

अभ्यास

| CLASS 10<sup>TH</sup>

SOCIAL SCIENCE

GEOGRAPHY | RESOURCES AND DEVELOPMENT

*Crafted with love* 

**By Digraj Singh Rajput**

**Concept**

- Development of resources
- Need → Planning
- Planning in India and conservation

**Land as a Resource**

- Land utilization
- Land use pattern in India.
- Land degradation and conservation measures.

**Soil as a resource**

- Classification of soil
- Soil erosion and soil conservation.

Which of the following pair is correctly matched ?

CBSE Board Paper 2023 - Set [32/1/1]

A. Alluvial Soil — Gangetic Plain

B. Black Soil — Himalayan Region

C. Arid Soil — Western Ghats

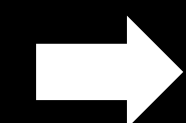
D. Laterite Soil — Desert Area

**Resources**

Material which satisfy our needs, provided it is **technologically accessible, economically feasible and culturally acceptable.**

**Classification**

→ **On the basis of** - Origin, Exhaustibility, Ownership, Status of development.

**Development of Resources****Need?**

→ **Vital for human survival but there are some issues**

Depletion, Accumulation in few hands( Rich and Poor) and global ecological crises → **Solution**

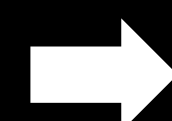
∴ **Earth summit**, 1992 gave the concept of **Agenda 21**.

More than 100 heads of states met in Rio de Janeiro in Brazil for addressing urgent problems of environmental protection and socio-economic development at the global level.

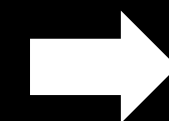
It aims at achieving global sustainable development through combating environmental damage, poverty, disease by global cooperation.

↓  
**Sustainable development**

Resource planning



Need?



Resources are unevenly distributed

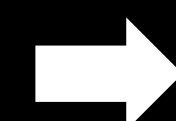
How it takes place in India? 🤔



1. Identification of Resources, 2. Evolving a planning structure to use them, 3. Matching resource development plan with National Development plan.

Conservation of Resources: Technology, Colonialism and need for conservation → Gandhian Idea 🤔

Land Resources



India has varied relief features with different uses. ( Plain, Plateau and Mountains)

Land use pattern in India



Forests, Land not for cultivation (Barren land, roads, factories etc.)  
other uncultivated land (Pasture land, under miscellaneous trees  
culturable wasteland) fallow lands and Net Sown Area

- Permanent pasture ↓
- Variation in net sown area 🤔
- Forest area in the country is far lower than the desired 33 per cent

CBSE Board Paper 2020 - Set [32/1/1]

Describe the importance of judicious use of resources.

OR

Describe the different steps of 'resource planning.

**Land degradation**

Deforestation, overgrazing, mining, excessive irrigation.

**Conservation Measures:**

Afforestation, management of grazing land, controlling mining and over irrigation.

**Soil as a resource**

Important renewable natural resource, relief, parent rock, climate vegetation plays a very crucial role in soil formation.

**Soil erosion and soil conservation**

(Removal of soil cover and subsequent washing down is described as soil erosion)

**Causes**

Wind, glacier, water (Gullies, sheet erosion), deforestation, overgrazing and deforestation.

**Conservation measures**

Contour ploughing, terrace cultivation, strip cropping, shelter belts and afforestation.

Mention the main reason for land degradation in states like Jharkhand, Chhattisgarh and Odisha.

