**REGION III: CHINA**

Located in Asia, China is the world’s largest country. It has the biggest population in the world totaling to 1.34bn people by 2004.

**RELIEF**

There are 8 major relief regions in China namely:

1. **Eastern highlands**

This region is located near the border to Russia. It is a highland region occupied by the China bay mountains and the Lesser Khinggan ranges.

1. **Eastern lowlands**

This is located in the East bordering the China Sea. It constitutes of the Manchuria plain, the China plain and the Valley of Yangtze river.

**It is the most populated and developed region because of the following:**

* Well drained fertile alluvial soils deposited by the River Yangtze that favour Agriculture.
* Favourable climatic conditions that attract settlements and Agricultural practices due to ice – free conditions.
* A variety of economic activities such as fishing, tourism, trade, Agriculture that attract settlement benefits.
* Easy access to the East China Sea which promotes trade attracting many people in the area to carry out business transactions.
* Existence of developed towns like Tianjin, Beijing with well – developed infrastructures like attracted many people in the area for administrative, education, health services, etc.

1. **Mongolian border upland**

This is located between the Eastern lowlands and Gobi Desert. It is a relatively highland region covered by the Huniggan ranges in the Northern part.

1. **The Xin Jiang – Mongolian upland**

This is located in the North Western China. It is a dry region with several deserts including Gobi Desert, Oracles desert, Taklamakan desert. The lowest point in China (Turban depression) is also found here.

1. **Tibetan highland**

This is s highland region located in South West China. It is covered by the highest mountains in the world, the Himalaya fold mountains. It is a barren region covered by rocks and snow. Some of the world’s longest rivers such as the Huang He (Ho) and R. Yangtze originate from this region.

1. **Southern upland**

It is located in Southern China. It is noted for the presence of R. Si-Kiang (Xi Jiang) and the Hainan island.

1. **Central uplands**

This is located between the Tibetan highlands and the eastern lowlands. It is a highland region covered by the Quinling mountains.

1. **Sichuan basin**

This is a relatively small Agricultural region located to the South of the central uplands. The region has well drained fertile alluvial soils and a network of rivers making it an important Agricultural region.

**RELIEF REGIONS OF CHINA Pg. 385**

**CLIMATIC REGIONS OF CHINA**

China has a wide range of climatic zones. Hot desert climate exists in the Gobi Desert and Taklamakan. Such areas experience hot temperatures of up to 380C during the day and cold temperatures during the night.

Mountainous areas such as the Himalayas are associated with very cold winters due to the effect of altitude.

In general, the summers are hot while winters are very cold.

**DRAINAGE SYSTEMS OF CHINA**

China has some of the longest rivers in the world. Most of the rivers originate from the snow – capped mountains in the Tibetan highlands flowing to the relatively lowland areas of the Eastern sea board of China.

The major rivers are **Yangtze, Si-Kiang (Xi Jiang), Huang Ho (He), Mekong, Hongshui He**, etc.

The major lakes are **Royang** and **Dongting**.

**DISTRIBUTION OF MAJOR RIVERS IN CHINA Pg. 386**

**YANGTZE RIVER (Yangtze Kiang/Chang Jiang->Long River/Da Jiang ->Great River/Jiang->The River)**

This is the third longest river in the world after the Nile and Amazon.

Also known as Chang Jiang River.

It has its source in the Tibetan mountains and its mouth (end) in the East China Sea.

**YANGTZE RIVER BASIN Pg 387**

**DEVELOPMENTS ALONG THE YANGTZE RIVER**

* HEP generation stations at Yichanga gorge which stimulated industrial growth.
* Several towns have grown up along the river e.g. Shanghai, Nanjing, Changping and Anqing.
* Crop cultivation takes along the delta due to presence of well drained fertile alluvial soils for the growth of cereals like wheat and rice.
* Fishing takes place which provide source of proteins to people.
* Tourism activities due to the magnificent scenery of snow – capped mountains like Himalayas and drainage features like Yangtze, Huang Ho, Yichanga gorge.
* Navigation (transport) of both imports and exports takes place along the river.

**Conditions favouring Agricultural activities in the Yangtze Kiang river basin.**

* Presence of well drained fertile alluvial soils that support the growth of crops like rice, wheat and potatoes.
* Presence of adequate fresh water from numerous rivers like Yangtze for irrigation.
* Suitable hot summer temperatures for quick growth and ripening of cereal crops like wheat, rice, etc.
* Presence of generally low – lying/ flat landscape which favour the use of machines like tractors, combined harvesters, etc.
* Presence of extensive land in the Yangtze river basin which encourages large scale cereal crop growing.
* Availability of highly skilled labour force provided by the large Chinese population used in ploughing of land, sowing, weeding, spraying, harvesting, transporting, processing, etc. of crops produced.
* Existence of a large population in towns like Beijing, Guangzhou, etc. which provides ready market for the crops produced like wheat and rice.
* Well – developed transport network by roads, railways, air and water which ease the movement of Agricultural inputs like fertilisers, seedlings, pesticides, etc. to farms and produced crops to market centres in Beijing, Canton, etc.
* Use of advanced technology involving the use of machines like tractors, overhead sprinklers, canals and aqueducts, fertiliser application which result into production of high quality and large quantities of cereal crops.
* Relative political stability provided by the Chinese army and police which encourage large scale investment in cereal crop growing in the Yangtze river basin.
* High levels of research involving the introduction of high yielding, quick maturing and disease resistant crop varieties which are highly demanded both in the Chinese and on the World markets in European, African, American countries, etc.
* Supportive government policies involving tax holidays, loans with little or no interest rates, free land, free seedlings, extension services etc. given to farmers which encourage large scale farming due to reduced costs of production.

