

CONSERVATION OF PLANTS AND ANIMALS

- Introduction
- Deforestation : Causes

A great variety of **PLANTS** and **ANIMALS** exist on earth.



INTRODUCTION

They are essential for the **WELL-BEING** and **SURVIVAL OF MANKIND**.



INTRODUCTION

Today, a major threat to survival of these organisms is **DEFORESTATION**.



INTRODUCTION

A major threat to survival of these organisms is **DEFORESTATION**.

We know that deforestation means **CLEARING OF FORESTS**
and **USING THAT LAND FOR OTHER PURPOSES**.



DEFORESTATION : CAUSES



Let us talk about
CAUSES OF DEFORESTATION

USING WOOD AS FUEL



DEFORSTATION : CAUSES

Some natural causes of deforestation are FOREST FIRES and SEVERE DROUGHTS.







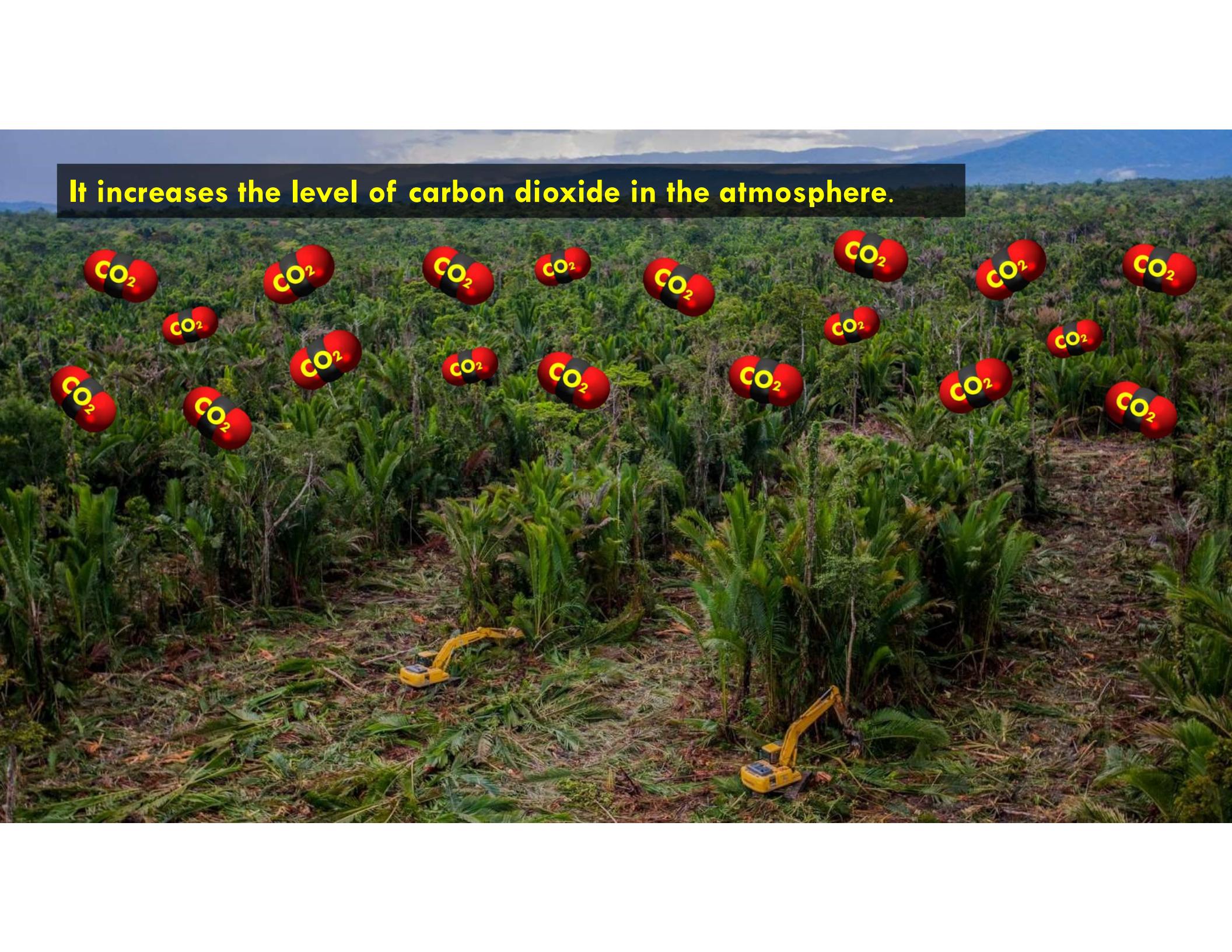
CONSERVATION OF PLANTS AND ANIMALS

- Deforestation : Consequences

DEFORESTATION : CONSEQUENCES

Deforestation increases the **TEMPERATURE** and **POLLUTION LEVEL** on the earth.





A landscape showing deforestation. In the foreground, two yellow excavators are working on a cleared area of dense green tropical vegetation. The ground is covered with fallen branches and leaves. Above the scene, numerous red and black 3D molecular models of carbon dioxide (CO_2) are floating in the air, symbolizing the release of greenhouse gases during deforestation.

It increases the level of carbon dioxide in the atmosphere.

DEFORESTATION : CONSEQUENCES

GROUND WATER level also gets lowered.

Deforestation disturbs the **BALANCE IN NATURE**



As deforestation reduces the number of trees and Roots Of Trees Hold The Rain Water.



DEFORESTATION : CONSEQUENCES

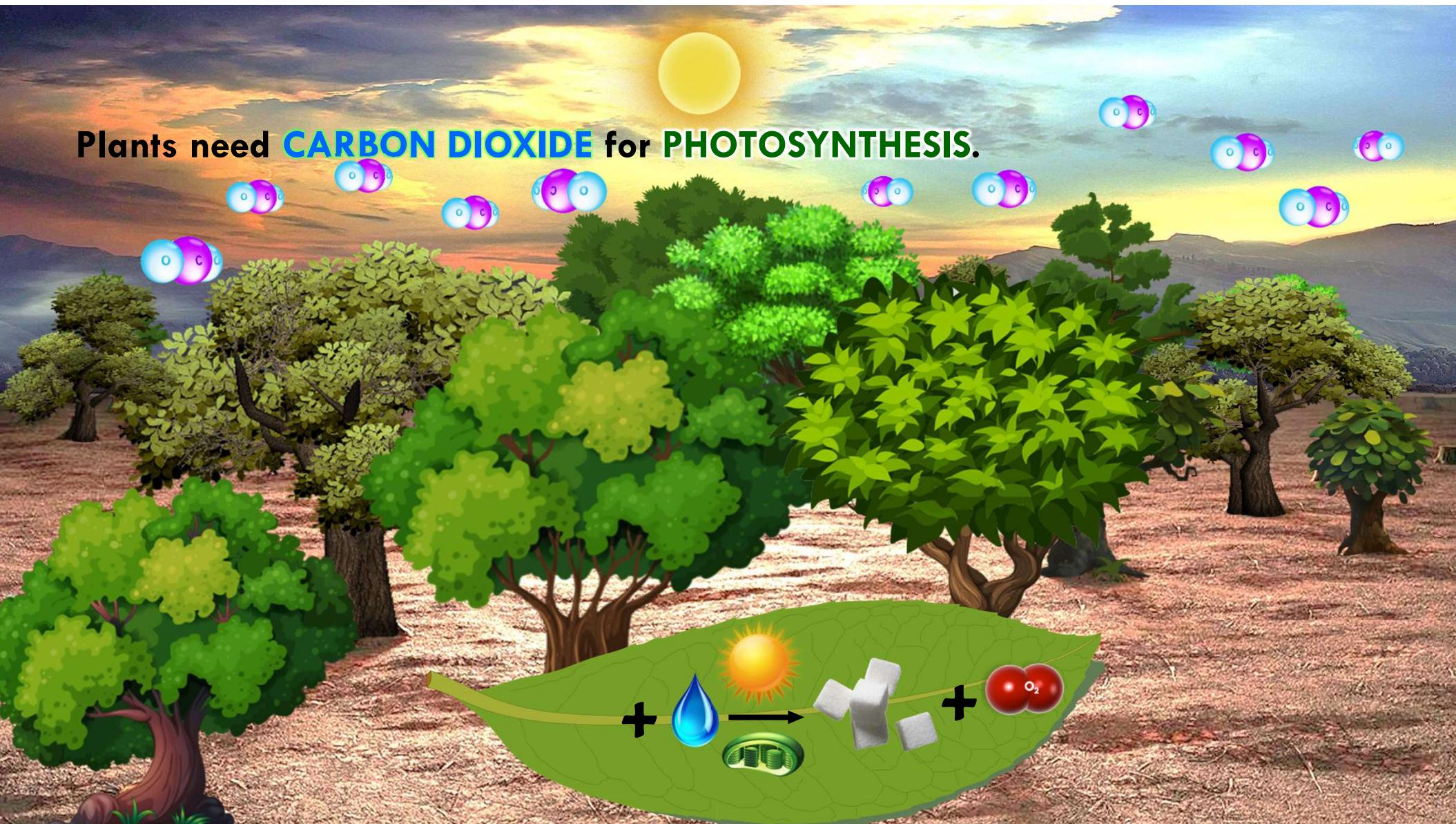
If cutting of trees continues, Rainfall and the Fertility Of The Soil will decrease.



Consequently, it leads to calamities such as FLOODS and

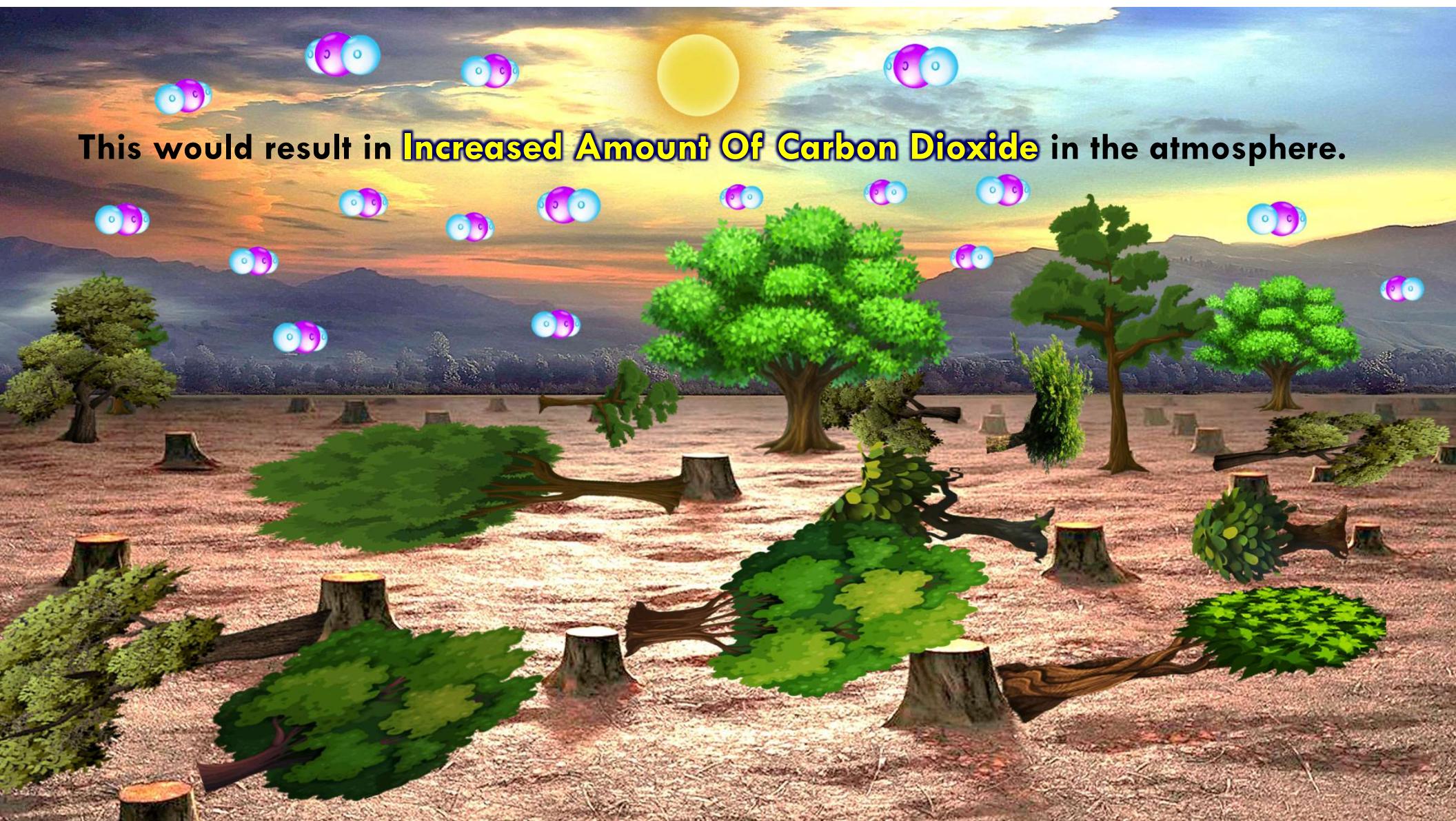


Plants need **CARBON DIOXIDE** for **PHOTOSYNTHESIS**.