CBSE Board Paper 2023 - Set [32/5/1]

A. Overgrazing

B. Mining

C. Over irrigation

D. Mineral processing

# Ninja Technique To learn Soils

Soil	Basis	Area / State	Crop	Contain	X - Factor
Alluvial		Northern plains (Interplay of Indus, Ganga Brahmaputra)	Paddy, wheat, sugar cane and other cereal	Silt, sand and clay Potash, phosphoric acid and lime.	Khadar and bangar
Black		Deccan trap (Gujarat, M.P and Maharashtra)	Cotton	Fine clayey material Calcium carbonate, magnesium carbonate but poor in phosphoric content.	Self aeration (develops cracks and sticky when dry and wet respectively.)
Red and Yellow		Odisha, chhattisgarh and piedmont zone of the Western Ghats.	Plantation (coffee)	Develops on crystalline igneous rocks and contain iron particles.	Reddish due to diffusion of iron and yellow when it occurs in hydrated form.
Laterite		Hilly areas of karnataka, Kerala, Meghalaya( Tropical Evergreen areas.)	Cashew nuts, pineapple cultivation tea and coffee.	Poor in humans, deep and acidic and deficient in plant nutrients.	Intense leaching due to heavy rain.
Arid		Found in the Western parts of Rajasthan	Rainfed crops, Jowar, Bajra, Maize	Lacks humus and moisture, sandy in texture and saline in nature,Contain calcium.	After proper irrigation become cultivable
Forest		Hill and mountainous regions (J&K,HP,UK, Sikkim and AP)	Mountain vegetations and forests.	Loamy and silty in valley and coarse grained in upper slopes	Fertile on valley and terraces.

Identify the soil with the help of following information.

- It develops in areas with high temperature.
- It is the result of intense leaching due to heavy rain.
- Humus content is low.

CBSE Board Paper 2024 - Set [32/1/3]

A. Arid soil

B. Laterite soil

C. Yellow soil

D. Black soil

**Resource** : Everything available in our environment which can be used to satisfy our needs, provided it is technologically accessible, economically feasible and culturally acceptable can be termed as 'Resource'.

**Sustainable development** : It means development should take place without damaging the environment, and development in the present should not compromise with the needs of the future generations.

**Fallow land** : Fallow land refers to bare land in which crops are not cultivated for five years or more and the Current fallow land is land that is left uncultivated for one or less than one agricultural year.

**Agenda 21** : Agenda 21 It is the declaration signed by world leaders in 1992 at the United Nations Conference on Environment and Development (UNCED), which took place at Rio de Janeiro, Brazil. It aims at achieving global sustainable development through combating environmental damage, poverty, disease by global cooperation.

**Culturable wasteland** : Land not cultivated during the last five years or more in succession including the current year for some reason or the other.

**Net Sown Area**: Net Sown Area is the area sown with crops at least once in an agricultural year and counted only once.

**Gross cropped Area** : The gross cropped area (GCA) is the total area sown once or multiple times in a given year. When a crop is sown twice on the same piece of land, the area is counted twice, this includes net sown area and area sown twice.

**Red and Yellow soil** : These soils are generally found in the Western Ghats, Odisha and Chhattisgarh. Red soil gets its colour from the iron found in its composition in a crystallized form. The soil takes on a yellow colour when it is hydrated.

**Leaching** : Laterite soil develops due to the leaching process. It is a process, it is the process under which the soil nutrients get washed off due to heavy rain and temperature.

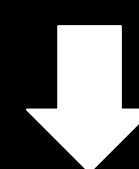
**Sheet Erosion** : Water flows as a sheet over large areas down a slope washing away all the topsoil. This process is known as sheet erosion.

**Gullies** : Running water cuts through the clayey soils and makes deep channels/ gullies. This type of pollution is responsible for destroying the fertility of the land and making it bad land. In Chambal basin such lands are called Ravines.

**Strip cropping**: It is type of cultivation in which different crops are sown in alternate strips to prevent soil erosion. These strips breaks up the force of the wind and wind erosion can also be prevented.

**Shelterbelts**: Shelter belts are rows of trees planted to protect an area, especially a field of crops, from wind and bad weather conditions. Shelter belts have contributed significantly to stabilisation of sand dunes in deserts.

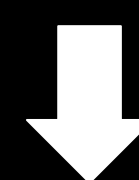
Mention three problems that are associated with the indiscriminate use of resources.