**Benefits of Agriculture to the people living in the Yangtze river basin**

* Stimulated growth of Agro – based industries through providing raw materials like food processing, beverages and soft drinks industries.
* Provision of food stuffs like rice, wheat, potatoes, maize, etc. to people which improves their standards of living.
* Provision of employment opportunities to the people like transporters, farmers, marketing agents, accountants, etc. which helps them access basic needs of life like food, clothes, education, etc. through incomes earned.
* Source of foreign exchange through the exportation of surplus food stuffs to countries like Germany, France, Japan, etc. which is used in development of social and economic infrastructures like schools.
* Strengthened both national and international unity between communal farming members and the cereal crop importing countries with China like Japan, Germany, USA, France, etc.
* Provides market to the industrial manufactured products like fertilisers, pesticides, seedlings, tractors, harvesters, etc.
* Promotes economic diversification by providing an alternative source of income and foreign exchange which reduces over – reliance on few economic sectors like mining, fishing, forestry, etc.
* Promotes urbanization especially those towns dealing in handling of Agricultural inputs and produced crop products like Beijing, Guangzhou, Nanjing, Shanghai, etc. with well – developed social services like piped water, electricity, hospitals, etc.

**Problems facing farmers in the Yangtze Kiang River Basin**

* Flooding of River Yangtze during the rainy season from June – July which destroys people’s lives and property.
* Pests and diseases like caterpillars, moths, mosquitoes, tsetse flies etc. which destroy crops and scare away people’s lives.
* Declining soil fertility due to over use of land through monoculture and high rates of soil erosion on the Yangtze river banks which lead to production of low quality crop products.
* Limited capital to purchase Agricultural inputs like fertilisers, seedlings, pesticides etc. and for paying workers which limits large scale cereal crop growing.
* Underdeveloped transport network due to boggy conditions which limit the transportation of farm inputs like fertilisers, seedlings, etc. to farms and crop products to markets.
* Unfavourable government policies in form of high taxes charged on farmers and other workers which limits large scale farming due to increased costs of production.
* Limited land for extensive farming due to land fragmentation, population pressure and competition from other land uses like industrialisation, forestry, mining, etc. which lead to low crop yields.
* Low levels of technology involving the use of elementary tools like sticks, hoes, hand axes etc. which lead to production of low quality cereal crop products.
* Limited co – operation between communal members which lead to low quality crop production.

**Steps being taken to solve the above problems**

* Application of manure and fertilisers to restore soil fertility.
* Land consolidation to control land fragmentation so as to get bigger plots of land which increase the quantity and quality of crops produced.
* Construction of embankments along the river banks to control river flooding.
* Getting loans from banks and SACCOs to access farm inputs and pay workers.
* Intensive research is being done to develop high yielding, quick maturing and disease resistant crop varieties.
* Construction and rehabilitation of roads, railways and air transport routes to ease movement of inputs to farms and crop products to markets.
* Spraying using pesticides and insecticides to control pests and diseases.

**Effects of agriculture on the physical environment in the Yangtze River Basin**

* Over – use of pesticides and insecticides have led to contamination/pollution of the river leading loss of aquatic life like fish.
* Swamp reclamation to create land for extensive farming has led to loss of important bio – diversity in form of plants and animals.
* Over – cultivation and monoculture have led to loss of soil fertility and low land productivity.
* Cultivation near the river banks has led to increased siltation of the river leading constant seasonal flooding especially during the rainy season.
* High rates of deforestation to create land for extensive farming which leads to soil erosion and global warming.
* The establishment of Agro – based industries in the region has led to pollution of air, land and water through dumping of industrial fumes in the atmosphere, in water bodies and on land.

**HUANG – HO RIVER BASIN (Huang He/China’s Sorrow)**

This is another major river basin of China found in the North East.

This river supports crop cultivation termed as communal farming (Collectivisation).

The major crops grown are Lettuce, Soya beans, Cotton, Vegetables, Tomatoes, Garlic, Onions, etc.

It is called China’s sorrow because it experiences floods in 1931 which killed an estimated 800,000 Chinese citizens because there was nowhere and time to evacuate. There is also another flood in 1998 which resulted in 3,656 deaths and an economic loss of US$43.7bn in 2014. Another recent flood happened in 2014 which caused 829 deaths and losses of US$31.1bn.

**Huang – Ho River Basin Pg. 388**

**Problems caused by (effects of) Huang – Ho river**

* Flooding during the rainy season which destroy crops and settlements.
* Soil erosion along the river banks which limit farming due to reduced land productivity.
* Outbreak of water – borne diseases like Bilharzia, Malaria, Cholera, Dysentery especially during the time of floods.
* Limits the construction of transport and communication routes due to boggy/muddy conditions.

**Steps being taken to solve the above problems**

* Construction of embankments to control floods.
* Construction of canals and aqueducts to divert excess water and reduce boggy/muddy conditions.
* Planting of cover crops, afforestation and re – afforestation to control soil erosion.
* Spraying using insecticides and pesticides to control pests and diseases.

**SI-KIANG (XI JIANG) RIVER BASIN**

This is located in the South Eastern part of China near Vietnam.

It flows towards the South East China Sea.

