

# **Course Code:MCC102A**

## **Course Title:Environmental Studies**

**Lecture No: 8**

**Title: Natural resources**

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# Lecture-8

## Intended Learning Outcomes

**At the end of this Lecture, students will be able to**

- Explain different natural resources
- Identify the threats to our natural resources
- Discuss measures to overcome different problems



# About our Country:

- **Area:** 3,287,590 sq km
- **Population:** 1,188,310,000
- **Literacy :** 74%%
- **Government:** Federal Democratic Republic
- **Unemployment:** 5%
- **GDP:** \$3.57 trillion
- **Chief Occupations:** Agriculture is the chief occupation of the country followed by service and industrial jobs.



- **Gross domestic product (GDP)** is a measure of the size of an economy. It is defined as "an aggregate measure of production equal to the sum of the gross values added of all resident, institutional units engaged in production (plus any taxes, and minus any subsidies, on products not included in the value of their outputs)" by the OECD.

# Our Natural Resources Wealth

- **Land**
  - Arable Land: 48%
  - Forests: 22%
- **Water**
  - Total renewable water resources: 1,907.8 km<sup>3</sup>/year
- **Soil**
  - Many fertile soils including alluvial soil which comprises 80% of the total fertile soil available



# Our Natural Resources Wealth

- **Minerals**

- India occupies a prominent place in the world in the production of many minerals. The chief minerals include Coal, iron ore, manganese, mica, bauxite, titanium ore, chromite, diamonds, limestone, thorium, petroleum, natural gas

- **Energy**

- India makes use of both renewable and non renewable energy resources. Energy resources include natural gas, thermal, hydro, nuclear and other renewable sources.



# Our Natural Resources Wealth

- **Vegetation**

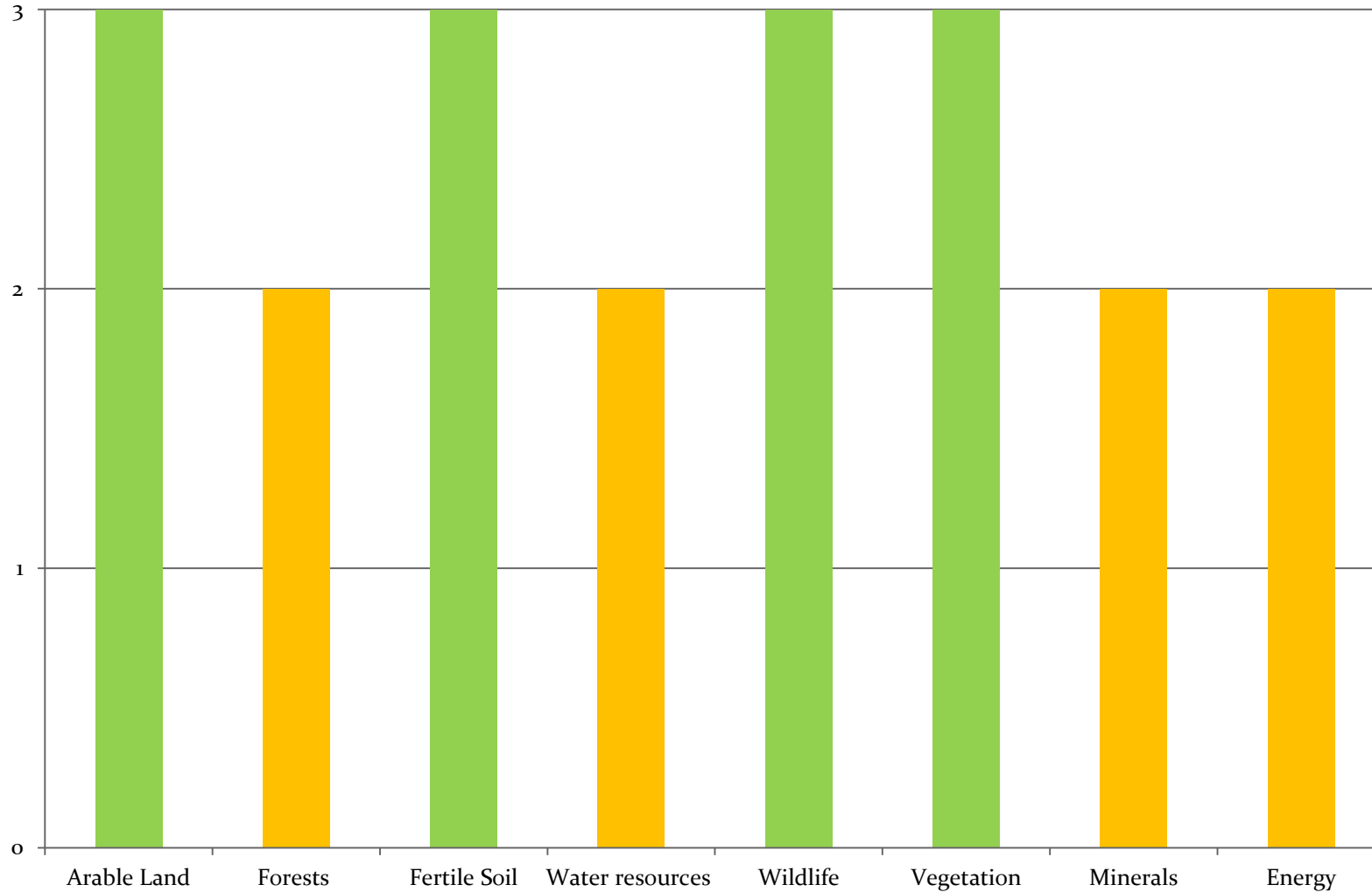
- India has diverse vegetation which includes tropical rainforests, deciduous forests and coniferous forests. India has 6 % of the world's flowering plants.

