CLASS 10 NOTES

GEOGRAPHY

Resources and Development

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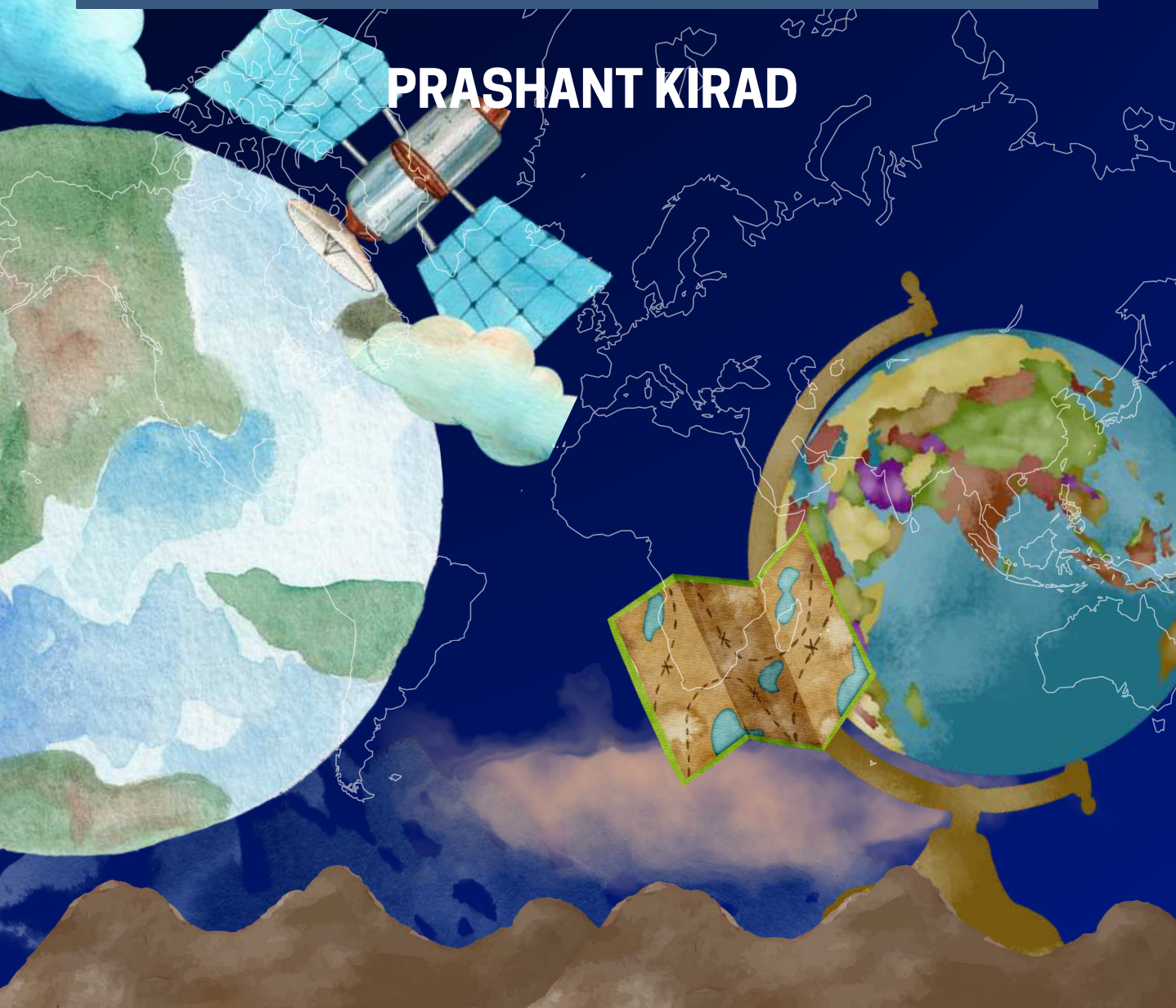
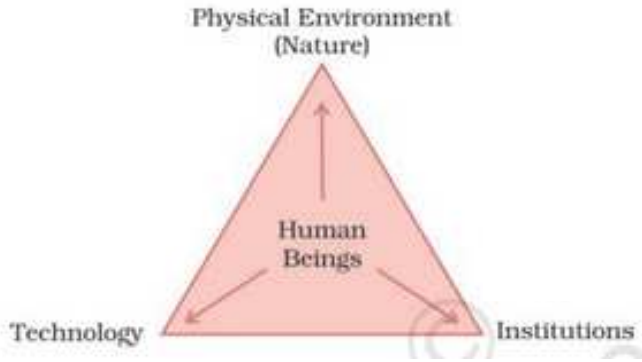