**The Si-Kiang River Basin (1,957Km) Pg. 389**

**Conditions favouring Agricultural activities in the Si-Kiang River Basin.**

* Presence of well drained fertile alluvial soils that support the growth of crops like rice, wheat and potatoes.
* Presence of adequate fresh water from numerous rivers like Si-Kiang for irrigation.
* Suitable hot summer temperatures for quick growth and ripening of cereal crops like wheat, rice, etc.
* Presence of generally low – lying/ flat landscape which favour the use of machines like tractors, combined harvesters, etc.
* Presence of extensive land in the Si-Kiang river basin which encourages large scale cereal crop growing.
* Availability of highly skilled labour force provided by the large Chinese population used in ploughing of land, sowing, weeding, spraying, harvesting, transporting, processing, etc. of crops produced.
* Existence of a large population in towns like Nanning, Kweilin, Guangzhou, etc. which provides ready market for the crops produced like wheat and rice.
* Well – developed transport network by roads, railways, air and water which ease the movement of Agricultural inputs like fertilisers, seedlings, pesticides, etc. to farms and produced crops to market centres in Kweiyang, Nanning, Canton, etc.
* Use of advanced technology involving the use of machines like tractors, overhead sprinklers, canals and aqueducts, fertiliser application which result into production of high quality and large quantities of cereal crops.
* Relative political stability provided by the Chinese army and police which encourage large scale investment in cereal crop growing in the Si-Kiang river basin.
* High levels of research involving the introduction of high yielding, quick maturing and disease resistant crop varieties which are highly demanded both in the Chinese and on the World markets in European, African, American countries, etc.
* Supportive government policies involving tax holidays, loans with little or no interest rates, free land, free seedlings, extension services etc. given to farmers which encourage large scale farming due to reduced costs of production.

**Benefits of Agriculture to the people living in the Si-Kiang river basin**

* Stimulated growth of Agro – based industries through providing raw materials like food processing, beverages and soft drinks industries.
* Provision of food stuffs like rice, wheat, potatoes, maize, etc. to people which improves their standards of living.
* Provision of employment opportunities to the people like transporters, farmers, marketing agents, accountants, etc. which helps them access basic needs of life like food, clothes, education, etc. through incomes earned.
* Source of foreign exchange through the exportation of surplus food stuffs to countries like Germany, France, Japan, etc. which is used in development of social and economic infrastructures like schools.
* Strengthened both national and international unity between communal farming members and the cereal crop importing countries with China like Japan, Germany, USA, France, etc.
* Provides market to the industrial manufactured products like fertilisers, pesticides, seedlings, tractors, harvesters, etc.
* Promotes economic diversification by providing an alternative source of income and foreign exchange which reduces over – reliance on few economic sectors like mining, fishing, forestry, etc.
* Promotes urbanization especially those towns dealing in handling of Agricultural inputs and produced crop products like Nanning, Guangzhou, Kweilin etc. with well – developed social services like piped water, electricity, hospitals, etc.

**Problems facing farmers in the Si-Kiang River Basin**

* Flooding of River Si-Kiang during the rainy season from June – July which destroys people’s lives and property.
* Pests and diseases like caterpillars, moths, mosquitoes, tsetse flies etc. which destroy crops and scare away people’s lives.
* Declining soil fertility due to over use of land through monoculture and high rates of soil erosion on the Si-Kiang river banks which lead to production of low quality crop products.
* Limited capital to purchase Agricultural inputs like fertilisers, seedlings, pesticides etc. and for paying workers which limits large scale cereal crop growing.
* Underdeveloped transport network due to boggy conditions which limit the transportation of farm inputs like fertilisers, seedlings, etc. to farms and crop products to markets.
* Unfavourable government policies in form of high taxes charged on farmers and other workers which limits large scale farming due to increased costs of production.
* Limited land for extensive farming due to land fragmentation, population pressure and competition from other land uses like industrialisation, forestry, mining, etc. which lead to low crop yields.
* Low levels of technology involving the use of elementary tools like sticks, hoes, hand axes etc. which lead to production of low quality cereal crop products.
* Limited co – operation between communal members which lead to low quality crop production.

**Steps being taken to solve the above problems**

* Application of manure and fertilisers to restore soil fertility.
* Land consolidation to control land fragmentation so as to get bigger plots of land which increase the quantity and quality of crops produced.
* Construction of embankments along the river banks to control river flooding.
* Getting loans from banks and SACCOs to access farm inputs and pay workers.
* Intensive research is being done to develop high yielding, quick maturing and disease resistant crop varieties.
* Construction and rehabilitation of roads, railways and air transport routes to ease movement of inputs to farms and crop products to markets.
* Spraying using pesticides and insecticides to control pests and diseases.

## **Problems limiting the use of Chinese rivers**

* Some rivers are not navigable along some parts due to winter freezing and existence of rapids and waterfalls like Si-Kiang, Yangtze, Huang Ho.
* River siltation which hinders locomotion of big ships.
* Narrow valleys along gorges like Tongtu gorge on R. Yangtze which limit the use of big ships.
* Fluctuation of water levels in the North due to excessive evaporation resulting from desert conditions which limits the use of big ships.
* River flooding during the summer from June to July which makes the rivers like Yangtze, Huang Ho, Si-Kiang dangerous limiting navigation.
* Industrial waste pollution which makes water in the rivers unsuitable for both domestic and industrial uses.
* Serious congestion along the rivers which cause delays limiting quick and easy navigation.
* Floating vegetation along rivers which limit the movement of boats.

# **Steps being taken to solve the above problems**

* Construction of canals to by – pass waterfalls and rapids e.g. the Grand canal.
* Constant dredging is being carried out to control river siltation.
* Recycling/water purification before being used in industries and homes.
* Using alternative means of transport like roads, railways and air alongside water transport to reduce delays caused by congestion.
* Mechanical and chemical removal of floating vegetation to ease the use of the rivers for navigation.
* Use of ice breaker vessels and ships during winter to reduce winter freezing of water.

**AGRICULTURE IN CHINA**

This takes place in the Eastern region. Crops grown are Rice, Wheat, Corns, Sweet potatoes, Cotton, Tobacco, Tea, Rubber, etc. In the West, there is limited Agricultural practices because of the dry conditions e.g. along the Taklamakan and Gobi deserts.