- **Wildlife**

- India has many species of animals, birds and reptiles which includes 7.6% of all mammalian, 12.6% of avian, 6.2% of reptilian of the wildlife population in the world Asian Elephant, Bengal Tiger, Asiatic Lion, Leopard, Sloth Bear and Indian Rhinoceros, antelopes are some of the important animals.



# Natural Resources Chart



|        |          |          |
|--------|----------|----------|
| 1      | 2        | 3        |
| Scarce | Adequate | Abundant |



# What is calling for our attention?

India as country is blessed with rich natural resources. But from our research on the usage of natural resources in our country, we found that the resources are depleting every day. For example:

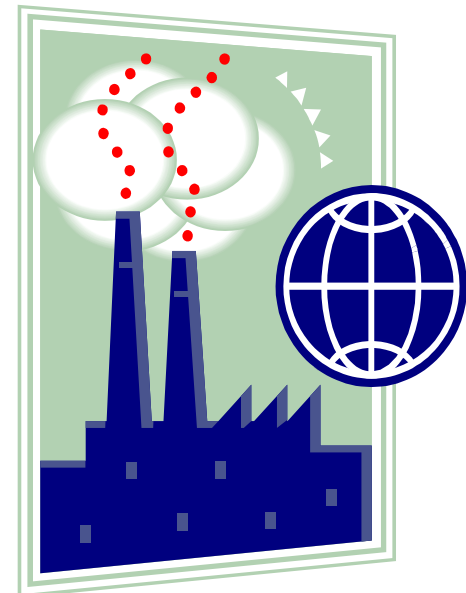
- Forest and arable land is being depleted due to urbanization, overpopulation and overconsumption
- Wild life resources are being lost due to illegal poaching, hunting and industrialization.
- Water resources are being contaminated are drying up due to industrialization.





# Threats to Natural Resources

- Urbanisation and Industrialisation
- Overpopulation
- Overconsumption and irresponsible use
- Deforestation
- Erosion
- Habitat Destruction
- Natural Hazards
- No proper access to resources such as water



# What are we doing to save our resources?

The Government of India has undertaken many measures for the conservation of the resources

- Regulations and reforms for proper housing and infrastructure development to avoid land acquisition problems
- Mass media public service messages to educate the people on the importance of conservation of resources
- Increase the wildlife and forest reserves in the country
- Schemes to do a proper inventory of the resources and monitor changes in the environment.
- Various projects and schemes that promote conservation of resources.