**The following three problems are the result of indiscriminate use of resources:**

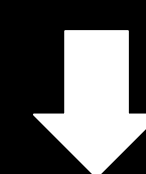
- **Depletion of resources for satisfying the greed of few individuals.**
- **Accumulation of resources in few hands, which in turn has divided the society into two segments-rich and poor.**
- **Indiscriminate exploitation of resources has led to global ecological crises such as global warming, ozone layer depletion, environmental pollution and land degradation.**

Discuss the purpose of Rio de Janeiro Earth Summit and what was its outcome.



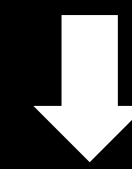
- The first United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro, Brazil in 1992 to formulate an Agenda to promote sustainable development.
- This convention endorsed the Global Forest Principles and adopted 'Agenda 21' for achieving sustainable development in the 21st century.
- The objectives of Agenda 21 are the elimination of poverty, hunger, sickness and illiteracy worldwide while halting the deterioration of sustain life.

“Resource planning is a complex process” Justify the statement with arguments.



- **Identification and inventory of resources** across the regions of the country, which involve surveying, mapping and measuring the quality as well as quantity of the resources.
- **Evolving a proper planning structure** for the development of the resources by using appropriate skill, technology and institutional set up.
- **Matching of resource development plans with overall national development plans.**

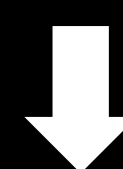
Suggest any six measures to solve the problem of land degradation.



**The following measures can help to solve the problem of land degradation**

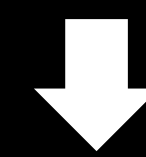
- **Afforestation over deforested areas.**
- **Proper management of grazing on permanent pastures.**
- **In areas where desertification has taken place, growing thorny bushes.**
- **Proper discharge and disposal of industrial effluents after treatment.**
- **Planting of shelterbelts.**
- **Control on mining activities.**

Trace the features of alluvial soil with reference to its formation, area, classification and containing minerals.



- **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.
- **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).
- **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.
- **Minerals :** This soil is rich in nutrients like potash, phosphoric acid and lime, which is suitable for growing paddy, wheat, sugarcane and other cereal and pulse crops.

What steps can be taken to control soil erosion in the hilly areas?



**Following steps should be taken to control soil erosion in the hilly areas**

- **Afforestation - This is done by planting trees.**
- **Terrace farming and contour ploughing this is done across the hill slopes.**
- **Restricted grazing of animals and they should be moved over different pastures so as to avoid erosion of soil.**
- **Any other relevant point.**

CBSE Board Paper 2019 - Set [32/1/1]

How is over irrigation responsible for land degradation in Punjab?

OR

How is cement industry responsible for land degradation?

CBSE Board Paper 2019 - Set [32/2/1]

Describe any three main features of 'Alluvial soil' found in India.

OR

Describe any three main features of 'Black soil' found in India.

CBSE Board Paper 2019 - Set [32/3/1]

How are mining activities responsible for land degradation in Jharkhand ?

OR

How is overgrazing responsible for land degradation in Gujarat ?

CBSE Board Paper 2019 - Set [32/3/1]

“Resource planning is a complex process.” Justify the statement with arguments.

CBSE Board Paper 2019 - Set [32/4/1]

Which type of soil is most suitable for growing the crop of cashew nut ?

OR

Which type of soil in India is most widespread and important ?

CBSE Board Paper 2019 - Set [32/5/1]

Highlight the reason for land being known as an utmost important natural resource.

OR

Highlight the importance of contour ploughing.

CBSE Board Paper 2020 - Set [32/2/1]

Fill in the blanks of the following table with suitable information.

Type of Resources : On the basis of Ownership

Resource	Examples / Type
<u>    A ?    </u>	Grazing grounds, ponds etc.
<u>    B ?    </u>	Cultivated land of farmer.