Fewer trees would mean that Less Carbon Dioxide Will Be Used Up.



This would result in **Increased Amount Of Carbon Dioxide** in the atmosphere.



and release. The earth's surface absorbs some of this solar energy; it also



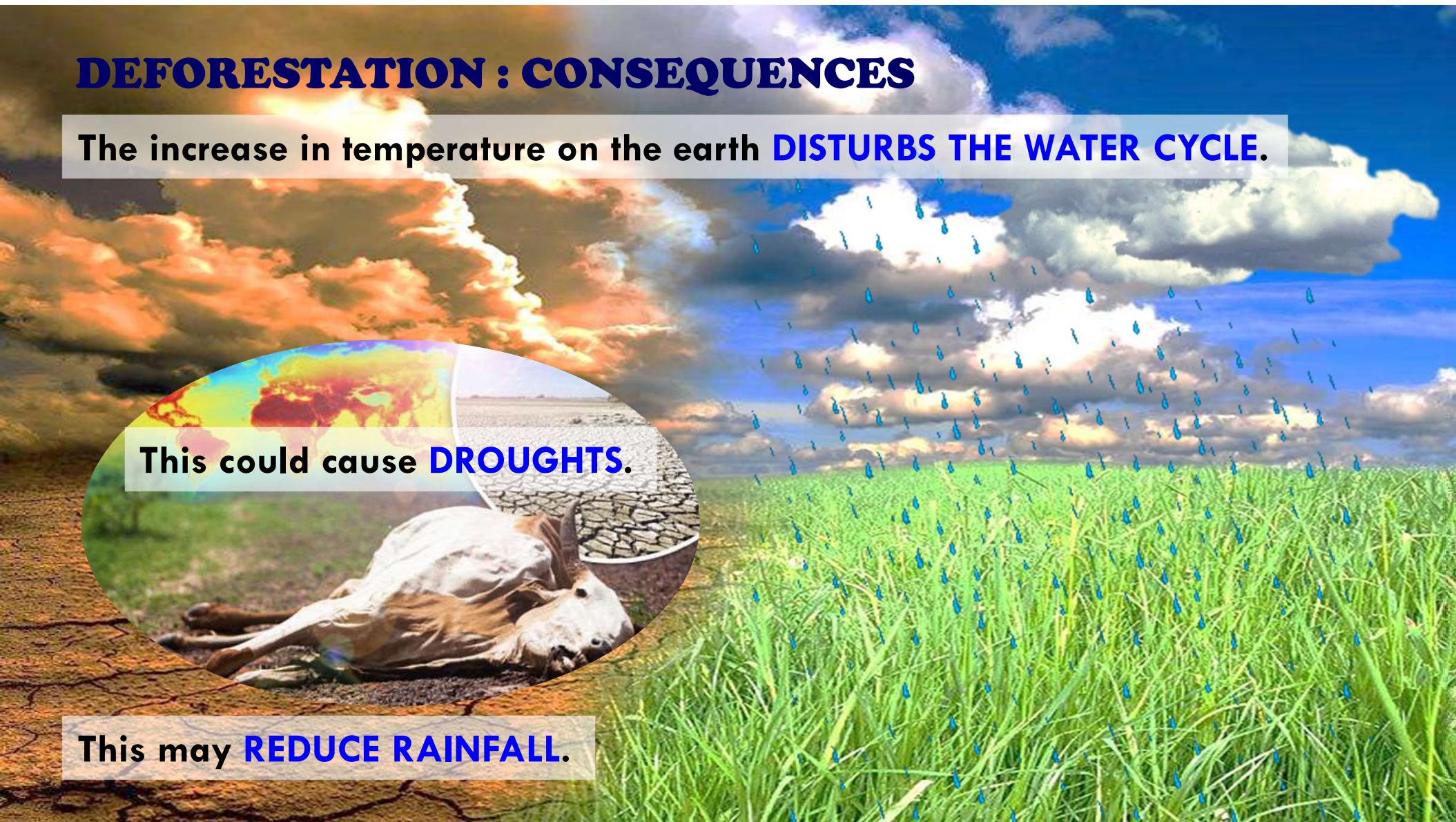
This will lead to **GLOBAL WARMING** reflected by the earth.

DEFORESTATION : CONSEQUENCES

The increase in temperature on the earth **DISTURBS THE WATER CYCLE.**

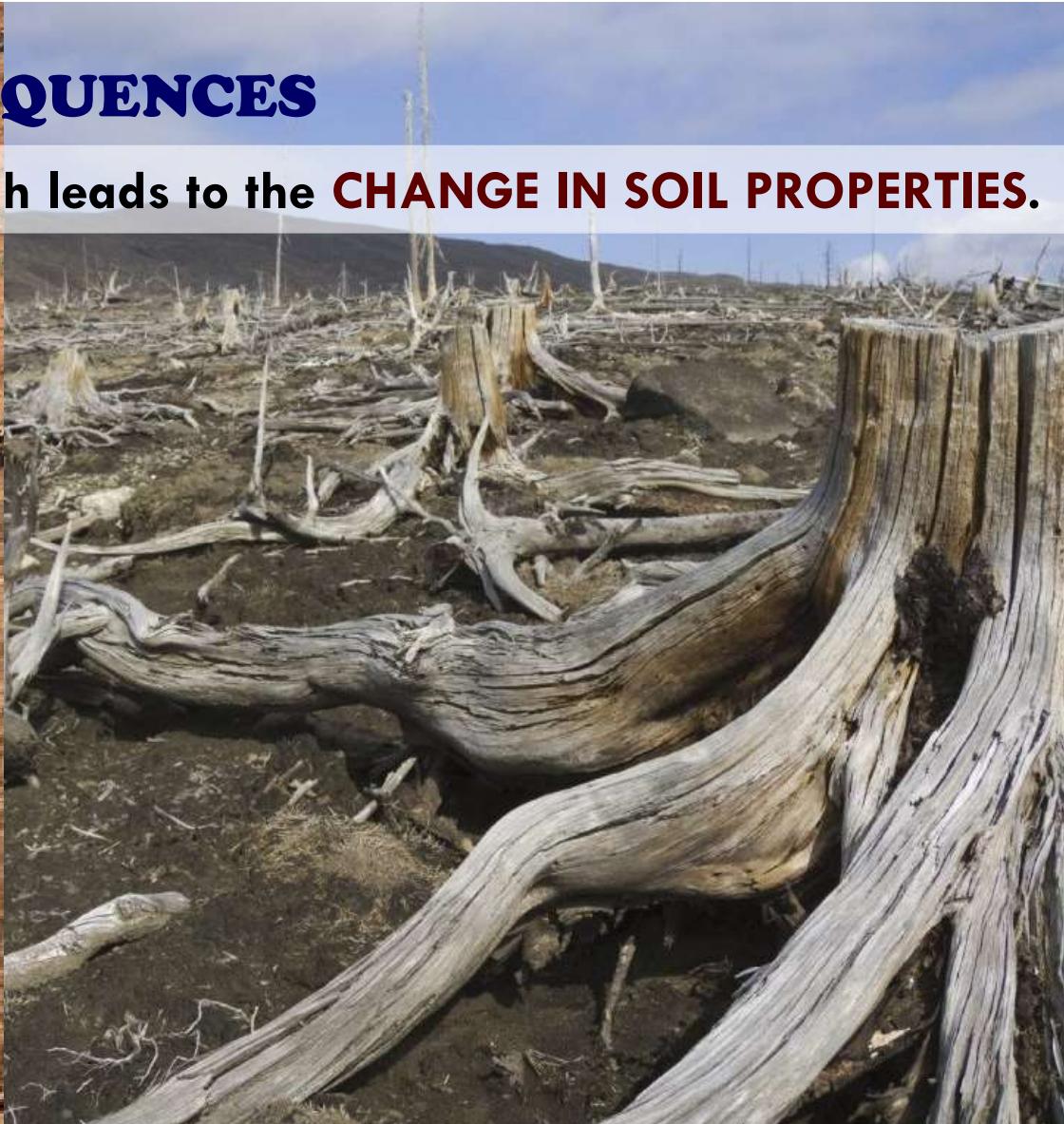
This could cause **DROUGHTS.**

This may **REDUCE RAINFALL.**



DEFORESTATION : CONSEQUENCES

Deforestation is a major cause which leads to the CHANGE IN SOIL PROPERTIES.



DEFORESTATION : CONSEQUENCES

PHYSICAL PROPERTIES OF THE SOIL get affected by plantation and vegetation.

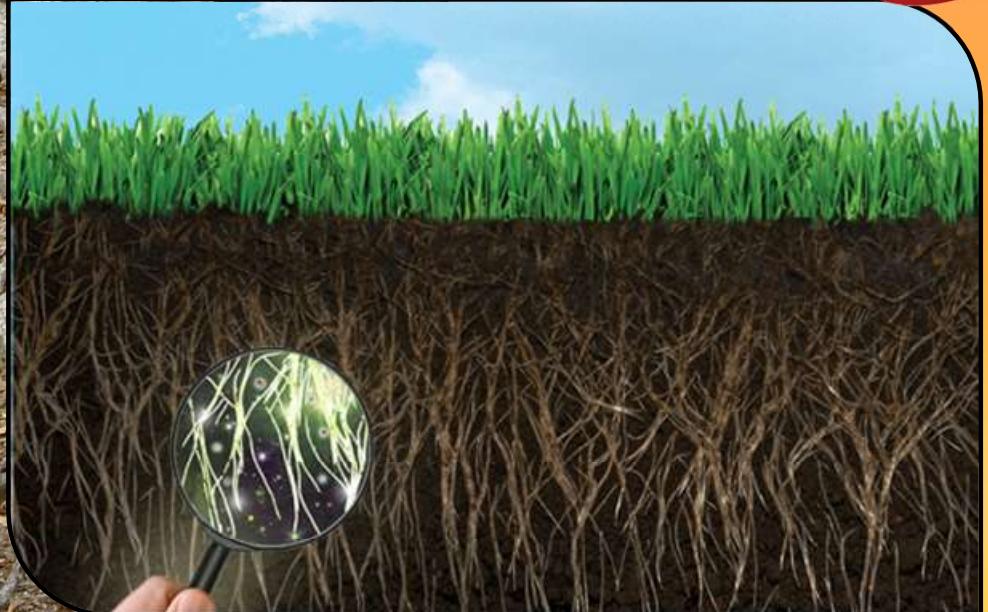


DEFORESTATION : CONSEQUENCES

Trees **PREVENT SOIL EROSION.**



As roots of the plant hold the soil firmly.