RESOURCES AND DEVELOPMENT

Resources → culturally acceptable
→ technologically accessible
→ economically feasible



Interdependent relationship between nature, technology and institutions

E.M.A
EXAM MEI AYEGA

Classification of Resources

(a) On the basis of origin

- **biotic** — eg. plants, animals
- **abiotic** — eg. air, water,

(b) On the basis of exhaustibility

- **Renewable** — eg. water
- **Non-Renewable** — eg. coal

(a) On the basis of ownership

Individual
eg. house, car.

Community
eg. schools, hospitals.

National
eg. wildlife, railways.

International
eg. mountains, seas.




(a) On the basis of status of development

Potential
eg. wind energy.

Developed
eg. coal.

Stock
eg. water, minerals.

Reserves
eg. forests, reservoirs.




Development of Resources

Resouces are free gifts of nature. As a result, people use them indiscriminately.

Major problems:

- The centralized control of resources in a few hands split society into two groups, rich and poor.
- Consumption of resources to satisfy the greed of a few people.
- It has resulted in worldwide environmental issues such as global warming, ozone depletion, pollution, and land degradation.

Sustainable Development

E.M.A

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

In June 1992 - Rio de Janeiro Earth Summit

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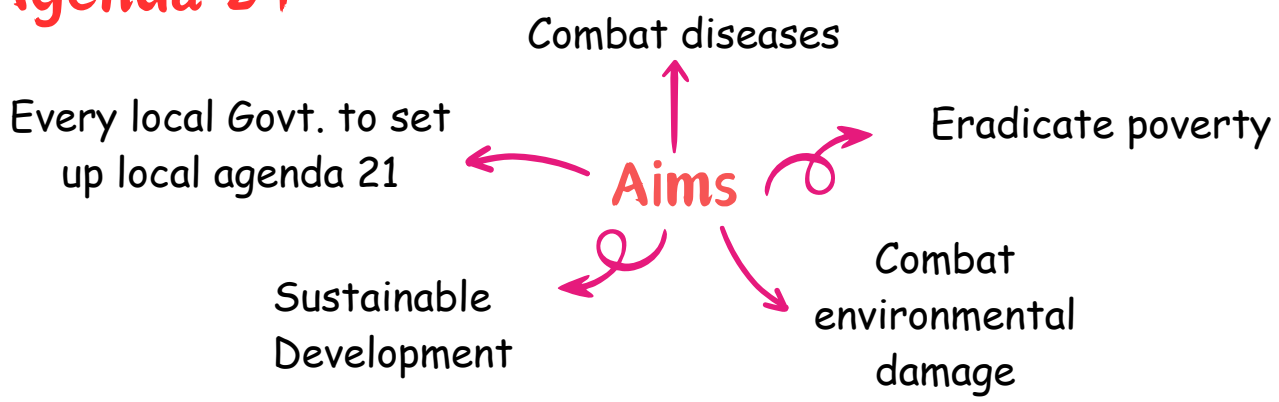
adopted Agenda 21 ⟶ to achieve sustainable development in 21st century

Agenda 21



Resource Planning

Why do we need resource planning?

- Resouces planning is widely accepted strategy for the judicious use of resources.
- Due to uneven distribution of resources in India.
- Most of the resources are limited. Therefore, if these resources are not used rationally, we will be in trouble.
- To avoid wastage or overutilization of resources.

Process of Resource Planning

1. Identification and Inventory of resources
2. Evolving a planning structure
3. Matching resource development plans with overall national development plans

3 stages

Conservation of Resources

E.M.A

- Irrational Consumption and over utilization of resources results in socio-economic and environmental problems. To overcome these problems, resource conservation at various levels is important.

"The world has enough for everyone's need, but not enough for everyone's greed"
-Mahatma Gandhi

Land Resources

It supports natural vegetation, economic activities, wildlife, human life, transport and communication systems.

Limitation: Land is an asset of finite magnitude.

