

SCIENCE

(Biology)

Chapter 6: Management of Natural Resources



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Management of Natural Resources

- Any matter or energy, derived from the environment, which can be used by all living organisms, including man, for their welfare constitute our **natural resources**.
- Forests and wildlife, water, coal and petroleum are some of our important natural resources.
- A system of controlling the use of natural resources in such a way so as to avoid their wastage and allow their use in the most judicial way is called **management of natural resources**.
- We need to manage our resources to ensure that they are used judiciously, to prevent their exploitation for short-term gains, and to make equitable distribution of natural resources and deal with environmental problems.
- **Sustainable development** is development which meets the needs of the present generation as well as preserves the resources for future generations.

Pollution in Ganga

- The river Ganga is used as a sewage dump for more than 100 cities stretching across Uttar Pradesh, Bihar and West Bengal.
- Dumping of untreated sewage, excreta and chemicals from industries increases the toxicity of the water.
- This makes it inhabitable for the flora and fauna in the river system.
- In 1985 the GAP (Ganga Action Plan) project was initialised to curb the poor quality of the water of river Ganges.

The 5 R's to save the environment can be performed by each individual in our society:

Refuse: This means to say No to things people offer you that you don't need. Refuse to buy products that can harm you and the environment, say No to single-use plastic carry bags.

Reduce: This means that you use less. You save electricity by switching off unnecessary lights and fans. You save water by repairing leaky taps. Do not waste food. Can you think of other things that you can reduce the usage of ?

Reuse: This is actually even better than recycling because the process of recycling uses some energy. In the 'reuse' strategy, you simply use things again and again. Instead of throwing away used envelopes, you can reverse it and use it again. The plastic bottles in which you buy various food-items like jam or pickle can be used for storing things in the kitchen.

Repurpose: This means when a product can no more be used for the original purpose, think carefully and use it for some other useful purpose. For example, cracked crockery, or cups with broken handles can be used to grow small plants and as feeding vessels for birds.

Recycle: This means that you collect plastic, paper, glass and metal items and recycle these materials to make required things instead of synthesising or extracting fresh plastic, paper,



glass or metal. In order to recycle, we first need to segregate our wastes so that the material that can be recycled is not dumped along with other wastes