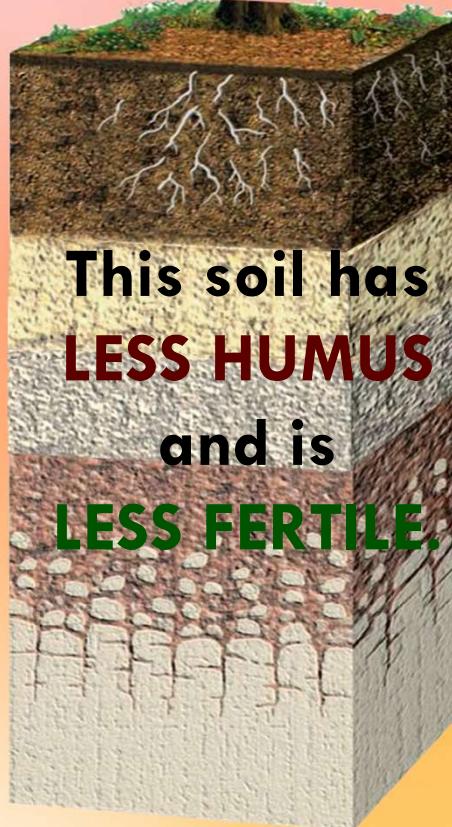
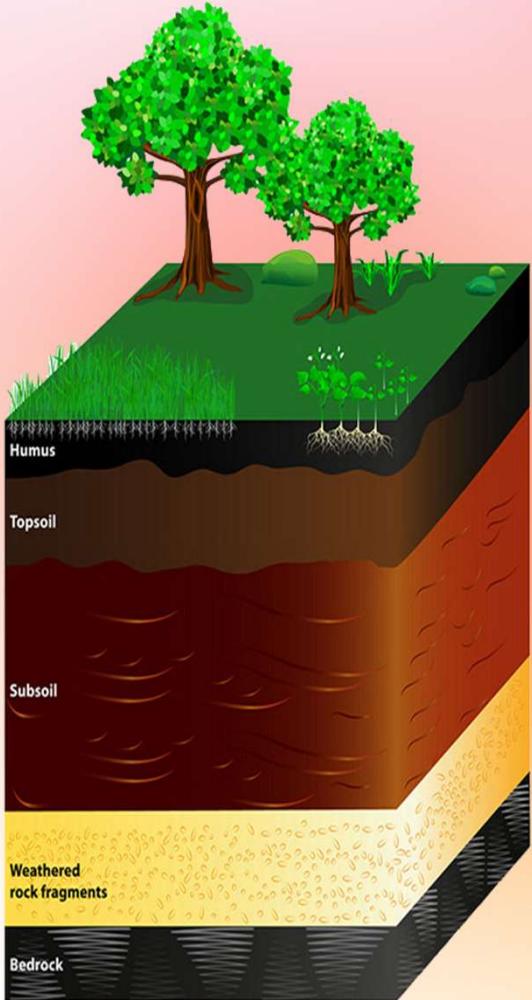


DEFORESTATION : CONSEQUENCES

FEWER TREES result in MORE SOIL EROSION.



DEFORESTATION : CONSEQUENCES



Removal of the top layer of soil,
EXPOSES THE LOWER, HARD AND ROCKY LAYERS.

This soil has
LESS HUMUS
and is
LESS FERTILE.

DEFORESTATION : CONSEQUENCES

Gradually the FERTILE LAND gets CONVERTED INTO DESERTS.

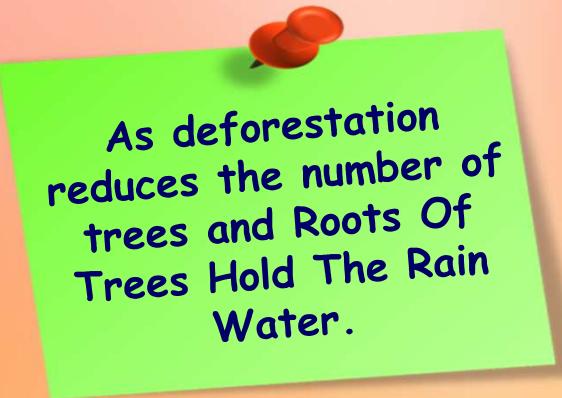


**It is called as
DESERTIFICATION.**



DEFORESTATION : CONSEQUENCES

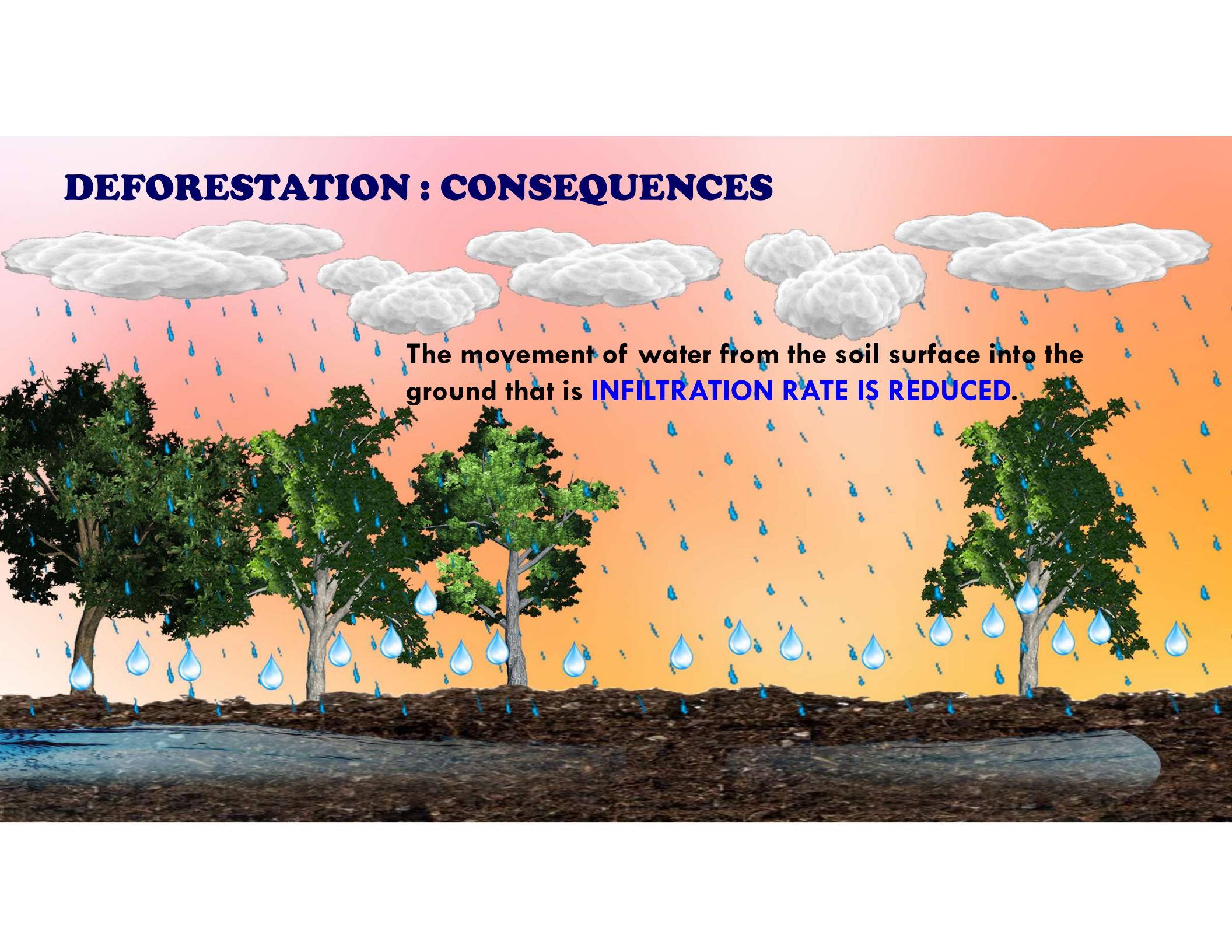
Deforestation also leads to a **DECREASE IN THE WATER HOLDING CAPACITY** of the soil.



As deforestation reduces the number of trees and Roots Of Trees Hold The Rain Water.



DEFORSTATION : CONSEQUENCES



The movement of water from the soil surface into the ground that is **INFILTRATION RATE IS REDUCED**.

A photograph of a street completely submerged in floodwater. Buildings, including houses and a brick apartment complex, stand on either side of the water. The water is turbulent, with white foam at the edges of the waves. The sky is overcast and grey.

DEFORESTATION : CONSEQUENCES

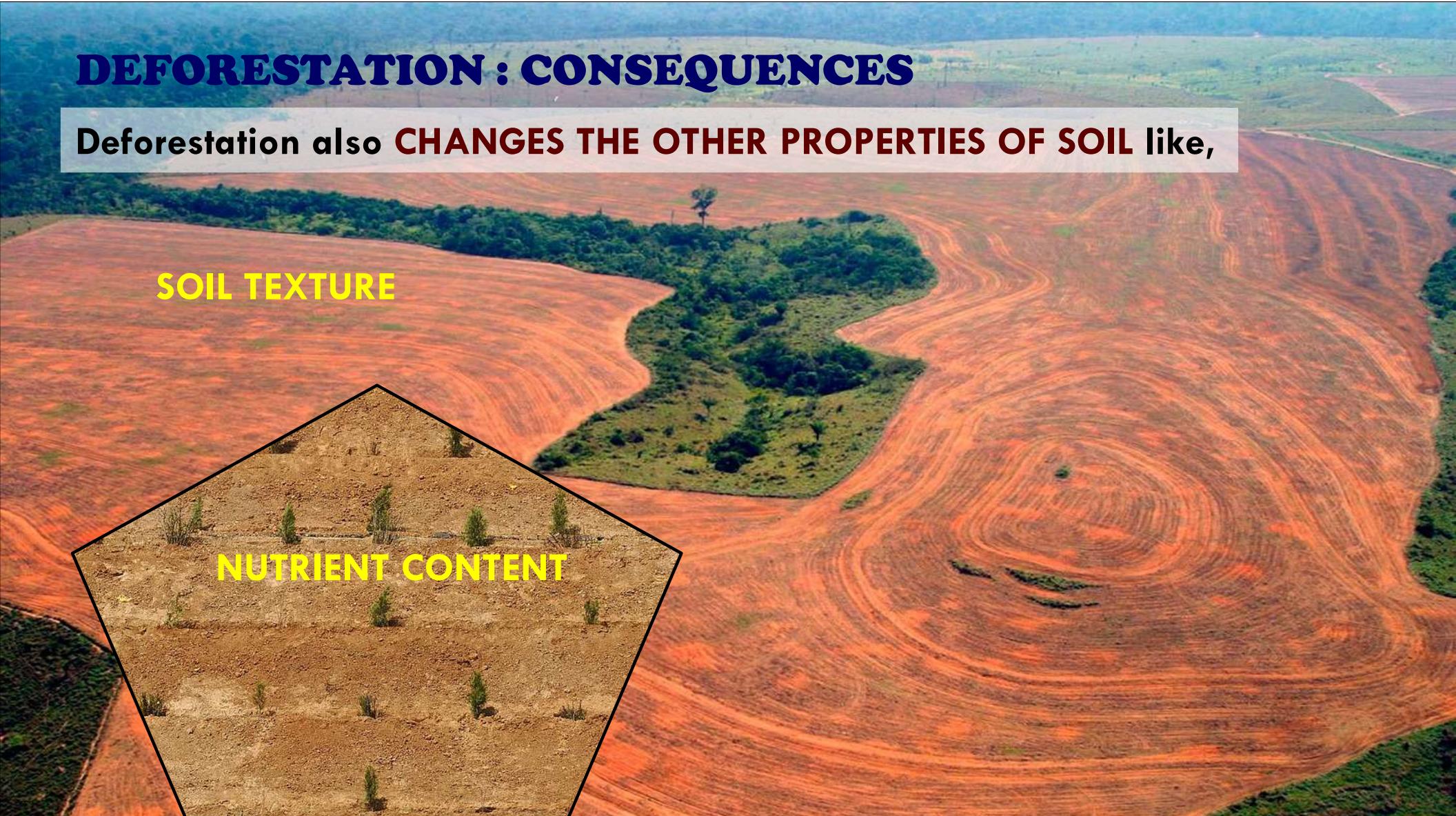
So, there are FLOODS.