**Conditions favouring Agriculture in China**

* Abundant fresh water from rivers like Huang – Ho, Yangtze, Si-Kiang, etc. for irrigation.
* Well drained fertile alluvial soils along river basins which support the growth of various crops like Corns, Potatoes, Wheat, Rice, etc.
* Favourable monsoon climatic conditions in the East with reliable rainfall and suitable temperatures which favour the growth of various crops like Wheat, Rice, etc.
* Generally flat/low – lying relief which ease the use of machines like tractors, combined harvesters and gravitational flow of water for irrigation thus encouraging large scale farming.
* High levels of organisation and co – operation through the formation of farming communes mobilised by people to carry out large scale farming.
* Well – developed transport network by roads, railways, air and water for transportation of Agricultural inputs like seedlings, fertilisers to farm and produced crops to markets.
* Ready market for the produced crops provided by the big Chinese population in towns like Beijing, Shanghai, Qingdao, etc.
* Cheap and abundant labour supply by the Chinese population who work in ploughing of land, sowing, spraying, harvesting, transportation, processing, etc. of produced crops.
* High levels of research involving the introduction of quick maturing, high yielding, drought and disease resistant crop varieties which ensures steady and constant food supply in markets all year round.
* Favourable government policies in form of low taxes and subsidies like free seedlings, free loans, free land, machines, etc. which encourage large scale farming due to reduced costs of production.
* High levels of technology involving the use of machines like tractors, combined harvesters, sprinklers, etc. which increase the quantity and quality of output in a short run.
* Low incidences of pests and diseases due to use application of pesticides and insecticides which lowers losses and increases the quality and quantity of crops produced.

**Problems facing farmers in China**

* Unfavourable climatic conditions especially in the West which limit crop growing due to the dry conditions along the Taklamakan and Gobi deserts.
* Seasonal flooding of rivers like Yangtze Kiang, Si-Kiang, Huang – Ho, etc. which destroy people’s crops and scare away lives.
* Infertile sandy soils in the Western semi – arid and arid areas which limit crop cultivation.
* High incidences of pests and diseases such as Malaria, Swine and Bird flu which kill animals, birds, people and destroy crops.
* Steep relief in the mountainous areas like the Tibetan plateau which limit the construction of transport routes like roads, railways, etc.
* Unfavourable government policies like high taxes charged on farmers which discourage large scale farming due to increased production costs.
* Inadequate skilled labour to work in ploughing of land, sowing, weeding, spraying, harvesting, etc. which leads to production of low quality crops and animal products.
* Inadequate capital to buy farm inputs like fertilisers, pesticides, seedlings, machines etc. and for paying workers which limits quick crop growing and large scale production.
* Shortage of ready market for crops and animal products due to high rates of poverty and stiff competition from other agriculture - dependent countries like USA, Canada, etc. which limit large scale farming.
* Inadequate land for extensive farming due to land fragmentation resulting from overpopulation and competition from other land uses like forestry, mining, industrialisation, etc. which lowers the quantity and quality of output.
* Rampant political instabilities especially in the neighbouring countries like Japan, Korea, Afghanistan which limit large scale investments in farming.

**PEOPLE’S COMMUNES**

China is the most densely populated country in the world with over 1.34bn people and therefore there is great need for food stuffs to support such a swollen population. It is because of that problem that communes were established.

***A commune*** refers to large farms created by the compulsory grouping of people into large units with the aim of improving the quality and quantity of Agricultural produce.

Communes were established in the 1950s by the communist government by forming 52,000 communes out of the 800m people of the time.

Each commune is self – sufficient in form of food requirements and have developed all forms of social and economic infrastructure/institutions such as factories, schools, banks, hospitals, etc.

The communist government set a production target for each commune so as to solve the food shortage problems.

Some of the most successful communes are ***Dai Yunnan commune in South West China, the Ping Chau commune, Chaunshan, Gele***, etc.

**Characteristics of communal/collective farming**

* Farms are managed communally or by a selected committee.
* Farms are highly mechanized.
* The proceeds are shared among the members.
* Marketing of the produce is controlled by the state.
* Farmers are allowed some limited land area for their own crops and livestock.
* Farms are amalgamated into larger farm units either voluntarily or compulsory.
* Engage in production of specified crops.

**Organisation of communes**

There are over 26,000 communes in China. Each commune is divided into smaller units called **Brigades.** Each Brigade is further divided into work team. Each work team is a village of between 25 – 30 families covering an area of 3,000ha.

Each family under a contract is assigned what crop or animal to raise. After raising what has been agreed upon, the surplus can be used as the family wishes. The state fixes the price for each produce.

**Benefits of Communes**

* Improved farming techniques through research, irrigation, application of fertilisers and seed breeding.
* Created large farm units for Agricultural modernization and mechanisation hence increased output of wheat, rice, barley, etc.
* Eliminated land fragmentation and the associated problems such as land conflicts, over – use of land, etc.
* Encouraged increased output and better quality of produce hence promotion of self – sufficiency in food requirements.
* Encourages co – operation and team work resulting into national unity necessary for political stability of the country.
* Stimulates development of Agro – based industries such as Wheat mills, Textiles, Food processing industries, etc. through provision of raw materials.
* Created employment opportunities to people involved in crop research, transport, processing of agricultural products in China.
* Encourages easy provision of social services like health care, education and transport services to the people.
* Allows all people to access means of production hence reducing income inequality among the people in China.
* Eases government assistance like loans, security, etc. to farmers since they have clear registration with the state.
* Exportation of the communal produce e.g. rice and wheat to countries like India, UK, etc. have earned foreign exchange to China used in providing social and economic infrastructure.
* Promoted economic diversification through providing an alternative source of income which reduces over – reliance on few economic sectors like fishing, forestry, mining, etc.
* Has put idle land particularly in the West into productive use through irrigation farming.