Distribution of Landmass:

Plains (43%)

Mountains (30%)

Plateau (27%)

Land Utilization

E.M.A

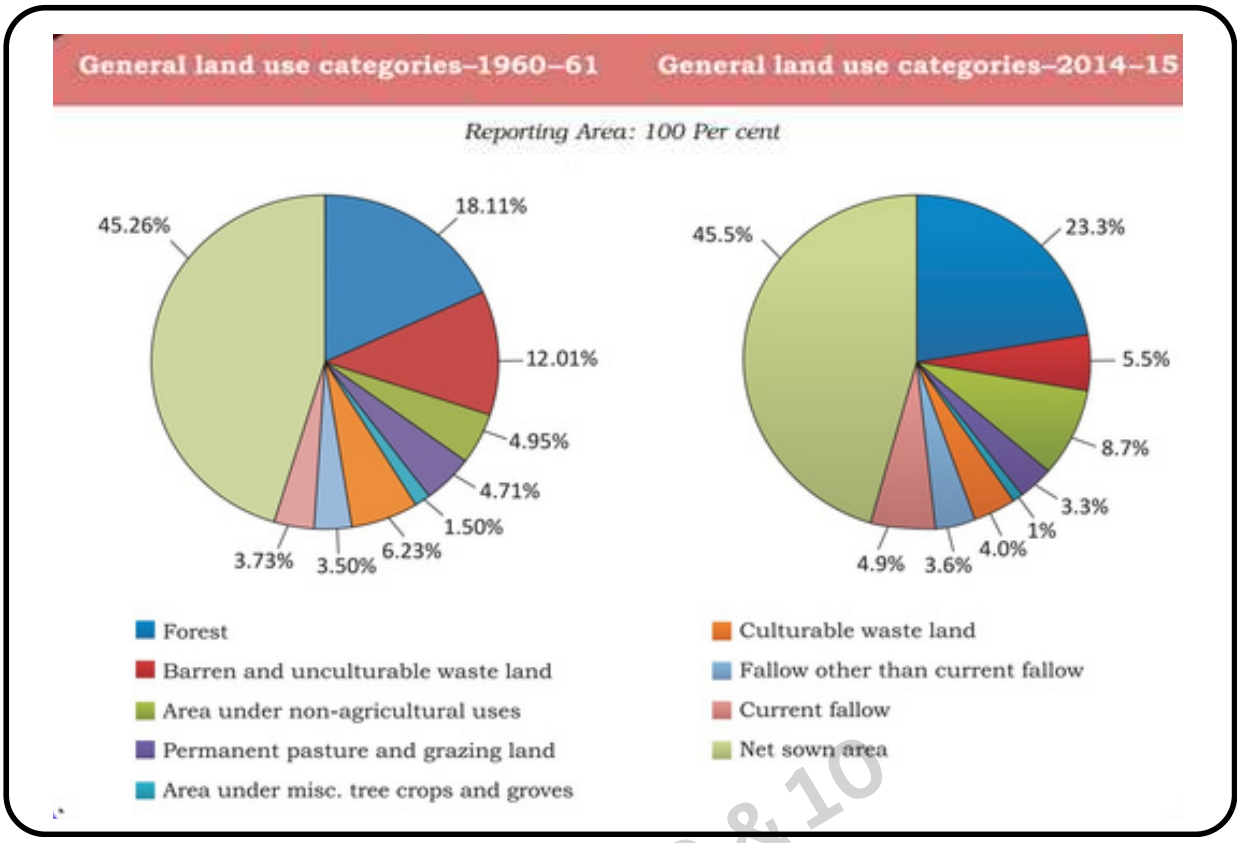
Land resources are utilized for the following purposes:

1) Forest area.
2) Land not available for cultivation.
3) Permanent pastures and other grazing lands.
4) Land under miscellaneous uses.
5) Cultivable wasteland.
6) Fallow lands.
7) Net area sown.

Net sown area - The physical extent of land on which crops are sown and harvested is known as net sown area.

Gross cropped area - Area sown more than once in an agricultural year plus net sown area is known as gross cropped area.