DEFORESTATION : CONSEQUENCES

Deforestation also CHANGES THE OTHER PROPERTIES OF SOIL like,

SOIL TEXTURE

NUTRIENT CONTENT



DEFORESTATION : CONSEQUENCES

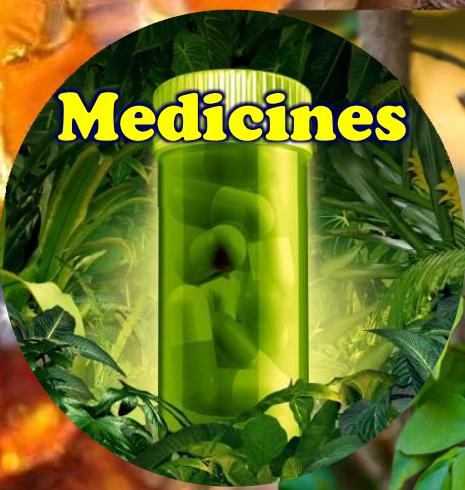
We get a VARIETY OF PRODUCTS FROM FORESTS.

Gums

Spices



Sealing Wax



Medicines



Honey



Catechu



DEFORESTATION : CONSEQUENCES





CONSERVATION OF PLANTS AND ANIMALS

- Conservation Of Forests And Wildlife
- Biosphere Reserve
- Flora And Fauna



BIOSPHERE is that part of the earth in which living organisms exist or which supports life.



CONSERVATION OF FORESTS AND WILDLIFE

BIOLOGICAL DIVERSITY

or

BIODIVERSITY

refers to the variety organisms
existing on the earth.



CONSERVATION OF FORESTS AND WILDLIFE

Their interrelationships with the environment.

COASTAL RAINFOREST



CONSERVATION OF FORESTS AND WILDLIFE



Apart from our personal efforts and efforts of the society, government agencies also take care of the forests and animals.

**Wildlife
Trust
of India**

CONSERVATION OF FORESTS AND WILDLIFE

The government lays down rules, methods and policies to protect and conserve them.



CONSERVATION OF FORESTS AND WILDLIFE

To protect our FLORA and FAUNA and their habitats,



CONSERVATION OF FORESTS AND WILDLIFE

**To protect our FLORA and FAUNA and their habitats,
protected areas called SANCTUARIES, NATIONAL PARKS and BIOSPHERE
RESERVES have been earmarked.**



CONSERVATION OF FORESTS AND WILDLIFE

**PLANTATION, CULTIVATION, GRAZING, FELLING TREES, HUNTING and
POACHING** are prohibited there.



CONSERVATION OF FORESTS AND WILDLIFE

SANCTUARY

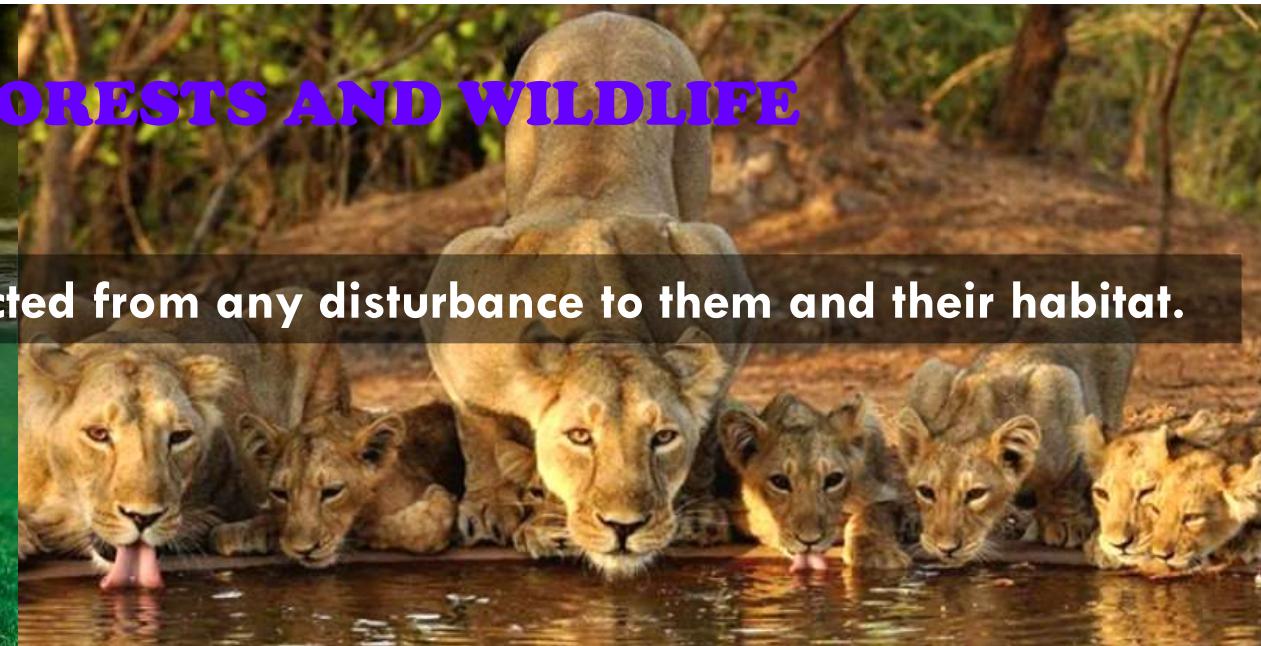
Brahminy Kite

Waterfowl

Areas where animals are protected from any disturbance to them and their habitat.

Parrot

Siberian Crane



CONSERVATION OF FORESTS AND WILDLIFE

NATIONAL PARK



**Areas reserved for wild
life where they can freely
use the habitats and
natural resources.**



CONSERVATION OF FORESTS AND WILDLIFE

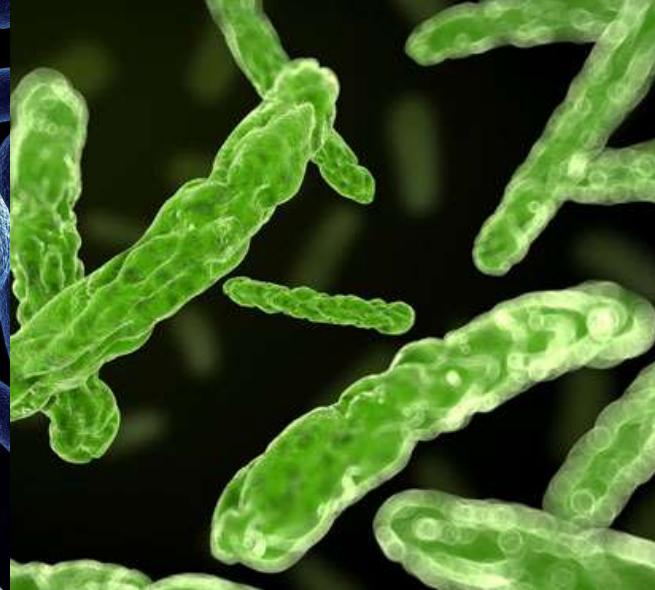
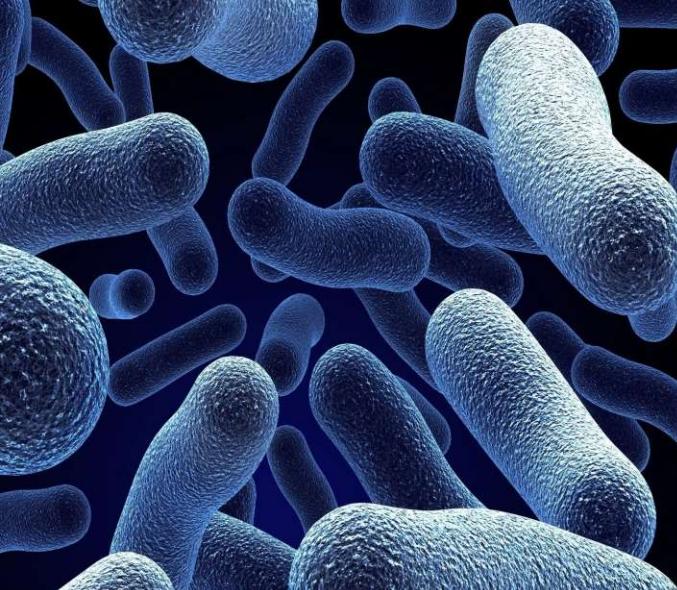
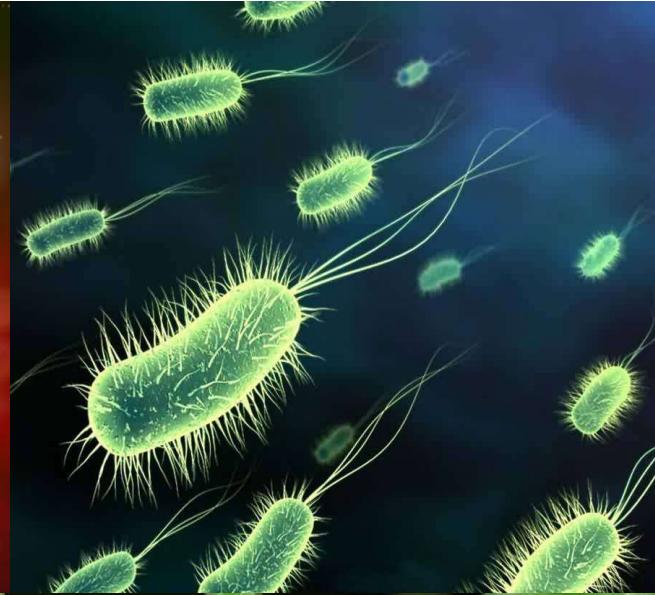
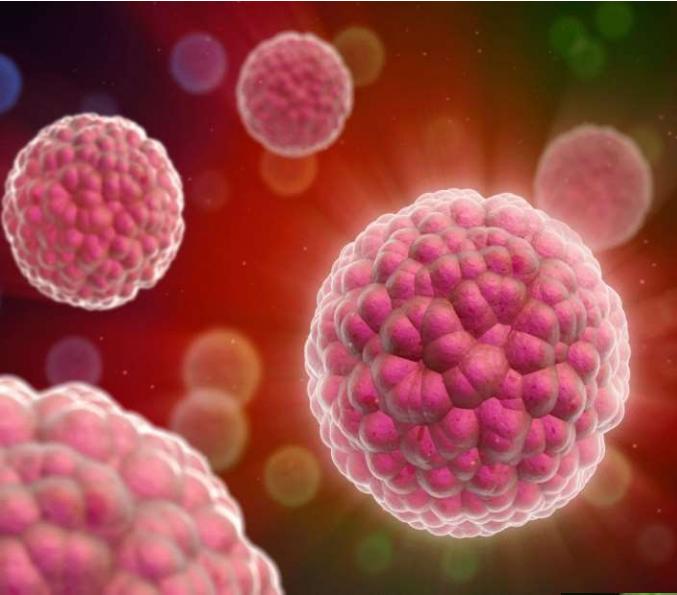
BIOSPHERE RESERVE



Large areas of protected land for conservation of wild life, plant and animal resources and traditional life of the tribals living in the area.