**Disadvantages of Communes**

* Encouraged destruction of the environment such as forests to establish communal farms.
* Affected individual initiative on the farmers resulting into low production of certain communes.
* There was mismanagement of communal farms through corruption resulting into great losses.
* Promoted monocultural practices that led to land degradation and decline in productivity.
* It involved farmer exploitation because the price of crops was fixed the state and not market mechanism.
* Involved regional quota system forcing the region to grow crops not suitable for that region which resulted into wastage of farmer’s efforts.
* Many times workers on the communal farms were paid low wages hence exploitation and poverty of the workers.
* Some rich farmers resisted amalgamation of their land to form communal farms.

**Changes brought by Communal farms**

* Farming on the communes is state directed and controlled.
* Food crop production centering on grains production is emphasized e.g. rice and wheat.
* Changed land ownership from individual ownership to state ownership i.e. land belongs to the state.
* Introduced custom of pulling together resources especially labour and capital.

**Success of Communes**

* Communal farming has been successful in the North East than South East because of the following reasons:
* Relief in the North East is relatively flat which favours large scale mechanized communal farming.
* There are large expanses of farm land in the North East which are more productive than those in the South Eastern part of China.
* The South East is more densely populated than the North East which leads to limited land for extensive communal farming in the South East.
* There are more economic activities in the South East like Industries and Forestry as compared to Agriculture in the North East which makes communal farming the best alternative form of land use.

China has the biggest population in the whole world. In order to reduce this rapid population growth, the government introduced a policy in 1979 to limit each family to only one child. Despite this policy, the Chinese population is growing by about 15m people per year. The single children are known as **“little emperors”** because they are often spoiled. By 2004, China’s population was 1.3bn people but has a relatively low population density of 132people/Km2.

Its population is unevenly distributed whereby ¾ of the country’s population is concentrated in only 15% of the total land area particularly in the East. 1/6 of China’s population is also concentrated in urban areas such as Shanghai while the Western half is still under populated. Moderately populated districts are found in the fringes of the densely populated regions.

**The densely populated areas included:**

* The North China plains of Manchuria
* Sichuan (Szechwan) basin
* Chang Jiang (Yangtze) basin
* Xi Jiang (Si-Kiang) basin

Such areas some of which are rural have densities as 1000 persons/Km2.

***They have such big populations because of the following factors:***

* Ideal conditions for Agriculture i.e. adequate monsoon rainfall and moderate temperatures which attract dense settlements whereby ¾ of the population earn a living from farming.
* Well drained fertile alluvial soils deposited from highlands into the lowlands like along the Yangtze, Si-Kiang, Huang He, Liao He, etc. suitable for cereal crop growing through providing water for irrigation thus attracting many people to settle in such areas.
* Well – developed towns and cities such as Shanghai, Beijing, Tangshan, Dalian, Shenyang, Changchun, etc. with high quality social services and economic infrastructures like education, medical, electricity, security, roads, airports.

**Moderately populated areas**

They include those in the fringes of the densely populated areas around Manchuria, Szechwan basin and Yangtze basin.

***Factors that favour population distribution in these areas*** include favourable gentle sloping relief e.g. the North East China plains in Manchuria, fairly drained fertile soils and constant water supplies from rivers like Nen Jiang, Mekong, etc.

**Sparsely populated areas**

They include interior provinces such Qinghai, Tibet plateau, Inner Mongolia, Gansu, Si-Kiang, etc.

***Physical factors exert more influence on population distribution in these areas which include***:

The cold continental climate creates cold desert unfavourable conditions which limit Agriculture and settlement.

The best form of land use in this region in **herding (mainly sheep).** In Mongolia, it is practiced by the **Tibetans, Kazaks, Kirgiz** and **Mongols.**

***POPULATION DISTRIBUTION IN CHINA Pg. 395***

**Conditions favouring population distribution in China.**

* Heavy rainfall above 1000mm per annum and ideal temperatures of 4 – 200C in the Eastern region such as Manchuria attracted a big population because they favour settlement and Agriculture. On the other hand, there is sparse population in the South West (Tibet plateau) due to Taklamakan desert, Gobi cold desert in the North also discourages settlement.
* Steep highlands and rugged landscape have caused sparse population in the South West because they limit transport, Agriculture and are prone to landslides. In contrast, the gentle slopes in the North China plains known as Manchuria, river valleys such as Si-Kiang river valley and other lowlands in the East are densely populated.
* Areas with well drained fertile alluvial soils e.g. the Yangtze River valley, Si-Kiang River valley are densely populated because they favour Agriculture. On the other hand, areas with thin skeletal infertile sandy soils such as Inner Mongolia, the interior province in the Tibet’s Gansu limit Agriculture and settlement and so are thinly/sparsely populated.
* Areas with high incidences of pests and diseases e.g. tsetse flies in the Inner Mongolia and Gansu scare away people and so are sparsely populated while areas with controlled pests and diseases in the East e.g. Manchuria region are densely populated.
* Areas with permanent drainage features like Lakes like Royang, Dongting, river basins like Yangtze, Si-Kiang are densely populated because water for Agriculture (irrigation), domestic and industrial purposes is readily available. On the other hand, limited water supply in the Gobi Desert, Takla Makan desert and the plateau of Tibet limits settlement, Agriculture and industrialisation and so remain sparsely populated.
* Areas with limited or no minerals and other natural resources tend to have fewer social and economic facilities making them have small populations e.g. Tibet plateau, Tarim basin. But areas with various minerals such as Kunming, Lan Zhou and Manchuria are densely populated because they offer employment opportunities.
* The highly urbanized centres such as Peking (Beijing), Shanghai, etc. are densely populated because of well-developed infrastructures such as hospitals, piped water, electricity, security, schools, etc. On the other hand, rural areas like Gobi Desert, Tibet plateau etc. remain thinly populated because of under developed social and economic infrastructure.
* Well-developed industrial centres like Beijing, Guangzhou, Shanghai are densely populated because they offer job opportunities to various groups of people like engineers, managers, drivers, security officers, etc. and those areas have well-developed social and economic infrastructure.
* Historical factors have caused dense populations in Eastern China and small populations in the interior and West e.g. the Eastern territories like Manchuria region, Yangtze basin, Si-Kiang basin were occupied by people of the **Han Race** who consider themselves as true Chinese. They tend to live together, avoid mixing with other ethnic groups and strongly objected to family planning because they want to fill China with the “**true Chinese**”. Similarly, the Eastern territories were occupied by the Koreans, Japanese and other immigrants from Europe thus resulting into a big population.
* Well-developed transport and communication network in the Eastern areas around Manchuria, Beijing, Shanghai attract a big population because of being accessible and near the coast with well-developed roads, railway lines and air ports that facilitate trade and commerce. On the other hand, the Western mountainous areas of Tibet, Himalayas are sparsely populated because they have under-developed social and economic infrastructure and so are inaccessible.