Land use pattern in India



Land Degradation and its Conservation

Causes

- Deforestation
- Overgrazing by cattle
- Overuse of fertilizers
- Forest fires
- Improper irrigation system
- Improper crop rotation

Measures

- Afforestation
- Management of grazing
- Proper management of waste land
- Proper discharge of Industrial waste
- Stabilization of sand dunes
- Control on mining activities

Soil as a Resource

E.M.A

Soil
- Natural renewable resource
- Supports living organisms on the earth

The important factors of soil formation are:

- Relief
- Parent rock
- Climate
- Vegetation
- Forces of nature - change in temperature, actions of running water, wind and glaciers, and activity of decomposers.

Classification of Soils

E.M.A

(i) Alluvial Soil – widely spread and important soil

Formation - Deposited by three important Himalayan River systems - the Indus, the Ganga and the Brahmaputra.
Location - Northern plains, Eastern Coastal plains and river deltas of the eastern coast.

Characteristics -

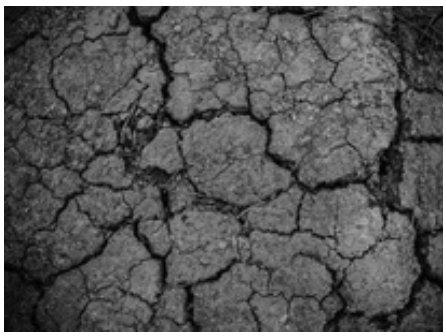
- It consists of sand, silt and clay.
- Found in Piedmont plains - Duars, Chos and Terai
- It is of two types- Bhangar and Khadar.

Bhangar - the old alluvium and less fertile.

Khadar - the new alluvium and more fertile.

- Rich in Potash and Lime but deficient in Nitrogen, phosphoric acid and humus (except the alluvium in the Ganga deltaic region which is rich in humus).
- Crops - Sugarcane, paddy, wheat, cereal and pulses.
- Due to its high fertility, regions of alluvial soil are densely populated.

(ii) Black Soil



Formation - Climatic condition and parent rock

Deccan trap made up of basalt

Location - Plateaus of Maharashtra, Saurashtra, Malwa, MP and Chattisgarh.

Characteristics -

- Black in colour and are also known as regur soils.
- Ideal for growing cotton and is also known as black cotton soil.
- Made up of extremely fine i.e. clayey material.
- Well-known for their capacity to hold moisture.
- Rich in calcium carbonate, magnesium, potash and lime.
- Crops - Cotton, Sugarcane.

(iii) Red and Yellow Soil

Formation - Crystalline igneous rocks in areas of low rainfall
Location - Southern eastern and Eastern part of our country

Characteristics -

- Develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks.
- Turns yellow in its hydrated form.
- Also found in parts of Odisha, Chhattisgarh and piedmont zone of Western Ghats.
- Crops - Plantation (tea, coffee and rubber)

(iv) Laterite Soil

Formation - high temperature and heavy rainfall
Location - Western Ghats and North eastern states

Characteristics -

- Suitable for cultivation with adequate doses of manures and fertilizers.
- Low humus content because decomposers, like bacteria, get destroyed due to high temperature.
- Found in Karnataka, Kerela, Tamil Nadu, Madhya Pradesh, and hilly areas of Odisha and Assam.
- Crops - Plantation crops

(iv) Arid Soil

Formation - High temperature and low rainfall
Sand texture and saline in nature
Location - North western part

Characteristics -

- Found in the western parts of Rajasthan.
- After proper irrigation these soils become cultivable.
- Lacks humus and moisture because dry climate, high temperature make evaporation faster.
- Salt content is very high and common salt is obtained by evaporating water.

(iv) Forest Soil

Formation - Mechanical withering by snow, rain and temperature.
Location - Hilly areas (Kashmir to Arunachal)

Characteristics -

- Found in areas where sufficient rain forests are available.
- Feature differs based on location.
- Loamy and silty in valley sides and coarse grained in the upper slopes.
- Slit in the lower parts of the valleys particularly on the river terraces and alluvial fans are fertile.

Top 7 Questions:

3 Markers

1. Give the characteristics of the soil used for growing cotton. List the areas in India where this soil is found.

Ans. **Characteristics of soil used for growing cotton are:**
(i) It is made up of fine clayey material with a high moisture retention capacity.
(ii) It is rich in soil nutrients like calcium carbonate, magnesium, potash and lime, but poor in phosphoric content.
(iii) It develops deep cracks during hot weather, helping in proper aeration of the soil.
(iv) It is found in the plateau areas of Maharashtra, Gujarat, Madhya Pradesh and Chhattisgarh, as well as in the Godavari and Krishna valleys.