BIOSPHERE RESERVE





**Biodiversity is the variety of
PLANTS, ANIMALS and
MICROORGANISMS generally
found in an area.**

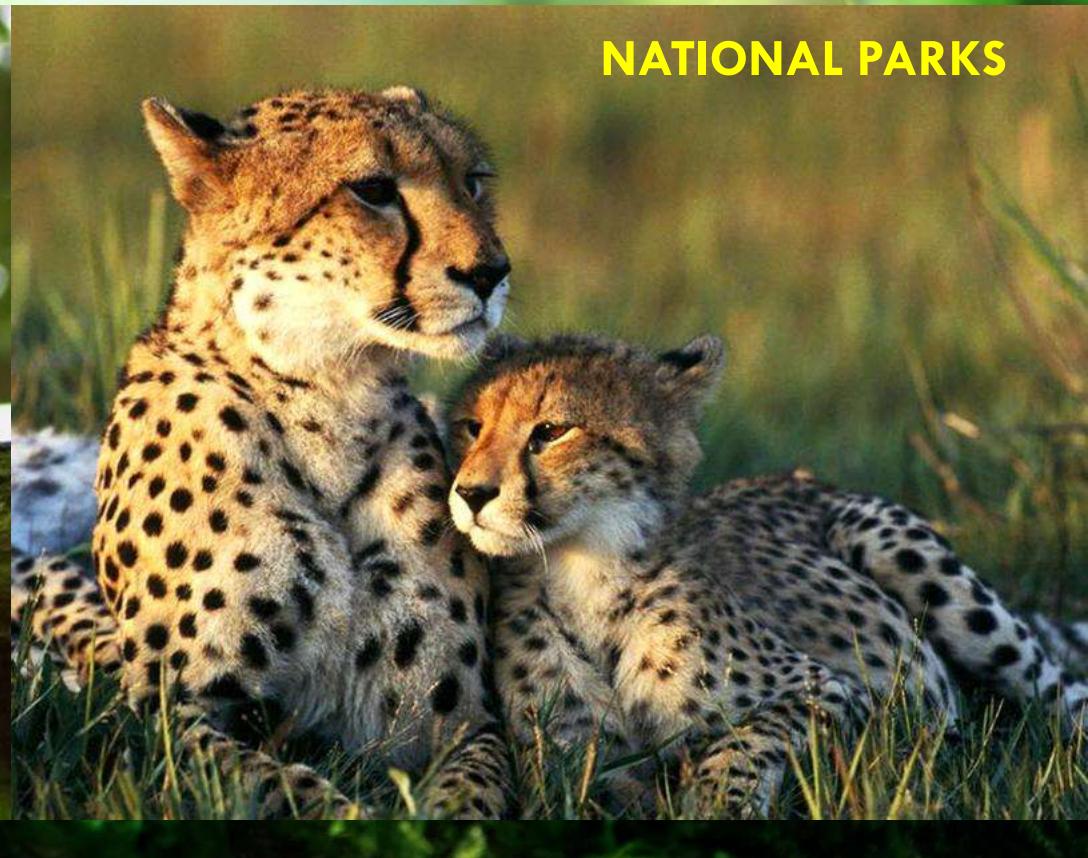
BIOSPHERE RESERVE

The biosphere reserves help to **MAINTAIN THE BIODIVERSITY** and **CULTURE** of that area.

A biosphere reserve may also contain **OTHER PROTECTED AREAS** in it like,



WILDLIFE SANCTUARIES



NATIONAL PARKS

BIOSPHERE RESERVE

The Pachmarhi Biosphere Reserve consists of one national park named Satpura and two wildlife sanctuaries named Bori and Pachmarhi.



FLORA AND FAUNA

Some Animals And Plants TYPICALLY BELONG TO A PARTICULAR AREA.



The plants and animals found in a particular area are termed *Flora And Fauna* of that area.

FLORA AND FAUNA

Flora refers to all plant life occurring in an area or time period,

Especially the naturally occurring or indigenous plant life.



FLORA AND FAUNA



Fauna is *All Of The Animal Life* of any particular region or time.

Especially *A Typical Collection Of Animals Found In A Specific Time Or Place.*

FLORA AND FAUNA

For Example



Silverfern

Jamu Arjun

etc. are examples of the **FLORA** of the PACHMARHI BIOSPHERE RESERVE.
Sal *Teak*

FLORA AND FAUNA

For Example



Leopard



Wild d



Blue-bull



Wolf

etc. are examples of the **FAUNA** of the PACHMARHI BIOSPHERE RESERVE.

*Chinkara
Barking deer*

Cheetal

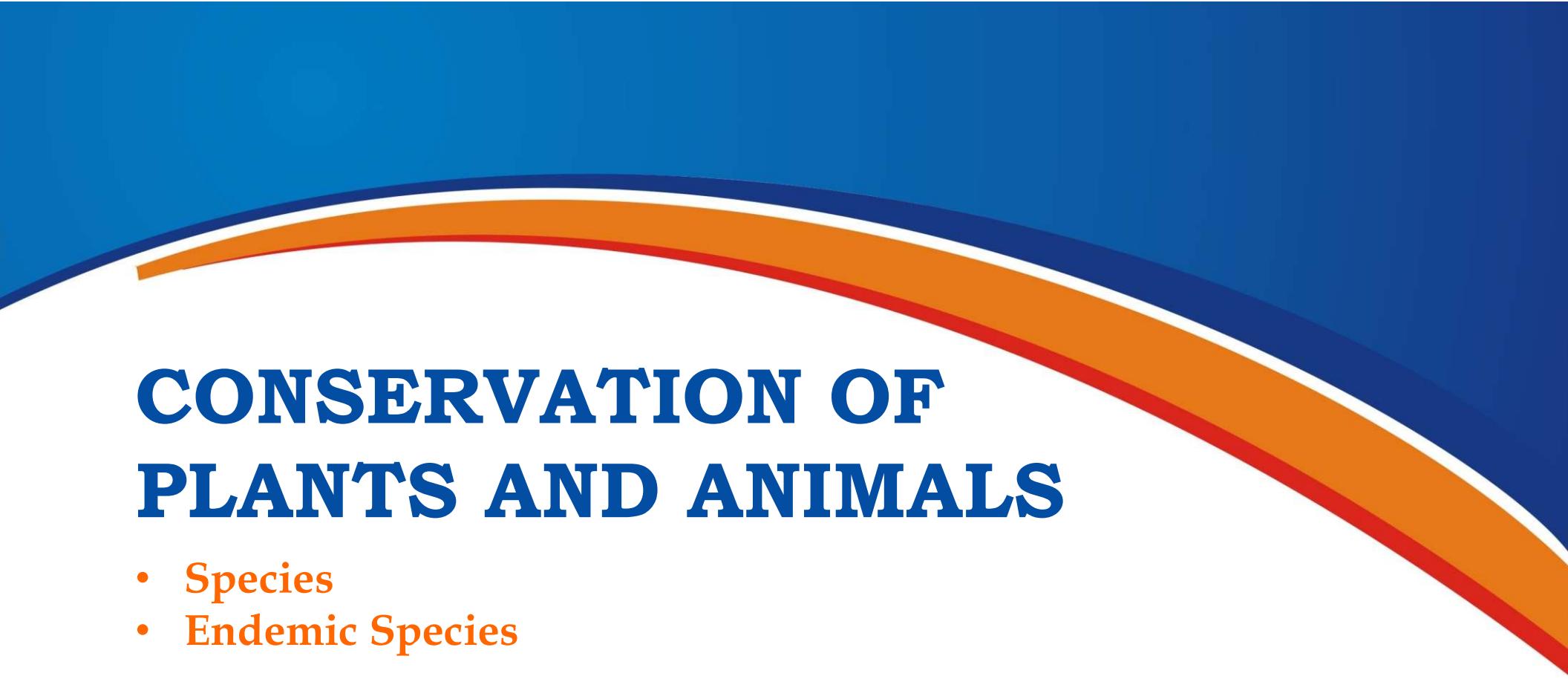
FLORA AND FAUNA



FLORA AND FAUNA







CONSERVATION OF PLANTS AND ANIMALS

- Species
- Endemic Species

SPECIES

Species is a Group Of Populations which are Capable Of Interbreeding.



SPECIES

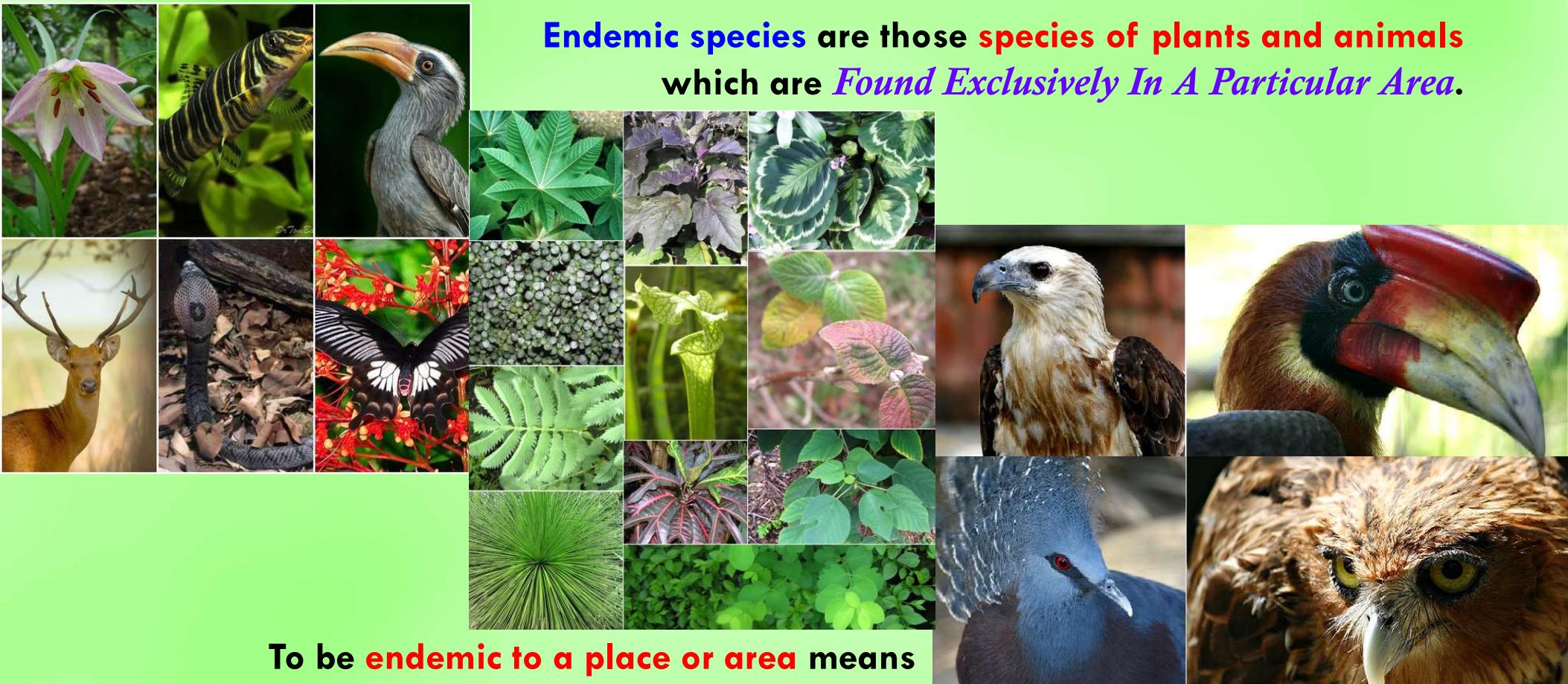
This means that the members of a species can *Reproduce Fertile Offspring Only With The Members Of Their Own Species* and not with members of other species.



Members of a species have
Common Characteristics.



ENDEMIC SPECIES

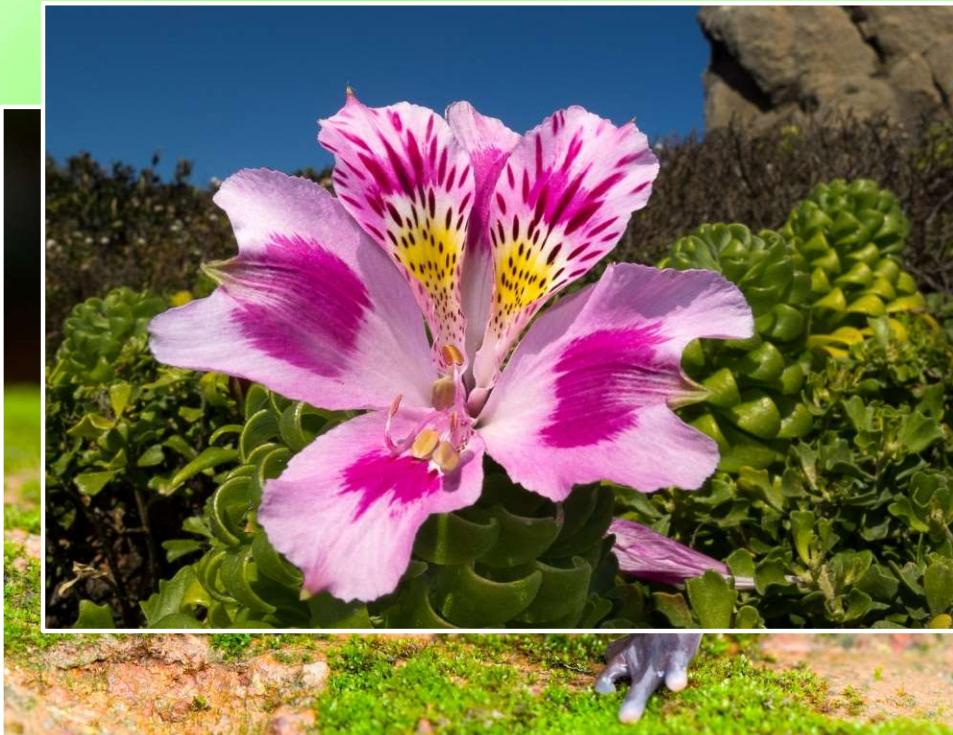


Endemic species are those species of plants and animals which are *Found Exclusively In A Particular Area.*

To be endemic to a place or area means found only in that part of the world and no where else.

