

REPORT ON FOREST ECOSYSTEM

Dhruba Chand Halder College located in the district of South 24 Parganas, West Bengal. Sundarban is suppose to the Bengal's first line defense from the cyclone arise in the Bay of Bengal. It is the largest Mangrove forest ecosystem is situated in this district, South 24 Parganas. Cyclones like Amphan cause severe damage to the Mangrove forest. The livelihoods of Sundarban areas are highly affected. According to official report 1200 sq Km of 4263 sq Km forest had been destroyed. According to some ecologists it will take several years to restore the mangrove forest ecosystem. The present project was undertaken to create following concept of the students regarding forest ecosystem:

1. Overall idea on forest ecosystem
2. Component and structure of forest ecosystem
3. Food chain of forest ecosystem

Synopsis of project:

There are **two main components** of an ecosystem broadly known as - Biotic and Abiotic. 1) Biotic components - Plants, animals, trees, and other living beings are biotic components. 2) Abiotic Components- Water, Soil, land, air are abiotic components. - Producer- Producers are the organisms that produce energy.

Structure and Function of Forest Ecosystem

I. Biotic components

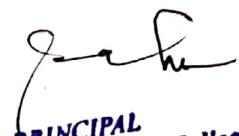
The various biotic components, representatives from the three functional groups, of a forest ecosystem are:

(i) **Producer Organisms:** In a forest, the producers are mainly trees. Trees are of different kinds depending upon the type of forest developed in that climate. Apart from trees, climbers, epiphytes, shrubs and ground vegetation. Dominant species of trees in major types of forest ecosystems are: Tectona grandis, Acer, Betula, Picea, Pine, Cedrus.

(ii) **Consumers:** In a forest, consumers are of three main types;

a) **Primary Consumers:** These are Herbivores which feed directly on producers.

Eg: Ants, Beetles, Bugs, spiders etc. feeding on tree leaves. Larger animals such as Elephants, Deer, giraffe etc. grazing on shoots and/or fruits of trees.


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South 24 Parganas, Pin- 743372

b) **Secondary Consumers:** These are carnivores and feed on primary consumers.

Eg: Birds, Lizards, Frogs, Snakes and Foxes.

c) **Tertiary Consumers:** These are secondary carnivores and feed on secondary consumers. These include top carnivores like Lion, Tiger.

3) **Decomposers**

These include wide variety of saprotrophic micro- organism like; Bacteria (*Bacillus Sp.*, *Clostridium sp.*, *pseudomonas.*)

A food chain in an ecosystem is a series of organisms in which each organism feeds on the one below it in the series.

In a forest ecosystem, grass is eaten by a deer, which in turn is eaten by a tiger. The grass, deer and tiger form a food chain. In this food chain, energy flows from the grass (producer) to the deer (primary consumer) to the tiger (secondary consumer).

Outcome of the Project:

1. Students have idea on forest ecosystem.
2. Students can draw food chain of forest ecosystem.
3. Students have idea on structure of forest ecosystem

Mobina Daween

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PRINCIPAL
Dhruba Chand Halder College
P.O.- D. Barasat, P.S.- Jaymugar
South 24 Parganas, Pin.- 743372