2. "India has land under a variety of relief features." Justify the statement with three examples.

Ans. India has land under a variety of relief features. In India, 30 percent area are mountainous, 27 percent are plateaus and 43 percent are plains, all of these have specific advantages to be utilised.

Main advantages of India's land

- Mountains are source to many streams and rivers, some of them are perennial. These regions have very high potential for hydro electricity productions, etc and are also good tourism destinations.

- Plateaus are mostly laden (heavily loaded) with minerals, fossil fuels and forest, etc so are economically very useful.
- Plains are most important land resource for human beings. These are fertile and most of the food crops, etc are grown here. They are also useful for the development of factories, roads, etc.

3. Why is resource planning essential? Give some examples which explain its need.

Ans. Resource planning is the widely accepted strategy for judicious use of resources. It is essential as resources are limited and unevenly distributed over the country. Planning will help in reducing wastage as well as taking care of the requirements of future generations.

Example:

(i) An example of uneven distribution is Arunachal Pradesh, which has an abundance of water resources but lacks infrastructural development to utilise the water resources.

(ii) Irrational consumption and over-utilisation of resources lead to socio-economic and environmental problems like in Punjab, waterlogging has increased salinity and alkalinity in the soil.

4. Give three main features of the soil found in the river deltas of the Indian coast.

Ans. The three main features of the soil found in the river deltas of the Indian coast (alluvial soil) are

(i) These soils are more common in the Piedmont plains or plains at the foothills such as Duars, Chos and Terai.

(ii) It is also known as transported soil, as the soil has been transported by the rivers to its current location.
(iii) It can also be described on the basis of age. The older alluvial soil, further away from the rivers is known as Bangar, whereas the newer soil near the rivers is known as Khadar.

5. "Resource planning is a complex process." Justify the statement with arguments.

Ans. It is true that resource planning is a complex process. It can be proved through the following arguments:
(i) Resource planning involves identification and taking stock of the resources. It is very difficult to estimate the quantity and quality of each resource of a country.
(ii) Resource Planning involves finding appropriate technology and skill to utilise the resources. It becomes difficult to match the available technology that can be used to utilise the resources fully.
(iii) Matching the resource development plans to the overall national development plans for the betterment of the country, its people and maintaining the environmental balance at the same time is a complex process.

5 markers

1. "Human activities have contributed significantly in land degradation." Justify the statement with three examples.

Ans. The human activities responsible for land degradation in India are:

(i) Deforestation due to mining activities in Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha have caused severe land degradation. Mining sites are abandoned after excavation work is completed,
leaving deep scars.
(ii) Mineral processing like grinding of limestone for cement industry as well as calcite and soapstone for ceramic industry generate huge quantities of dust which falls down on land. This retards the process of infiltration of water into the soil.
(iii) Effluents as waste from industries have become a major source of land and water pollution in many parts of the country.
(iv) Over irrigation in Punjab, Haryana and Western Uttar Pradesh is responsible for land degradation due to waterlogging, leading to increase in salinity.

2. Describe alluvial soil under the following heads:
(a) Formation (b) Distribution
(c) Classification (d) Nutrients

Ans. Alluvial soil can be described as follows:

(a) **Formation** : Alluvial soil is made-up of silt, sand and clay. It is deposited by three important Himalayan river systems the Indus, the Ganga and the Brahmaputra. It is bigger and coarser in the upper reaches of the river and becomes finer as the river flows down.
(b) **Distribution/Area** :This soil is prevalent in the river valleys of the Northern plains (Indus, Ganga, Brahmaputra), strips in Gujarat and Rajasthan, as well as in the Eastern coastal plains in the deltas of rivers of the Peninsular plateau (Mahanadi, Krishna, Kaveri).

(c) **Classification** : According to their age, alluvial soils can be classified as (Bangar) old alluvial and Khadar (new alluvial). Khadar has higher concentration of kankar and contains more fine particles than Bangar.
(d) **Nutrients/Minerals** :This soil is rich in nutrients s like potash, phosphoric acid: and lime, which is suitable for growing paddy, wheat, sugarcane and other cereal and pulse crops.

Map Work: