

Renewable and non renewable resources

- Natural Resources: inexhaustible and exhaustible
- Changed chemistry of the Earth. Ecosystem changed
- The renewable resources, if not used 'sustainably', can be depleted more quickly than they can be renewed.
- Environmental Management

Development and Natural Resources

- Means a positive change
- Improvement and progress
- Economic growth and positive changes associated with it, like, higher living standard, life expectancy, mass education, social welfare etc.
- Modernization

Renewable Resources	Non-renewable Resources
It can be used again and again throughout its life.	It cannot be used again and again as it is limited which can be depleted one day.
They are the energy resources which cannot be exhausted.	They are the energy resources which can be exhausted one day.
It is environment-friendly as the amount of carbon emission is low.	It is not environment-friendly as the amount of carbon emission is high.
These resources are present in unlimited quantity.	These resources are present in a limited quantity only.
The total cost of these resources is low.	The total cost of these resources is comparatively high.
These resources are pollution free.	These resources are not pollution free.
The maintenance cost of the renewable resources is very high.	The maintenance cost of the renewable resources is low.
Requires large land area for the installation of the power plant.	Requires less land area for the installation of the power plant.
It is sustainable	It is exhaustible

**Renewable resources: have a life cycle or can be renewed, self
–regenerating, recycled, management, maintainable**

- Water
- Energy resources: solar, wind, wave and tidal, geothermal, biogas, nuclear, hydro power
- Forests
- Wildlife

Non Renewable resources:

- Mineral resources: fossil fuel, metals, minor minerals
- Land resources
- Soil resources

Trees

- A woody plant, perennial, more than 1,00,000 species.
- Appeared at a later stage on Earth. Appear timeless due to their longevity and size
- Ideological associations between trees and people, must be considered social and ecological explanations of forest cover change.
- ✓ Fearful: trees separate from culture, can be cut down
- ✓ Romanticised/venerated: tree centric ideas, tree plantations
 - Difference between forests and trees
- ✓ A significant portion of world trees are not in forests
- ✓ Forest: systemic collection of plants, soils and animals. Tree: diverse set of species and individuals

- **Should trees have a standing? Ethics, Justice and Equality**

- ✓ Eco-centrism dominant view
- ✓ Forest constituted of trees, living things upon whom deforestation acts
- ✓ Christopher Stone (1972): Trees should have legal rights and standing in the court, legal rights will not make tree felling universally illegal, (as even people have rights but they cannot exercise them everywhere)
- ✓ Rights based approach : focus on exploitation/harms of deforestation on trees themselves and mobilization of legal mechanisms to protect both local people and trees themselves against depredation.

Forest resources:

It is being gradually acknowledged that a forest is not a simple ecological entity, but a complex socio-ecological construct in which different forest management systems (and non forest systems) provide different mixes of benefits to different stakeholders located at varying distances from the forest, and that stakes are ecologically and socially determined.

Sharachandra Lele and Ajit Menon

- Forest Survey of India, (MoEFCC), every two year State of Forest Report is released, 1987(1st), 2021 (17th). **Forest cover** from 19 to 24 percent. *(there is difference between forest cover and forest area).*
- Indian Forest Act, 1927 is colonial act thus characterised by exclusion, extraction and centralisation of power
- The Forest Conservation Act, 1986 aimed at forest depletion further centralisation of power.
- Godavarman Case (1995). SC asked to follow the dictionary meaning in deciding forest boundary.

Approaches in forest policy:

1. Colonial-aimed at revenue generation/industrial needs, established exclusive state control over forest, some resistance: granting of rights to local communities e.g. Van panchayats Uttarakhand, Mundarikhuntkattidar in Jharkhand and Sopinabetta in Karnataka.
2. Post-colonial: same colonial policy, dominance of supra-local interests, 1990s participatory management(National Forest Policy, 1988), wildlife and biodiversity conservation goal (WLPA 1972), .

Commonality in two phases : state versus the local communities

Assignment:

- Explore the recent coal crises in India as a non renewable resource problem?
 - How the present urbanisation and development model pose problem for the sand resources?
 - Problems with wind energy:
<https://www.downtoearth.org.in/blog/energy/renewable-energy-why-is-wind-losing-ground--69356>
 - **Should natural objects(rivers, trees, oceans, mountains) have legal rights : Indian case: Legal rights like humans for rivers**
1. <https://edition.cnn.com/2017/03/22/asia/india-river-human/index.html>
 2. <https://www.bbc.com/news/world-asia-india-40537701#:~:text=India's%20revered%20Ganges%20and%20Yamuna,legal%20status%20as%20human%20beings>
- Read chapter: Natural resources, pg 16-51