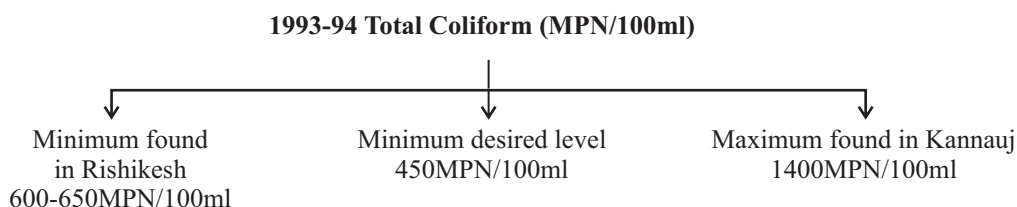


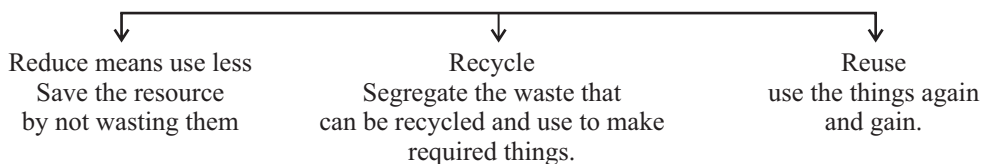
## CHAPTER – 16

# MANAGEMENT OF NATURAL RESOURCES

- Natural Resources  $\leftarrow$  Resources provided to us by nature  
Soil, air, water, forests  
wildlife, coal and petroleum are used by man for his survival.
- Management of natural resources is needed for conservation of natural resources.
- There are national and international laws and Acts to protect the environment.
- Ganga Action Plan : Multi Crore Project came in 1985 to improve the quality of Ganga
- Accordingly a survey was conducted and a data was collected of total coliform ( a group of bacteria found in human intestine) between 1993-1994 which was as below



- MPN    Most probable number.
- National Award for wildlife conservation – In the memory Amrita Devi Bishnoi who lost her life in the protection of Khejri trees in Rajasthan alongwith 363 other people.
- Chipko Andolan – Movement originated in Garhwal in early 1970S that was the result of a grassroot level effort to end the alienation of people from their forest.
- Protection of Sal forest in West Bengal in 1972.
- Three R's to save the environment

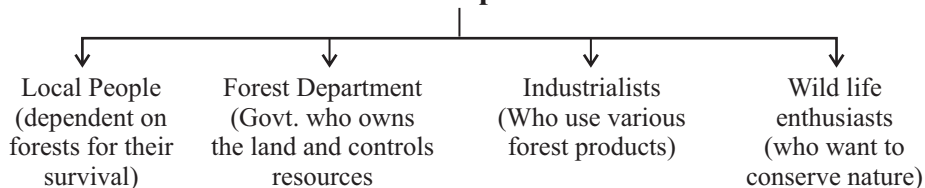


- Reuse is better than recycling as it saves energy.
- Management of Natural Resources is necessary so that these may last for the generations to come and are not exploited for short term gains. Also see the damage they cause to the environment when they are used or mixed.
- Forest and wild life conservation – Forests are biodiversity hot spots  
Biodiversity of an area is the number of species of different life forms like bacteria, fungi, flowering plants insects, birds etc.
- Hotspot means an area full of biological diversity.  
– loss of diversity may lead to a loss of ecological stability/ecological imbalance

### Stake holders

A person having interest or concern for some thing called as stake holder.

#### Stakeholders : their dependence on forests



- Sustainable management – Management of forest resources Wisely to make it available for future generations.
- **Water as a Resource**
- Water is a basic necessity for all terrestrial forms of life.
- Regions of water scarcity are closely correlated to the regions of acute poverty.
- Failure to sustain water availability has resulted in loss of vegetation cover, diversion for high water demanding crops and pollution from industries and urban wastes and less rain.
- Irrigation methods like dams, tanks and canals have been used in various part of India.
- **Dams**
- Advantages of Dams – Ensures of adequate water for irrigation.

- Generate electricity.
- Continuous supply of water in regions.
- **Disadvantages :**
- No equitable distribution of water.
- Large no. of people displaced without compensation.
- Involves huge amount of Public money without giving proper benefits.
- Causes deforestation and loss of biological diversity.
- **Water Harvesting** – Aim is to develop primary resources of land and water and to produce secondary resources of plants and animals for use in a manner which will not cause ecological imbalance.
- Various ancient methods of water harvesting
- | Method               | State                   |
|----------------------|-------------------------|
| Khadin, tanks, nadis | Rajasthan               |
| Bandharas, tals      | Maharashtra             |
| Bundhis              | Madhya Pradesh and U.P. |
| Pyhes                | Bihar                   |
| Kulhs                | Himachal Pradesh        |
| Ponds                | Jammu Region            |
| Eris (tanks)         | Tamilnadu               |
- Bawlis – old method of water harvesting in Delhi and near by region.
- These techniques are locale specific to ensure the mismanagement and over-exploitation of these resources
- Advantages of Khadin System :
  - Water does no evaporate
  - Recharge wells and moisture for vegetation.
  - does no provide breeding ground for mosquito
  - Ground water is protected from human and animal waste.

### Coal and Petroleum

- Generally called fossil fuel.
- Formed from the disintegration of bio-mass millions of years ago.
- They will get exhausted in the future no matter how carefully we use them.
- Petroleum will last us for about 40 years and the coal resources will last for another two hundred years.
- These contain hydrogen, nitrogen and sulphur.
- Why to use fossil fuels judiciously?
  - By using public transport instead of private one, by using C.F.L. tubes, by using stairs instead of lift, by saving electricity as much as possible.

## EXERCISE

### (Question Bank)

#### Very Short Answers (1 Mark)

1. Why is it necessary to conserve our environment?
2. Define sustainable development
3. Name any two exhaustible resources
4. What is the most conducive PH range for the life of fresh water plants?
5. List two advantages of water harvesting.
6. Why reuse is better than recycle?
7. What are Dhadin? Where there found?
8. List two steps you would take to conserve electricity in your house.
9. Who are called stake holders?
10. Name some traditional water harvesting systems in India.

#### Short Answers (2 Marks)

1. How mining is a cause of pollution?
2. Make a list of four forests products that we use.
3. How burning of fossil fuels is effecting our environment?
4. Suggest two weasures for controlling CO<sub>2</sub> levels in atmosphere.
5. Why should we conserve forest and wild life?

#### (3 Marks)

1. What are three main problems from dams?
2. How can you reduce energy consumption at your level. Suggest at least three points.
3. Explain the maximum of 'Reduce', 'Recycle' and 'Reuse' in your own words.

#### (5 Marks)

1. What is the main objective of water harvesting techniques? Name & ancient water harvesting structures used in India. Mention 3 causes for failure to sustain water availability under ground?
2. Discuss the damage caused to forest by the following activities:
  - (a) Building rest houses for 10% tourists in national parks.
  - (b) Grazing domestic animals on National Parks.
  - (c) Tourists throwing plastic bottles, covers and other litter in National Parks.