**BENEFITS OF THE CHINESE BIG POPULATION**

* With a big population of 1.4bn people, China’s big population provides market for both Agricultural and industrial products such as rice and wheat from the Yangtze and Si-Kiang river basins as well as manufactured industrial products from the Manchuria region.
* The big population of 1.4bn is a source of cheap labour for work in the Agricultural, industrial, mining, forestry, fishing and other sectors which promotes maximum utilization of natural resources.
* The big population of 1.4bn is a source of government revenue through paying taxes used in provision of social and economic infrastructure like roads, hospitals, schools, airports, etc.
* The big population provides reliable security services to defend the country through the deployment in police and Army. Today, China has a strong and big army simply because of its big population.
* The big population stimulates development of Agriculture and industrialisation for example China has compelled/resorted to development of her Agricultural and industrial sector so as to look after its swelling population.
* It promotes urbanization due to existence of large population densities in towns like Beijing, Shanghai, Guangzhou, Manchuria, Shenyang, etc. because they offer trade, commercial, health, education and accommodation services.

**DISADVANTAGES OF CHINA’S BIG POPULATION**

* Heavy dependence burden due to a large number of the young and the elderly who are not productive which leads to low savings, low investment, low capital accumulation and retards economic growth and development of the country.
* High population growth rate strains social service centres like schools, hospitals, roads as well as over – exploitation and depletion of natural resources like forests, minerals, land, etc.
* It has resulted into high costs of living in terms of accommodation, education, health care, feeding, etc. in Shanghai, Beijing, etc. forcing the Chinese to migrate to other countries particularly United Kingdom, Canada, USA and Africa.
* It has resulted into an increase in crime rate such as human trafficking, drug abuse, theft, piracy looking for survival in big cities due to high rates of unemployment.
* It has resulted into overcrowding in the outskirts of big towns and cities like Beijing, Shanghai, Shenyang, etc. which results into development of slums with related evils like prostitution.
* It has led to development of towns Shanghai, Beijing, Guangzhou, etc. and their associated evils such as congestion on roads, air and water pollution as well as land degradation due to improper urban waste disposal.
* The large Chinese population has led to land shortages particularly in big cities and towns such as Beijing, Shanghai, Guangzhou, etc. which results into land fragmentation.
* High population in China has led to increased government expenditure in an attempt to look after the increasing population in terms of purchasing drugs, maintain schools, hospitals, establish roads railways, providing safe drinking water etc. for the people.

**INDUSTRIALISATION IN CHINA**

China is a newly industrialised country (NIC). The communist government has attempted to industrialise China in a period of only 30 years since 1949. Previously, it was an Agricultural country but today, the trend has changed.

It is currently the leading producer of Iron and Steel, Textiles and consumer goods such as toys, light metal goods, etc.

**There are seven major industrial regions namely:**

1. **Manchuria industrial region.** This is located in the North East. This is China’s greatest area for heavy industry. Industries include Iron and Steel, Engineering, Automobiles, Factory equipment, and Chemicals. The availability of local Coal and Iron ore is the basis for Iron and Steel industry in the region.
2. **Tianjin – Beijing industrial region.** Industrial towns include Tianjin and Beijing (National capital). It is noted for Ship building, Textiles, Chemicals, Metallurgical and Engineering industries. Presence of Coal in Shansi and Hebei has promoted industrial growth in the area.
3. **Shanxi – Baotou industrial region.** This is China’s largest Coalfield in the provinces Shensi and Shansi (Shaanxi and Shanxi). Industrial towns are Baotou, Taiyuan and Datong. Industries include Agricultural equipment, Iron & Steel and Chemical. The region also has large quantities of Iron ore.
4. **Lower Chang Jiang (Yangtze Kiang) area.** This is China’s oldest industrial region because the area has been open to foreign influence since the 1840s. Shanghai is the major industrial town here. Industries include Textile mills, Oil refineries, Ship yards, Steel plants, Flour mills, Engineering, etc. Shanghai is also the premier port of China and so have great access to raw materials.
5. **Wuhan.** This is an area for Iron and Steel, Railway equipment, Ship building, Chemicals, Machine tools, etc.
6. **Xi Jiang (Si-Kiang) Delta region.** Located at the mouth of the Xi Jiang (Si-Kiang) is the port of Guangzhou (Canton). Industries are Chemicals, Brewing, Food processing, Ship building, Textiles. Its proximity/closeness to Hong Kong; a British colony stimulated trade and industries.