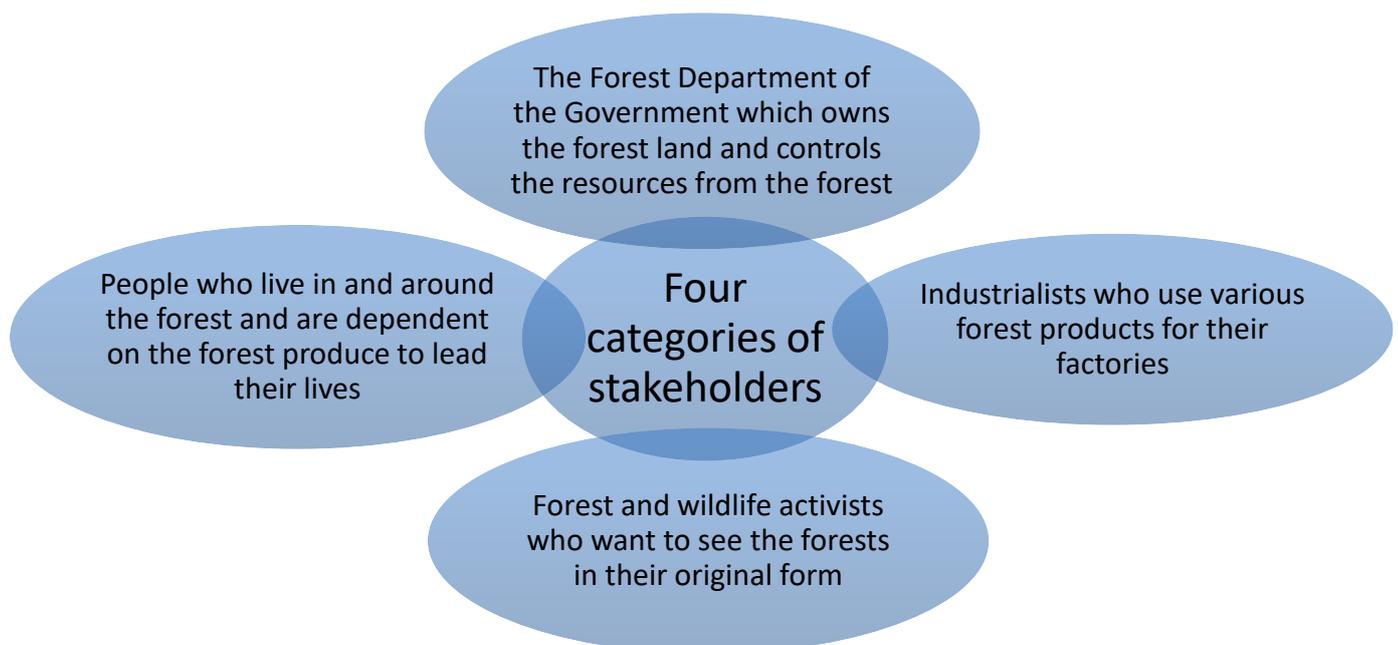
Why Do We Need to Manage Our Resources

- Because the resources available to us are limited and take millions of years to form.
- With the human population increasing at a tremendous rate the demand for resources is also increasing which increases the use of resources.
- Exploiting or reckless use of natural resources causes damage to the environment.
- The management of natural resources should be in a sustainable manner so that these will last for generations to come.
- And should be available to everyone i.e., should be equally distributed to everyone.

Forests and Wildlife

- **Forests** refer to a large piece of land covered with trees, shrubs and herbs growing naturally and sustaining a variety of life forms.
- Uncultivated plants and non-domesticated animals which live in their natural habitat collectively constitute the **wildlife** of an area.
- Naturally occurring plants and animals constitute the **flora** and **fauna** of the forest.
- The main aim of management of forests and wildlife is to conserve the vast inherited biodiversity, because loss of biodiversity leads to loss of ecological stability of the forest ecosystem.

Stakeholders in the Management of Forests



Sustainable Management of Forests

People's participation in the management of forests can help in increasing the forest produce as well as in their conservation.

INSTANCES OF PEOPLE'S PARTICIPATION IN THE MANAGEMENT OF FORESTS

The Case of Khejri trees

- In 1731, Amrita Devi Bishnoi led a group of 363 people who sacrificed their lives for the protection of Khejri trees in Khejrli village near Jodhpur in Rajasthan.

The Chipko Andolan

- The Chipko Andolan also called the 'Hug the trees movement' was organised under the leadership of Sunderlal Bahuguna to stop the destruction of forests.
- The movement began in 1970s in a remote village called Reni in Garhwal in the Himalayas.

Revival of Sal forests

- A forest officer, A. K. Banerjee got the villagers involved in protecting 1.272 hectares of badly degraded Sal forests of West Bengal.
- In return, the villagers were given employment in silviculture and harvesting operations.
- They were also given 25% of the final harvest and were allowed to collect fuel wood and fodder on the payment of a nominal fee.

Conservation of Wildlife

Large-scale poaching of wild animals disturbs the food chains in which these animals occur. This results in undesirable consequences for the entire ecosystem.

Measures to be Taken for the Conservation of Wildlife

Breeding of wild animals in captivity and then releasing them into their original natural habitat.

Enacting and enforcing strict laws, action plans and projects started by non-government organisations.

Ban on hunting and killing of endangered animals.

Establishment of national parks, wildlife sanctuaries and biosphere reserves.

Educating the public about the importance of wildlife conservation by observing 'Wildlife Week'.

