



Forestry

Forestry is the art and science of managing forests so as to yield, on a continuous basis, maximum in a quantity and quality of forest products and services. In broad sense, it is for the handling of forest land to satisfy the needs of man. It includes the logging, manufacturing, marketing and use of woods products.

Objective

The implicit objective of forestry is to make the forest economically useful to humans. The practice of silviculture is divided into three areas: methods of regeneration, intermediate cuttings, and protection.

Introduction

Forest is derived from Latin word-‘Foris’ means Away from inhabited land. An area land covered with trees. A forest is a system which is composed of plants, animals and microorganisms. A Forest is a community of trees, shrubs, herbs and associated plants and organisms that cover a considerable area that use oxygen, carbon dioxide, water and soil nutrients as the community attains maturity and reproduces itself.



There are Some Natural Forest and Manmade Forests:

1. **Natural Forest-** Gir Forest, Gujarat Sundarbans Forests, West Bengal (Dense mangrove forest, one of the largest reserves for the Bengal Tiger and a UNESCO world heritage site)



2. **Manmade Forest-** Molai Kathoni forest, A one-man-made forest, Majuli Island in the Brahmaputra. Jadav Payeng is better known as the Forest Man of India. He earned this name by spending 30 years of his life planting trees, creating a real man-made forest of 550 hectares.

Need of Forest

Forests are vital to life on Earth. They purify the air we breathe, filter the water we drink, prevent erosion, and act as an important buffer against climate change.

Benefits of Forests

Direct Benefits

- Trees provide organic fertilizer, through the falling of leaves, branches and root segregates.
- They have provided medicines for centuries for malaria, heartburn, measles, lung diseases, rheumatism, flu, leprosy
- They provide a sustainable source of timber (for cabinets, wardrobes, kitchens, desks/tables, chairs, doors, floors, paper, musical instruments, sports goods, boats, agricultural tools), food, fruit, fibre, fuel wood, charcoal, etc.

Indirect Benefits

- The roots reduce soil erosion in rainy seasons and replenish the ground with nutrients from the air e.g. nitrogen fixation.
- They retain ground water supporting surrounding growth.
- Tree roots stabilize river banks, reducing the risk of flooding.
- They rebuild worn soils and improve agricultural productivity.

DEFORESTATION:

Deforestation is the conversion of forested areas to non-forested land, for uses such as: pasture, urban use, logging purposes, and can result in arid land and wastelands.

AFFORESTATION:

Afforestation is the process of establishing a forest on land that is not a forest, or has not been a forest for a long time by planting trees or their seeds.

REFORESTATION:

Reforestation is the restocking of existing forests and woodlands which have been depleted, with native tree stock.



NTFP (Non-timber forest products)

1. Fiber and flosses

- Fibers are obtained from **waste tissue** of certain Woody plants and used for making **ropes**
- Flosses are obtained from **Ceiba pentandra**
- Fibers are obtained from **Agave sisalana, Sterculia**.

2. Grasses and bamboos

- About 30% livestock population graze in the Forests.
- Among valuable grasses e.g. Sabai (*Eulaliopsis binata*) is harvested annually.
- 80,000 tonnes of bamboo are harvested from forest every year.

3. Essential oil

- An essential oil is a concentrated hydrophobic liquid containing volatile aroma compounds from plants. Essential oils are also known as volatile oils, ethereal oils
- Essential oil obtained from Eucalyptus, Bursera, Cymbopogon, Santalum album etc

4. Oil seeds

- A seed oil is a vegetable oil that is obtained from the seed of some plant, rather than the fruit
- Oil bearing seeds produced by Madhuca indica, Pongamia pinnata, Shorea robusta, Azadirachta indica, Schleicheria oleosa, Vateria indica etc

5. Tannins and dyes

- Tannins extracted from myrobalan nuts, bark of wattles.

6. Gums and resins

- Gums and resins are exuded by trees as a
- Sterculia urens, Anogeissus latifolia etc.
- Resin is obtained from Pinus roxburghii.



7. Drugs, Spices and Insecticides

8. Tendu and other leaves

- Tendu leaves (bidi leaves) and leaves of baubhinia spp

9. Lac and other products

- Lac is a resinous secretion of insects which feed on forest trees. Silkworm is feed on Morus alba or Terminalia alata. Honey is produced from forests.

10. Fodder and grazing

- About 30% livestock population depend up on forest grazing and leaf fodder supply. Eg; Luecaena leucocephala, Albizzia lebbeck, Hardwickia binata.

11. Cane

- Canes or rattans are the stems of a climber plant and are used for a large number of household items.

LEARNIZY