**INDUSTRIAL CENTRES AND MINING AREAS IN CHINA Pg. 399**

**CONDITIONS FAVOURING INDUSTRIAL GROWTH IN CHINA**

* Abundant Agricultural raw materials such as Cotton, Timber, Rice Wheat and vegetables from the Sichuan province used in Agro – based industries like Textiles, Furniture making, Food processing.
* Abundant mineral resources such as Iron ore from the Manchuria region for Iron and Steel industries, Oil, Gold, Copper, Limestone from Yunshan Gold mine (largest in China) in Wen county North West of Gansu province with reserves of over 200 Tonnes have promoted the Jewelry producing Necklaces, Ear rings, etc.
* Varied energy resources for running of industrial machines e.g. Coal from Shensi, Hebei, Manchuria region while HEP is tapped from R. Yangtze, local and imported Oil, Nuclear energy at Manchuria.
* Availability of cheap skilled and semi – skilled labour provided by the local population of 1,415,844 people (the highest in the world) who work in offloading raw materials and loading of industrial manufactured goods on tracks for export.
* Availability of ready and reliable market for manufactured goods provided by the 1.4bn people in large towns and cities like Tianjin, Beijing, Guangzhou, Shanghai, Shansi and in outside countries like India, Pakistan, Russia, USA, Canada etc.
* The existence of an indented coastline in the East along the Pacific Ocean have led to the development of several ports like Shanghai, Qingdao, Tianjin which handle imported raw materials like cotton, minerals, etc. and exports like manufactured goods to outside markets in Europe, Africa and America.
* Relative political stability of China provided by the Chinese Police and Army ensured security which encouraged large scale investment in industries.
* High levels of technological development and transfer from USA, Germany, Britain in addition to the well trained skilled Chinese who work in industries in processing and refining of manufactured goods.
* Presence of extensive land for industrial establishment in Manchuria, Tianjin, Beijing and Xi Jiang industrial regions.
* Existence of people’s communes in Manchuria, Beijing, Tianjin have led to industrial development whereby each commune was encouraged to establish its factory for food stuffs, production of Agricultural machinery, chemicals, etc.
* Abundant water supply from permanent rivers like Yangtze, Huang He, Nen Jiang have been used in the production of industrial steam, processing of textiles and paper industries, cooling of machines in the Iron and Steel industries as well as being used as an input in the distilleries, Breweries and soft drinks industries.
* Well-developed transport network in form of roads, electrified railways and airways all over the major industrial like Wuhan, Sichuan, Xi Jiang, Tianjin – Beijing used in movement of raw materials and distribution of manufactured goods to market centres.
* Availability of large sums of capital raised by the rich entrepreneurs and loans from China Development Bank necessary for purchasing machines like pulleys, Bull dozers, Conveyor belts; industrial raw materials like cotton, Gold, Iron ore etc. and for paying of workers.
* Supportive government policies towards industrialisation like tax holidays, loans with little or no interest rates, leasing of land, privatization of state – owned firms etc. all which aim at promoting large scale industrial development due to reduced costs of production.

**PROBLEMS FACING THE INDUSTRIAL SECTOR IN CHINA**

* Shortage of sufficient and energy in form of HEP, Coal and Natural gas which limits the processing work in manufacturing industries.
* Existence of under-developed transport network due to water logging and the steep nature of the landscape in the Western parts especially around the Tibetan plateau which limit construction of transport routes like roads, railways hence making it difficult to transport raw materials to industries and manufactured products to market centres.
* Inadequate raw materials like minerals e.g. Oil, Coal, Iron Ore due to small deposits which limits large scale industrial development.
* Limited skilled labour to work in industries in form of electrical, chemical, structural engineers, marketing agents and managers which lead to production of low quality products that are less demanded on the world market.
* Stiff competition for market with high quality products from highly established industries in developed countries like Germany, USA, Japan which reduces demand for Chinese manufactured products on the world market.
* Existence of protectionism policies against Chinese manufactured products like powdered milk, beef for example in Germany, USA which limit large scale industrialisation in China.

**BENEFITS OF INDUSTRIALISATION TO THE ECONOMY OF CHINA**

* Promotes infrastructure development in form of airports, roads, electrified railways and power stations which facilitate mobility, trade and commerce and movement of industrial raw materials to factories and manufactured commodities to markets.
* Has led to growth and development of towns and ports such as Shanghai, Tianjin, Qingdao which offer business opportunities, accommodation, schools, hospitals etc. to various groups of people.
* Agro – based industries such as Meat packing, Leather tanning, Foot wear and Textiles provide market for Agricultural products such as Cotton, Silk worms, hides, skins and beef.
* Employment opportunities have been created by the Ship building, Oil refining and Petro – Chemical industries which provides incomes to various groups of people like Engineers, Managers, etc. thus improving their standards of living.
* Foreign exchange is earned through the exportation of manufactured goods such as electronics and automobiles to countries in Europe, America and Africa used in the development of infrastructures like roads, schools, power stations, hospitals.
* Has promoted Bi – lateral relations between China and other countries in America, Europe and Africa which strengthen security, political stability and trade creation (business) opportunities.
* Promotes acquisition of skills to workers employed in the Automobiles, Aircraft, Oil refineries and Petro – chemical industries for example welding, modern engineering techniques, motor vehicle mechanics etc. which helps them to do various activities.
* Has led to capital and foreign exchange inflow through foreign investors such as Volkswagen, Ford motors, Unilever, Siemens, IBM, British Petroleum, General Electricals mostly from USA, Britain, Germany etc. used to develop infrastructure like roads, schools, health centres, etc.
* Industries form a large tax base hence source of government revenue used in development of infrastructures like roads, schools, hospitals, etc. which promotes service delivery.
* Industrialisation has led to economic diversification through providing an alternative source of income and foreign exchange which reduces overreliance on few sectors of the economy like Fishing, Forestry, Mining, Agriculture.
* Has promoted tourism especially the case with the most successful Automobile industries which provides China with huge sums of foreign exchange for the economic development of the country.
* Has promoted self – sufficiency in China which reduce foreign exchange outflow on importation of industrial manufactured goods from USA and Europe through producing the previously imported commodities locally e.g. computers, electrical equipments, motor vehicles, mobile phones, etc.
* Provides both consumer & capital goods to the people of China such as soda, canned fish, TV sets, etc. which has improved people’s standards of living.

**DISADVANTAGES OF INDUSTRIALISATION IN CHINA**

* The massive ship building, fish canning and Petro – chemical industries at Osaka, Kobe, Yokohama have led to pollution of the Yellow Sea, South China Sea which leads to loss of aquatic life such as whales, sharks, etc.
* Smog due to atmospheric pollution by industrial smoke and fumes such as Carbon dioxide and Carbon monoxide has led to global warming and increase in health hazards such as acidic rain, Asthma, Whooping cough, etc.
* Has led to land degradation as well as disfigurement of the landscape in form of ware houses especially mine pits are left uncovered.
* Has led to urbanization like Shanghai, Beijing, Guangzhou, Tianjin, etc. with its associated evils like congestion, prostitution, slum development, etc. which lower people’s standards of living.
* Profit repatriation by foreign companies which own most of the Chinese industries especially from USA, Britain, Germany etc. which leads to loss of national revenue and capital outflow hence retarding economic growth and development.
* High rates of accidents due to use of automatic machines, nuclear leakages, explosion of steam chambers in Textiles, Food processing and Chemical industries which lead to loss of people’s lives and property.
* Industrialisation leads to displacement of people often at small compensation dues e.g. smog, congestion and noise pollution in Manchuria region are still forcing people to vacate in search for clean air elsewhere which affects national development.
* The Ship building, Pulp, paper and chopsticks industries have led to large scale deforestation of the already few existing forests which leads to environmental degradation and loss of useful flora and fauna.
* High rates of unemployment due to continuous use of high – tech methods of production involving massive use of machines like Robots, conveyor belts, tractors, cranes, etc.
* Over – utilization of natural resources such as Coal, Oil, Iron ore, Copper, Manganese etc. to develop the Electronic, Chemical, Iron and Steel industries lead to depletion of non – renewable mineral resources.
* Industrialisation leads to increased rate of rural – urban migration which leads to overpopulation in major cities and towns like Shanghai, Beijing resulting into declining Agricultural activities in rural areas.

**MANCHURIA INDUSTRIAL REGION OF CHINA**

This is located in the North East of China. It is an important region because it is the mining centre for Coal and Iron ore, it is an Agricultural centre where communal farming takes place. It is also an industrial centre very important for the Iron and Steel industries.

**LOCATION OF MANCHURIA REGION Pg. 403**

**Conditions that made Manchuria an important region in China**

* Presence of various mineral resources such as Coal, Copper, Manganese, Iron ore etc. necessary for industrial growth
* Availability of large quantities of HEP for domestic and industrial uses like cooking, lighting, ironing, running of industrial machines in Iron and Steel industries.
* Availability of well-developed transport and communication network by roads, railways, air and water which ease the movement of people, raw materials and manufactured commodities to their respective destinations.
* Availability of various tourist attractions such as the Great Wall of China that bring in foreign exchange necessary for rapid economic growth and development.

**MINING REGIONS OF CHINA Pg. 404**

**REVISION QUESTIONS**

1. a) Draw a sketch map of China and on it, mark and name:
2. The South China Sea
3. Rivers: Huang Ho and Sikiang
4. Area with a population density of:

* Less than 10 persons per Km2
* 10 – 100 persons per Km2
* 100 – 200 persons per Km2
* Over 200 persons per Km2

b) Describe the conditions which have led to a population density of less than 10 persons per Km2 in China.

c) Explain the: i) Advantages; ii) Disadvantages of the low population

d) Outline the conditions that have led to a population density of over 200 persons per Km2 in China.

1. a) Draw a sketch map of the Sikiang River valley and on it, mark and name:
2. Rivers: Sikiang and Hongshui He
3. Hainan island
4. Gulf of Tong King
5. Lei Zhou peninsular
6. Towns: Hong Kong and Guangzhou.

b) Describe the conditions that have favoured Agricultural development in the Sikiang river valley.

c) Outline the problems faced by farmers in the Si-Kiang river valley.

d) Suggest the steps that should be taken to solve the problems in c) above.

1. a) Draw a sketch map of Manchuria and on it, mark and name:

**MANCHURIA ##RESEARCH MAP##**

1. Penki Iron ore mining centre.
2. Coal mining centres: Fushun, Sian and Pehpiao.
3. Industrial towns: Dairen, Harbin and Antunj.

b) Describe the conditions which have led to the concentration of industries in any of the towns above.

c) Describe the factors which have led to the development of urban centres in China.

d) Outline the:

1. Problems which have resulted from urbanization in China.
2. Steps being taken to improve urban centres in China.
3. a) Name any two regions in China where the Commune system of farming is practiced.

b) Describe the characteristics of the Commune system of farming in China.

c) What factors favoured the establishment of Agricultural Communes in any one region named in a) above?

d) Outline the:

1. Benefits of Communal farming.
2. Problems facing the Commune system of farming in china.

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