# Proposed Action Plan

| Problems                              | Solutions   |
|---------------------------------------|---|
| Overpopulation                        | Develop population control measures and educate people on the advantages of a small family.   |
| Overconsumption and irresponsible use | Educate people on the importance of conservation of resources using mass media. Develop partnerships with advocacy groups and environmental NGOs for spreading the message. |
| No proper access to resources         | Privatization of the some of the resource management function will help in better developing the delivery mechanism   |
| Deforestation and Habitat destruction | Have stringent regulations for the protection of the resources and ensure that the defaulters are punished  |
| Natural Hazards                       | Develop and employ tools for monitoring the possibility of natural hazards and providing preventive measures  |



# Ecological Concepts

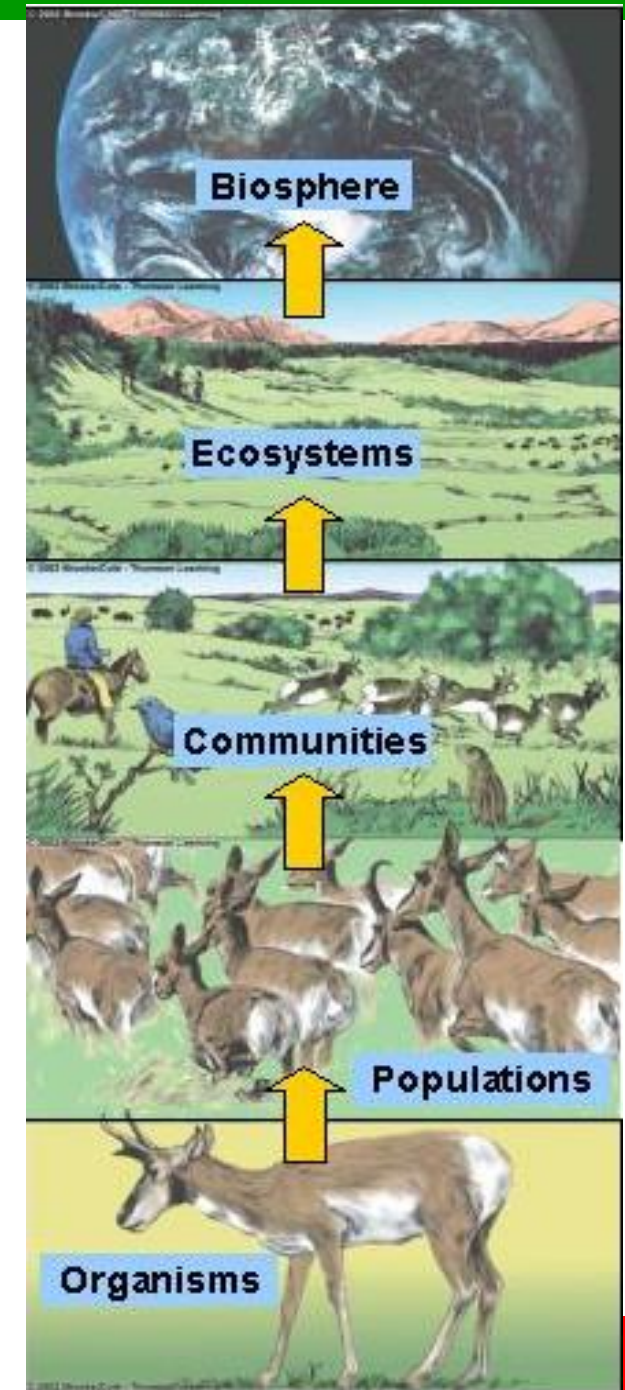
- **Ecology:** Study of how organisms interact with each other and with their non-living surroundings.
- **Eco** - is from the Greek word “Oikos” for house