CBSE Board Paper 2020 - Set [32/3/1]

Read the following features of a soil and name the related soil :

- (a) Develops in high rainfall area
- (b) Intense leaching process takes place.
- (c) Humus content is low.

**CBSE Board Paper 2020 - Set [32/4/1]**

Describe the importance of an equitable distribution of resources in the society.

OR

Describe the need of resources for human survival.

**CBSE Board Paper 2020 - Set [32/5/1]**

Give one example of the main commercial crop cultivable in laterite soil.

OR

Give one example of the Community Owned Resources.

CBSE Board Paper 2022 - Set [32/1/1]

In which one of the following states is overgrazing the main reason for land degradation?

- (a) Maharashtra
- (b) Punjab
- (c) Haryana
- (d) Uttar Pradesh

CBSE Board Paper 2022 - Set [32/1/1]

Identify the soil which ranges from red to brown in colour and saline in nature.

- (a) Red soil
- (b) Arid soil
- (c) Alluvial soil
- (d) Laterite soil

CBSE Board Paper 2022 - Set [32/1/1]

Which one of the following forces leads to maximum soil erosion in plains?

- (a) Wind
- (b) Glacier
- (c) Running water
- (d) Earthquake

CBSE Board Paper 2022 - Set [32/1/1]

Deforestation due to mining has caused severe land degradation in which one of the following states?

- (a) Odisha
- (b) Tamil Nadu
- (c) Kerala
- (d) Gujarat

CBSE Board Paper 2023 - Set [32/2/1]

Which one of the following soils develops in an area with high temperature and heavy rainfall ?

- (a) Red and Yellow
- (b) Alluvial
- (c) Black
- (d) Laterite

CBSE Board Paper 2023 - Set [32/4/1]

Which of the following is correctly matched ?

- (a) Alluvial Soil - Consist of sand and silt
- (b) Black Soil - Salt content is high
- (c) Arid Soil - Diffusion of iron in crystalline
- (d) Laterite Soil - Made up of Lava flows

CBSE Board Paper 2023 - Set [32/6/1]

Which of the following pair is correctly matched?

- (A) Alluvial Soil - Western Rajasthan
- (B) Black Soil - Northern Plain
- (C) Arid Soil - Deccan Plateau
- (D) Laterite Soil - Western Ghats

CBSE Board Paper 2024 - Set [32/2/2]

Read the following characteristics of a soil and identify the soil from the given options.

It is widely spread and important soil.

Northern plains are made of it.

It consists of sand, silt and clay.

Options:

(A) Yellow soil

(B) Black soil

(C) Laterite soil

(D) Alluvial soil

CBSE Board Paper 2024 - Set [32/4/1]

Match the column - 1 with column - 2 and choose the correct option :

Column - 1 (Resources)	Column - 2 (Example)
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(I) Biological	1. Coal
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(II) Renewable	2. Wildlife
----------------	-------------

(III) Non-renewable	3. Solar Energy
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Options :

I	II	III
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(a)	1	3	2
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(b)	3	2	1
-----	---	---	---

(c)	2	3	1
-----	---	---	---

(d)	1	2	3
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CBSE Board Paper 2024 - Set [32/5/2]

Read the given source and answer the questions that follow:

### **Conservation of Resources**

At the international level, the Club of Rome advocated resource conservation for the first time in a more systematic way in 1968. Subsequently, in 1974, Gandhian philosophy was once again presented by Schumacher in his book *Small is Beautiful*. The seminal contribution with respect to resource conservation at the global level was made by the Brundtland Commission Report, 1987. This report introduced the concept of 'Sustainable Development' and advocated it as a means for resource conservation, which was subsequently published in a book entitled *Our Common Future*. Another significant contribution was made at the Earth Summit at Rio de Janeiro, Brazil in 1992.

- (1) Explain the meaning of sustainable development.
- (2) In which international conference was 'Agenda-21' accepted?
- (3) Explain any two outcomes of the Summit.

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