR, Ukraine is main wheat growing region; In volga region & western Siberia, spring wheat is cultivated; wheat also grown in Kazakhstan. U.S.A. is also major producer. Two wheat belts in USA: i) Spring wheat belt from Dakota and to Montana & ii) winter wheat belt plus Kansas & Oklahoma running through eastern Colorado. wheat region of China lie north of

Qinlingshan & Huay Ho river. Hobei & Hunan provinces of Huang Ho basin are leading wheat producer.

Regions of India: Aw is an imp. wheat producing ~~area~~ <sup>region</sup>. The temperate grassland of Murray & Darling basin form major wheat region of Australia; In South America, Argentina (Pampas grassland);

wheat is produced in every country of Europe. but Mediterranean lands are most imp. France is leading wheat producer. Spain, Italy, Hungary, Germany are another major producers.

Oil Seeds : Main oil seeds are ~~sesame~~, mustard, groundnut, rape-seed, linseed, coconut.

↳ Sesame is crop of low rainfall areas. Its plant can't tolerate too much drought, cold. India is the largest producer. Sudan, China, Myanmar are other producers. Egypt, Ethiopia, Tunisia are other countries in Africa; In Asia, Turkey, SL, Bangladesh, ~~Turkey~~ Syria are minor producers. Mexico is largest producer in Africa.

Mustard and rape-seed are the crops of tropical and subtropical region. It is mostly grown in China, India, Bangladesh, Pak; European countries, Canada & U.S.A also grow; They are grown in cooler climate with 25 to 40 cm rainfall.

Linseed is cultivated for seeds as well as flax. Traditional area of production is Asia and coastal areas of Mediterranean <sup>(sea)</sup> region. It is grown in tropical & temperate region. India, Argentina, former USSR, U.S.A, Canada, France are leading producers.



Tea: req. warm & humid climate; Thrives well in region b/w 43°N to 27°S latitude and evenly distributed rainfall is necessary condition. req. rain of about 125 to 750 cm.

Major producers are India, SL, Bangladesh, China, Japan, Indonesia, Argentina & Kenya. U.K. & USA are major importers.

Coffee: It is a plant of highlands in the tropics. Coffee Arabica req. temp. of 15-20°C while coffee robusta req. a little high temp 20-30°C. Brazil is largest producer of coffee. Also grown in hilly slopes of Colombia, Venezuela, In India, Karnataka; In Indonesia, Java Island. Besides, it is also grown in some part of Africa and Malagasy. European countries are major importer besides USA.

Rubber: It is latex of tree widely found in tropical forests of Amazon & Zaïre Basins. Britishers started its plantation in Malaya, SL & Dutch in Indonesia. It has become product of South East Asia. Malaysia & Indonesia major producers; Thailand, India, China, Kenya, Brazil, Vietnam, Nigeria are other producers.

Sugarcane :- Tropical crop; temp. b/w  $21-27^{\circ}\text{C}$ ; Rain  
75-120cm; hot & humid climate;

loam, clay & alluvial soils are suitable;

Brazil occupied first place;

India second; Other imp producers are Cuba, Pak, China, Thailand, Mexico, Aus, Indonesia; Queensland and coastal plains of north New South Wales are imp. sugarcane cultivating regions of the ~~world~~ <sup>Australia</sup>

Cotton :- Ancient crop in India & Egypt. Req. warm climate but temp. b/w  $21-27^{\circ}\text{C}$  is ideal;

Plant of dry climate; Rain of 50cm is enough.

Distribution :- Cotton in southern U.S.A; North western uplands of Texas, Mississippi<sup>valley</sup>, Atlantic coastal plain are main cotton producing areas in U.S.A;

In China, it is produced in North China plain, Wei Ho valley & lower Chang Jiang valley. Major cotton producing areas of Central Asia lies in Tajikistan; Kazakhstan, Turkmenistan & Uzbekistan.

In India (black soil belt); Sao Paulo in Brazil; Nile Delta in Egypt; Indus valley region in Pak.

# Africa

- Whole continent made of several plateaus. Tropical continent
- Great rift valley; ~~Western~~ <sup>eastern</sup> & northern part of continent mostly have plateau while ~~eastern~~ <sup>western</sup> & northern parts are lowlands.
- Only 10% of soil suitable for crops. It includes volcanic soils of East Africa, the alluvial soil of river Nile, & certain soil of savanna lands. Large part of central Africa is under forest
- A large part of Africa is dry. Many rivers reach sea through series of rainfall as they flow from the higher plateau areas on to lower coastal areas. These can be used for hydroelectricity.

## Minerals

- Leads in production of diamond, gold, platinum.
- 95% of world's diamond (mainly in west & southern Africa)
- production of half of world's gold production. S.A. leads.
- Africa has large reserve of cobalt, magnesium, chromium, copper, tin, bauxite, uranium.

But there is not much coal & iron ore & hence not much steel industry which hampered industrial growth.

- Cobalt & Mn found in southern half of Africa. S.A leads in chromium. Congo & S.A main producer of copper, bauxite, uranium.

Petroleum is found in Nigeria, Libya, Angola.

Forest:- Large parts of central Africa covered with thick forest.

They have many valuable trees such as ebony, mahogany. Rubber trees grow wild in these forests; Different kind of palm trees. Cocoa & cola are another imp. trees.

Cocoa grows well in the equatorial lowlands. West African countries ~~produce~~ Ghana & Nigeria export good deal of cocoa.

Large variety of fruit trees. In the tropical region banana, pineapple, papaya, mango are common.

Crops:- Most of the food crops are root crops. With the exception of maize, cereals are not imp. Rice, wheat, millets are grown in small quantities.

Among cash crops palm oil, groundnut, cocoa, coffee, cotton are imp. Palm oil & groundnut are produced mainly in west Africa. Cotton has been grown in Nile valley for years.

Africa is one of largest producer & exporter of sisal. which is used in making ropes & sacks.

The islands of Zanzibar & Pemba are famous for cloves & coconuts.

In the past few years production of cash crops have been increased. This could provide them money to build dams, industry & improve their std. of living. Hence area under food crops has decreased.

South America :- Most part of continent in Southern Hemisphere

- Its Andes mountains are next only to Himalayas in their avg. heights.
- Large part of continent in ~~tropical~~ tropical belt. It has rain forest & extensive grasslands. Rich in some mineral resources as mineral oil, copper, silver, bauxite, tin & iron ore.

only 10% of soil suitable for agriculture. Wheat, maize, sugar cane, coffee, banana are imp. crops. Water resources are abundant. Continent has mostly light industries such as meat packing, textile mills. Heavy industry using mineral resources are developing slowly.

Land :- following physical divisions :  
 1) Western coastal strip  
 2) Western Mountain (Andes)  
 3) Central plain  
 4) Eastern highlands



- Climate & Vegetation :-
- i) equatorial type (selvas)
  - ii) Savanna (Ilanos, campos)
  - iii) Grain Chaco (Argentina, Paraguay)
  - iv) desert type (Atacama)
  - v) mediterranean (central Chile)
  - vi) temperate grassland (Pampas)
  - vii) Patagonia desert

Forests :- large part covered with forests; most of these in Amazon basin are equatorial rain forest. However rain forest are not utilised much due to several difficulties such as inaccessibility, economic viability etc.

Water :- Huge water resources; however under utilised;

Only Orinoco, Amazon & Parana are big & deep enough to be used for water transportation. Hydroelectric power generation has been increased over the years. South America accounts for about one fifth of world's total catch of fish.

Soil & crops :- only 10% of soil suitable for farming. Most of good farmland found in Argentina & Uruguay.

Another imp. farming region is along the Pacific coast in the middle part of Chile.

Wheat & maize are imp. food crop. Wheat is crop of temperate region, mainly grown in Argentina, Chile. Maize req. fair amount of rainfall. Its main producers are Brazil & Argentina.

Coffee, sugarcane, Cocoa, bananae are imp. cash crops. Brazil, Colombia & Ecuador are among leading producer of coffee. Cotton is another imp. cash crop grown in Brazil.

Animal Rearing! Has extensive grassland on which cattle, sheep, goat are reared. mainly for wool, meat & beef. Most imp. cattle rearing area are semi humid part of Argentina, Uruguay, Brazil. Original hot fertile grasses are replaced by nutritious grasses in these region. Sheep rearing areas are in Argentina & Chile. Argentina's main industry is meat packing & processing.

Minerals! Rich in minerals; huge deposits of mineral oil in Venezuela, coal tar in Trinidad. Brazil has one of the largest iron-ore reserve in the world. Chile is major producer of copper and Bolivia of Tin.

Rich deposits of nitrate in Atacama desert. It is imp source of manures & fertilizers. Guano island, off the coast of Peru, world's most concentrated <sup>style</sup> source of natural manure.

Australia:- Tropic of Capricorn almost passes through middle.

Three major physical divisions: i) Western Plateau (desert or semi-desert)  
ii) Central lowland  
iii) Eastern highland (great dividing range)

Climate:-

Eastern, North Eastern & South western part of the country come in the way of ~~south~~ winds blowing from sea, hence receive heavy rainfall. Eastern highland act as barrier to these rain bearing winds hence rain decreases to west. Southern coast of Australia enjoys mediterranean climate. Northern part receive rain from monsoon winds.

Resources:- One of the most industrialized countries;

Eucalyptus is most common tree; forest found where rainfall is heavy and grassland and scrubland in drier interior parts.

Crops:- due to moderate rainfall, undercultivated; wheat is most imp. food; New South Wales & West Aus. main wheat growing region. Barley, oats & maize are other food crops grown. Rice in irrigated areas. Sugar cane, tobacco, cotton are imp. crops grown in Queensland.

Sheep rearing :- largest no. of sheep in the world; Best sheep land b/w river Murray & Darling, reared for wool. Cattle are reared partly for dairy products & partly for meat. Finest breed producing cattle is reared on grasslands of Queensland & northern territory.

Minerals & Industries :- considerable mineral wealth; fairly good amount of gold is found; It possesses large reserves of coal, iron ore, kaunite, molybdenum & tin. It has some reserves of petroleum & natural gas.





Flash Flood:- It is rapid flooding of <sup>geomorphic</sup> low lying areas.

- ↳ It may be caused by heavy rain associated with a severe thunderstorm, hurricane, tropical storm.
- ↳ Flash floods are distinguished from regular floods by a time scale of less than six hours.
- ↳ Flash flooding occurs when precipitation falls rapidly on saturated soil or dry soil that has poor absorption capacity.
- ↳ The runoff collect in gullies and streams and as they join to form large volumes, often form a fast flowing mass of water & debris.
- ↳ can also caused by excessive rainfall released by hurricanes and other tropical storms; or meltwater from ice or snow flowing over ice sheet.
- ↳ Human activities can also cause flash flood to occur. for. failure of dams

Residents are expected to do following

- i) Be aware of signs of heavy rain
- ii) move to higher ground
- iii) do not cross flowing river.

Cloudburst: It is an extreme amount of precipitation sometimes with hail and thunder which normally lasts no longer than few minutes but is capable of creating flood conditions. It is sudden heavy, brief & usually unforecast rainfall. Cloud bursts are also responsible for flash flood creation.

- 4 It is not essential that cloudburst occurs only when a cloud clashes with a solid body like a mountain. They can also occur when hot water vapor mixes into cold resulting in sudden condensation.