# The Nature of Ecology

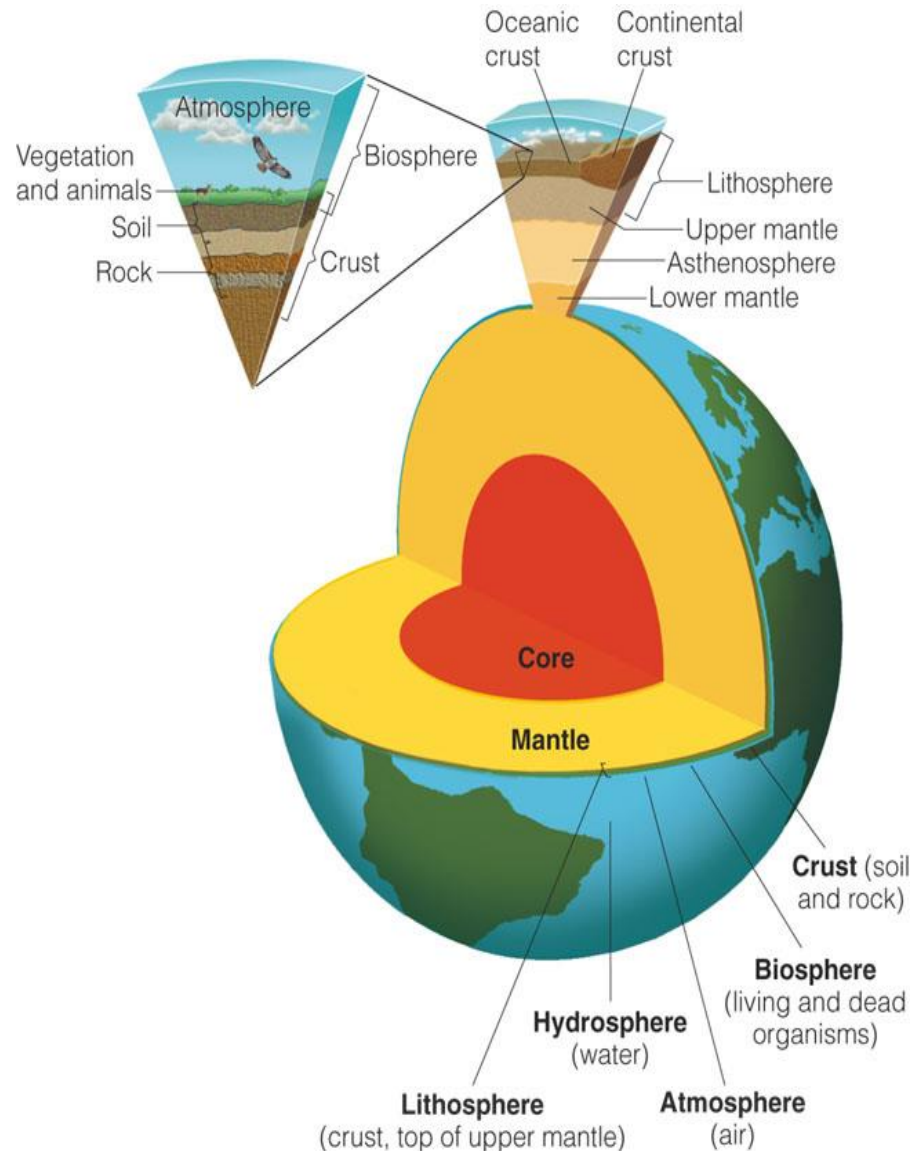
Levels of study in Ecology:

- Organisms – single animal
- Populations – same species together
- Communities – pop'ns living together
- Ecosystems – community + physical environment
- Biosphere – all the earth's ecosystems



# The Earth's Life-Support Systems

- Atmosphere
  - Thin membrane of air
  - Troposphere
    - 11 miles
  - Stratosphere
    - 12-30 miles
    - Lower portion (ozone)
    - filters out harmful sun rays
    - Allows life to exist on earth
- Lithosphere
  - Earth's crust
- Hydrosphere
  - water
- Biosphere
  - Living and dead organisms



# Summary

- India as country is blessed with rich natural resources. But from our research on the usage of natural resources in our country, we found that the resources are depleting every day.
- The Government of India has undertaken many measures for the conservation of the resources
  - Regulations and reforms for proper housing and infrastructure development to avoid land acquisition problems
  - Mass media public service messages to educate the people on the importance of conservation of resources etc
- Ecology: Study of how organisms interact with each other and with their non-living surroundings.