ENDEMIC SPECIES

They are not *Naturally Found Anywhere Else.*



The Purple Frog is endemic to the Western Ghats in India.

They may be *Endemic To A Zone, A State Or A Country.*

The Silver Fern is endemic to New Zealand.



ENDEMIC SPECIES

***Sal* and *Wild Mango* are endemic flora of the Pachmarhi Biosphere Reserve.**



SAL



MANGO

ENDEMIC SPECIES

Bison, Indian giant squirrel and flying squirrel are endemic fauna of this area.



Indian Giant Squirrel



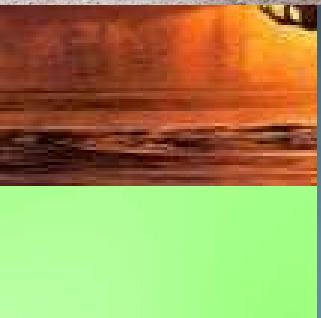
Flying Squirrel



Bison

ENDEMIC SPECIES

The *Destruction Of Their Habitat*, *Increasing Population* and *Introduction Of New Species* may affect the natural habitat of endemic species and **endanger their existence.**



ENDEMIC SPECIES

LOSS OF HABITAT

It occurs when an Environment Is Altered so much, that

Certain Organisms Can No Longer Survive There.

o Pollution and Destruction of



ENDEMIC SPECIES

OVEREXPLOITATION

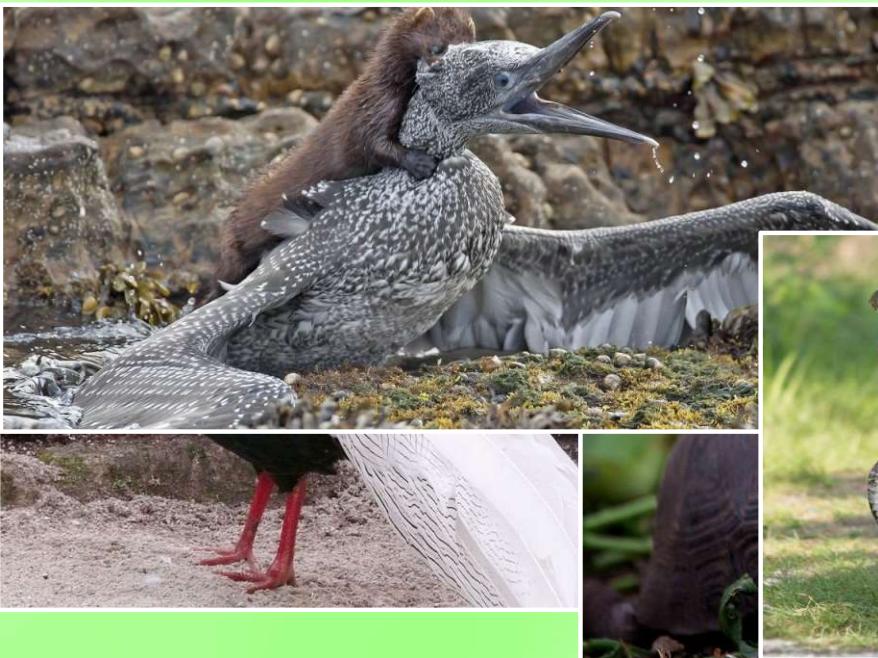
Passenger Pigeons, once numerous across North America, were Hunted To The Extent that Their Population Is Not Able For Food and are Now Extinct.



ENDEMIC SPECIES

INTRODUCED SPECIES

Colonisation, ie. Introduction Of New Species can have a Significant Impact on endemic species.



The new species May Prey On, or Compete For Resources With Existing Species.

ENDEMIC SPECIES

ECOSYSTEM DISRUPTION

The living organisms in an ecosystem are Often Linked Together.



ENDEMIC SPECIES

ECOSYSTEM DISRUPTION

This link might be :



Primary consumer
(Herbivore)

A Food Chain



Secondary consumer
(Carnivore)



Tertiary consumer
(Carnivore)



Producers
(autotrophs)



Decomposers



Apex consumer
(Carnivore)

ENDEMIC SPECIES

ECOSYSTEM DISRUPTION

This link might be :



[**The Pollination Of Plants By Insects Bats And Birds**](#)



ENDEMIC SPECIES

ECOSYSTEM DISRUPTION



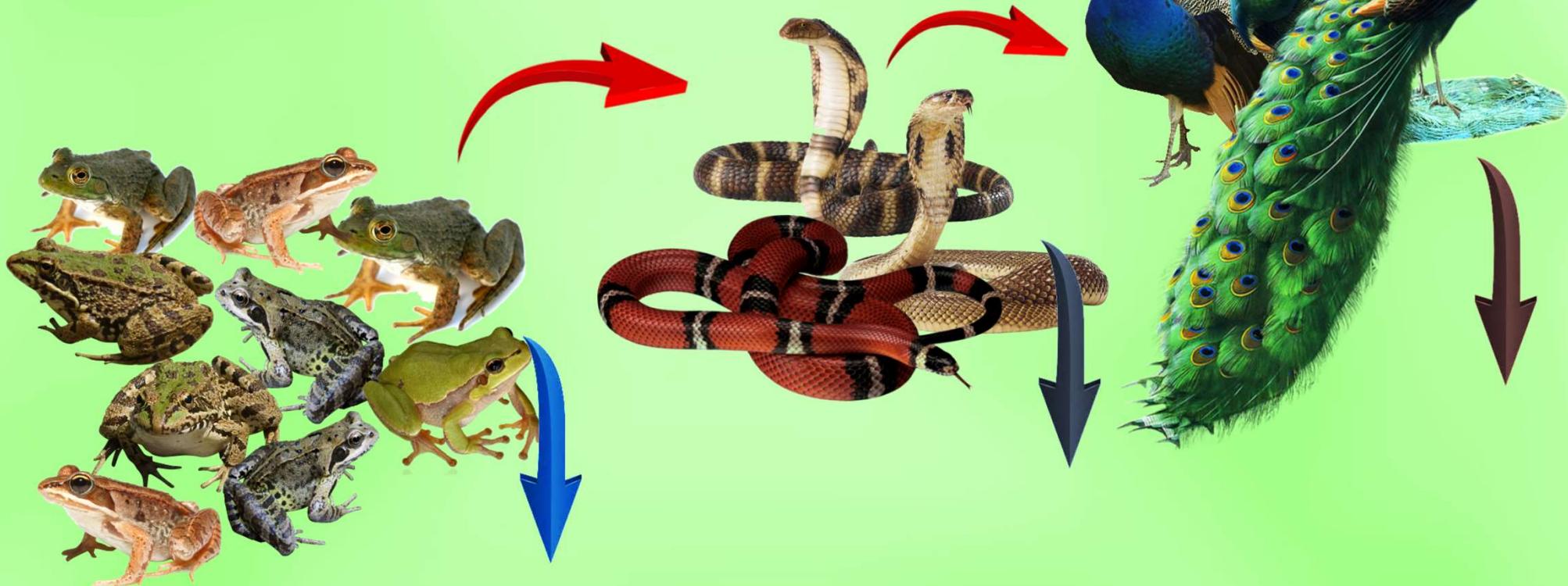
Or The Shelter That Plants Provide For Certain Animals.



ENDEMIC SPECIES

ECOSYSTEM DISRUPTION

Because of these links,
The Reduction in the Population of One Species
Can Affect the Populations of Other Species.



ENDEMIC SPECIES

The projects and programmes concerning nature, started by The Indian Government, include Project Tiger, Nature Camps and Jungle Lodges.

Project Tiger **Nature Camps** **Jungle Lodges**

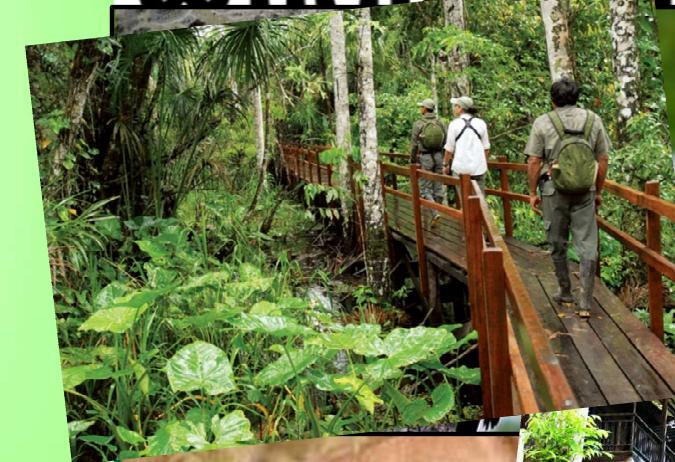


ENDEMIC SPECIES

These have been organised to promote Wildlife Awareness among people.

Natural Heritage, but also

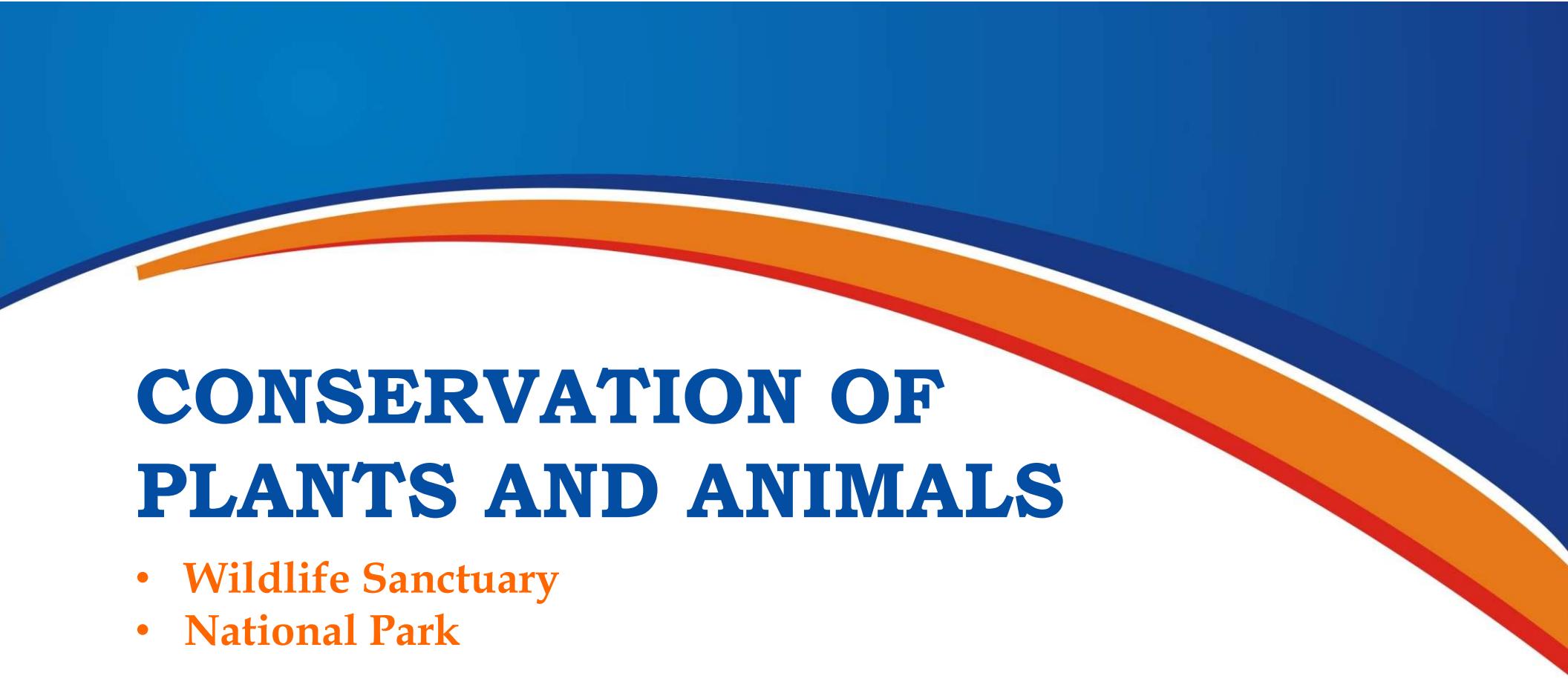
Encourage Eco-tourism



Dodo was a bird that was endemic to the **island of Mauritius**.







CONSERVATION OF PLANTS AND ANIMALS

- Wildlife Sanctuary
- National Park

WILDLIFE SANCTUARY

A Wildlife Sanctuary is generally An Officially Designated Territory, Created By The Government, providing Protection And Suitable Living Conditions for wild animals.



A wildlife sanctuary is also called *A Wildlife Refuge*.

WILDLIFE SANCTUARY

Hunting, Killing (Poaching) or Capturing Of Animals is Strictly Prohibited in such areas.





WILDLIFE SANCTUARY

Indian sanctuaries have **unique landscapes** like

Bush Lands In Deltas Of Big Rivers

WILDLIFE SANCTUARY

For Example

Jayakwadi Bird Sanctuary is situated *in Aurangabad* and *Ahmadnagar* district in *Marathawara* region of Maharashtra.



WILDLIFE SANCTUARY

For Example

Gahirmatha Turtle sanctuary in *Orissa*.



WILDLIFE SANCTUARY



It is a pity that even Protected Forests Are Not Safe because people living in the neighborhood encroach upon them and destroy them.



WILDLIFE SANCTUARY

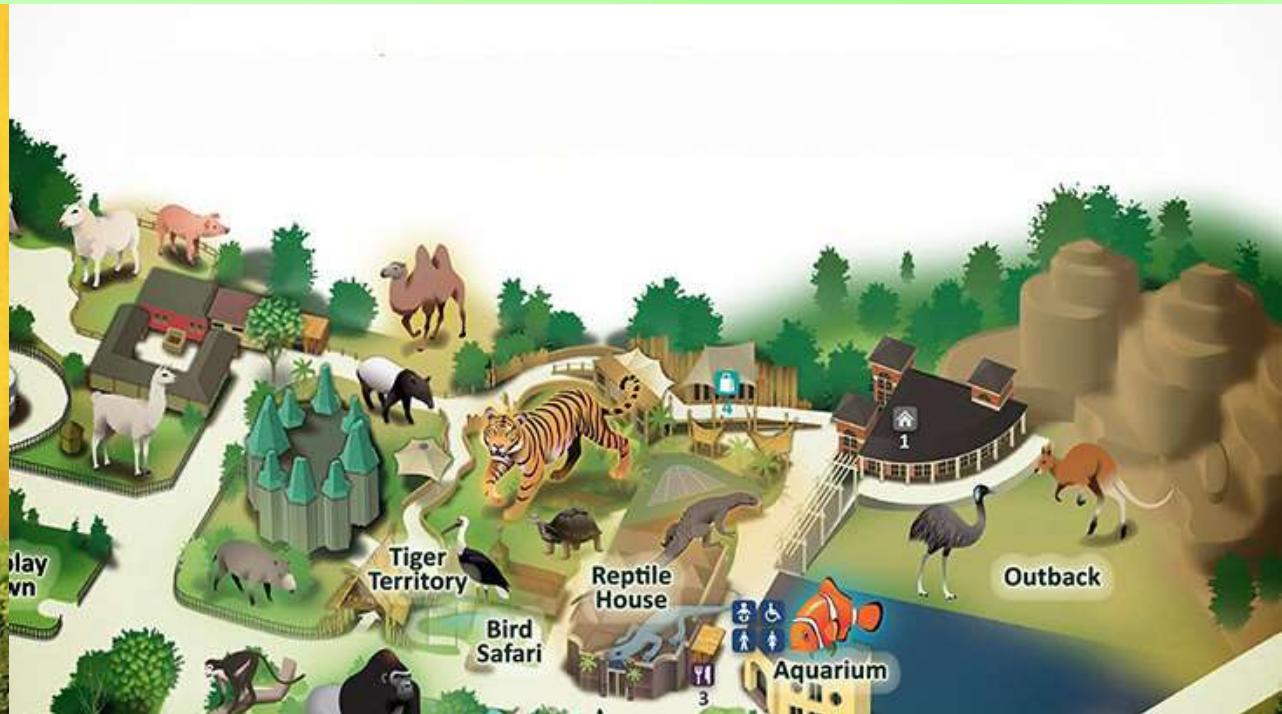
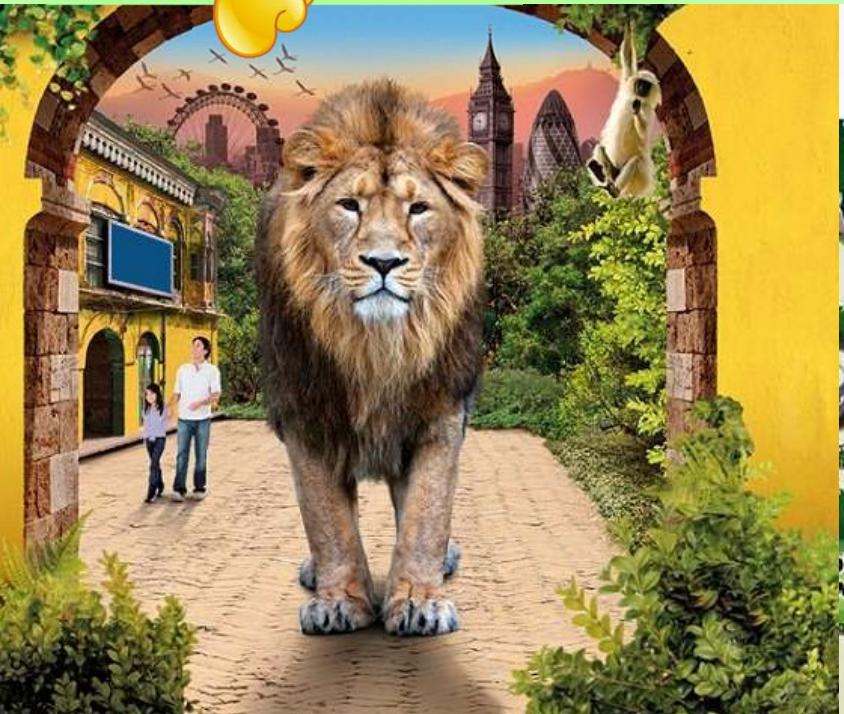


Friends you must have visited a zoo lot of times.

Is A Zoo and A Wildlife Sanctuary the same ???

Zoos are the places where Some Animals are
Protected in Artificial Habitats for Public View.

NO !!!



NATIONAL PARK

A national park is a Reserve Of Land, usually Declared and Owned By A National Government, Protected from Most Human Development and Pollution.



NATIONAL PARK

National parks are Protected Areas.



NATIONAL PARK

National parks help in conservation and preservation of endangered species of Animals (Fauna), as well as plants (Flora), landscape and historic objects of an area.



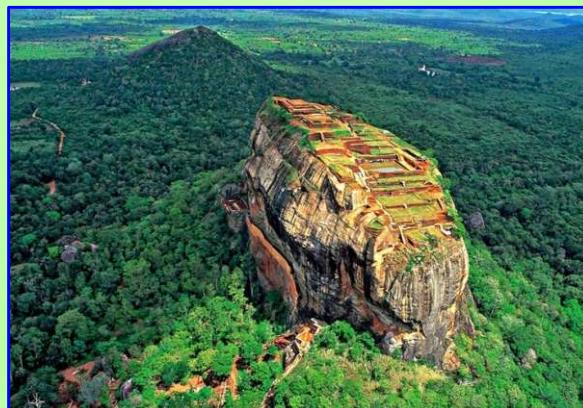
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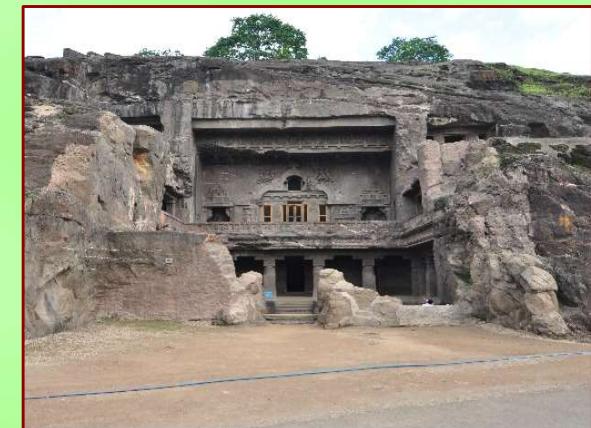
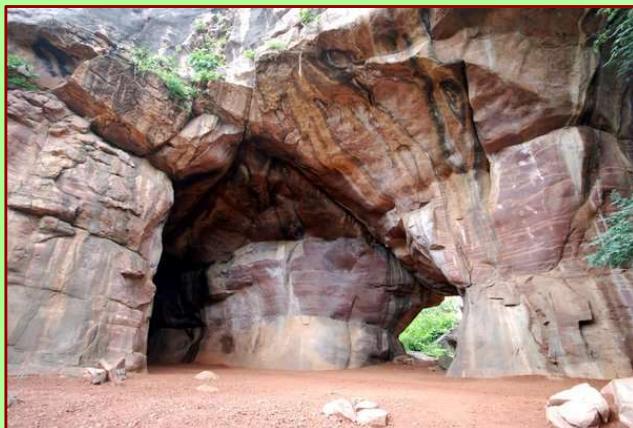
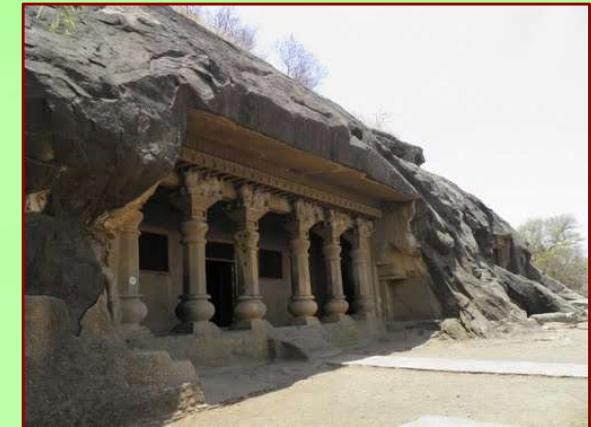
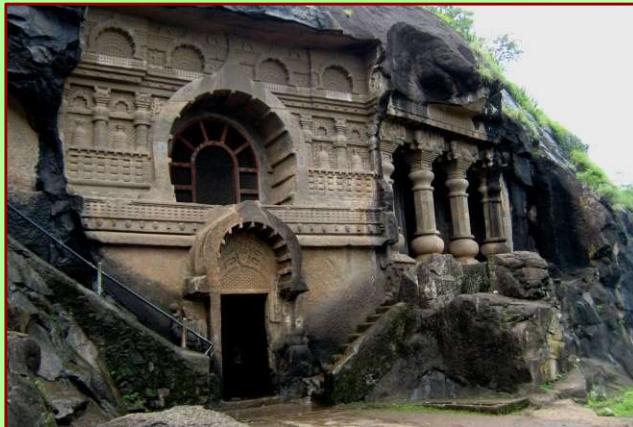
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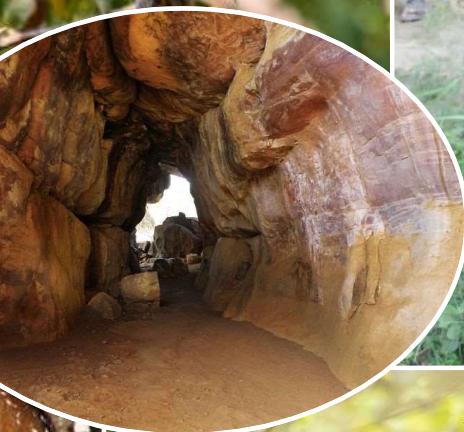
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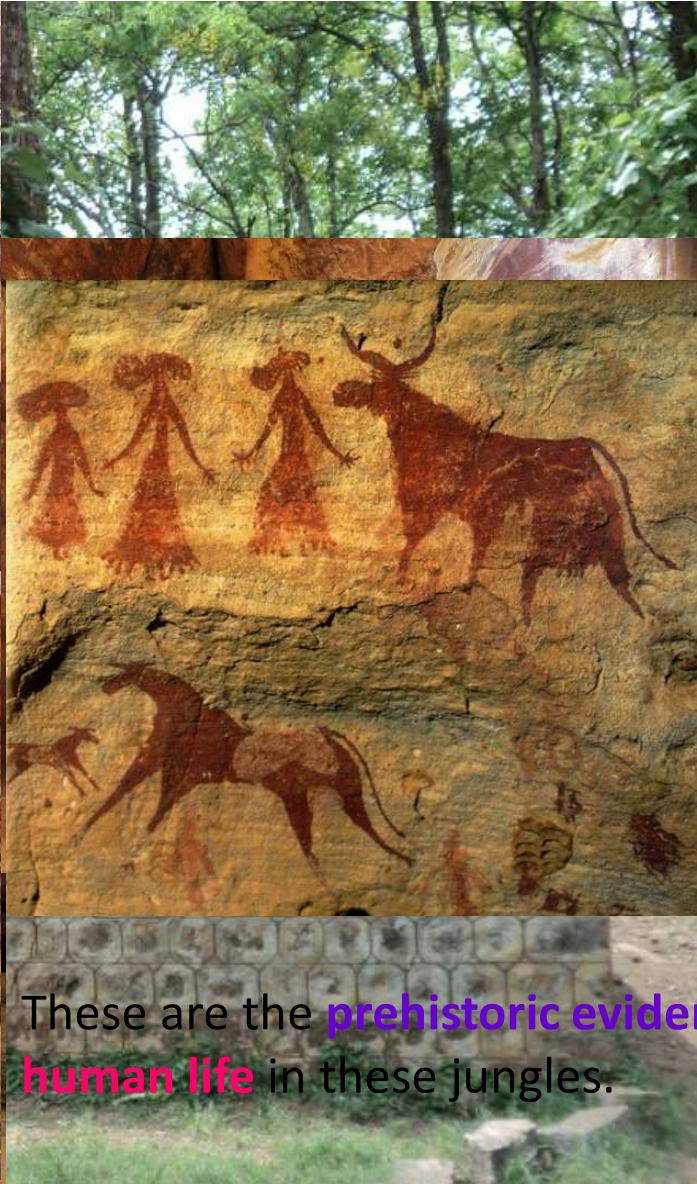
NATIONAL PARK

Few examples of National Parks :



Satpura National Park

is the first Reserve Forest of India.



The finest Indian Teak is found in this forest.

Rock Shelters are also found inside this forest.

Rock paintings are found in these shelters.

These are the prehistoric evidences of human life in these jungles.

A close-up photograph of a tiger mother and her cub resting on a bed of green grass. The tiger mother, with her characteristic orange and black stripes, is lying down, facing slightly towards the camera. Her cub is nestled against her, also facing the camera. Both tigers have white fur on their faces and chests. The background is a soft-focus view of more greenery.

The Jim Corbett National Park was the
first National Park in India established In 1935.

The Kaziranga National Park has two-thirds of the world's great one-horned rhinoceros population.



Bandipur National Park (BNP) is one of the India's best known protected areas and is an important reserve for the Project Tiger.

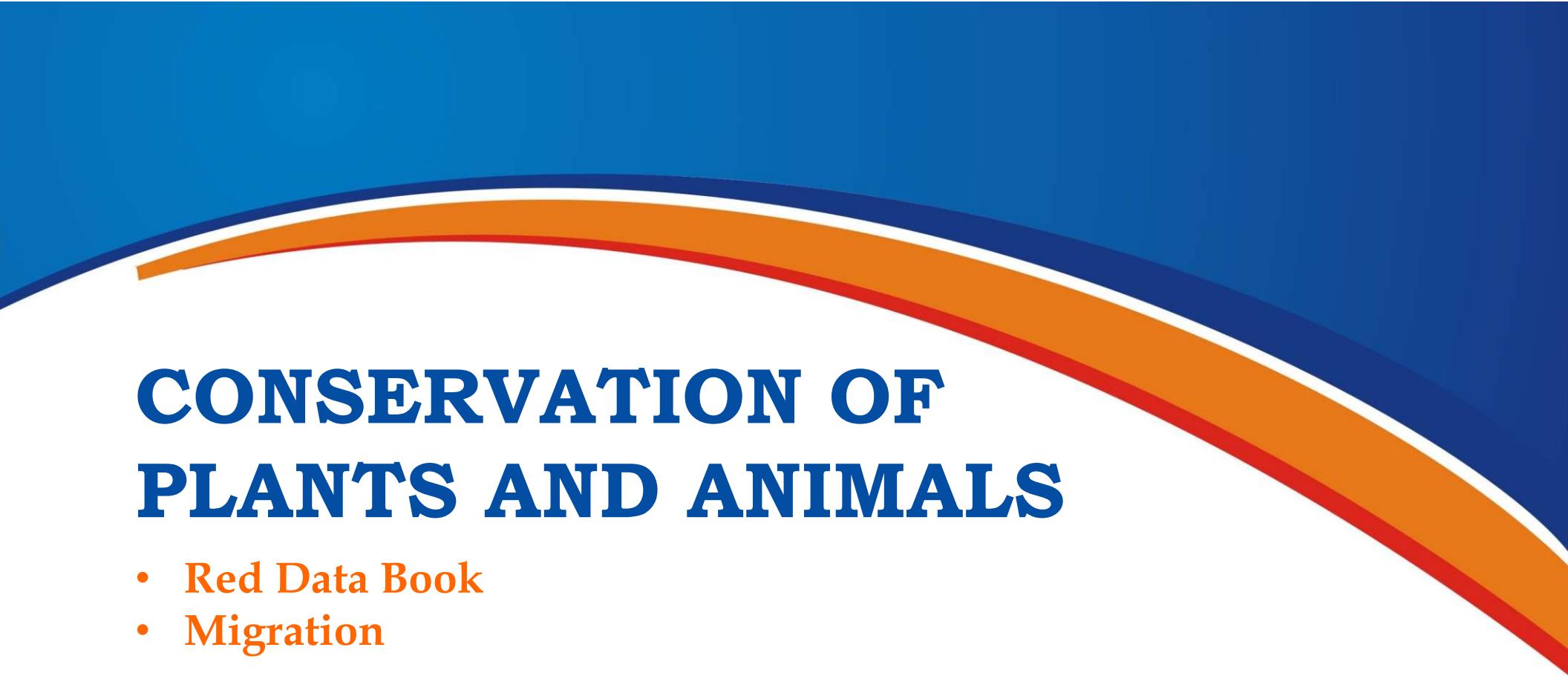


NATIONAL PARK

The **Largest National Park** in the world is the **North-east Greenland National park**, which was established in **1974**.







CONSERVATION OF PLANTS AND ANIMALS

- Red Data Book
- Migration

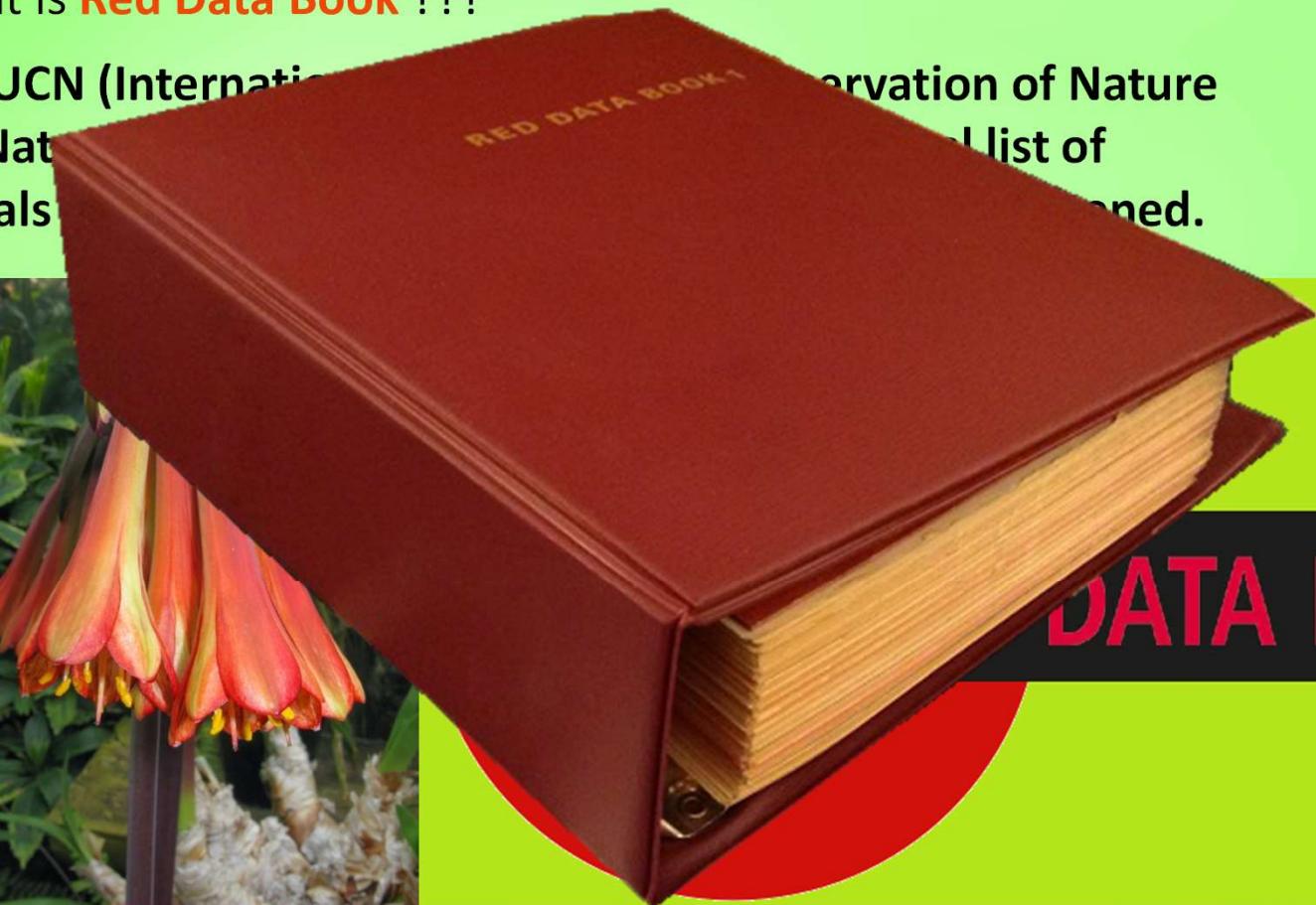
RED DATA BOOK



What is **Red Data Book** ???

The IUCN (International Union for the
Conservation of Nature) is a list of
endangered animals.

Conservation of Nature
A list of
endangered species.



DATA BOOK

RED DATA BOOK

Rare and endangered species of animals
and plants

Red Data Book is the source book which keeps a record of all the **Endangered Animals and Plants.**



RED DATA BOOK

There are **Different Red Data Books** for plants, animals and other species.

RED DATA BOOK



Vol 1. Plants and Fungi

RED DATA BOOK



Vol 2. Animals

RED DATA BOOK



Vol 3. Natural Habitats

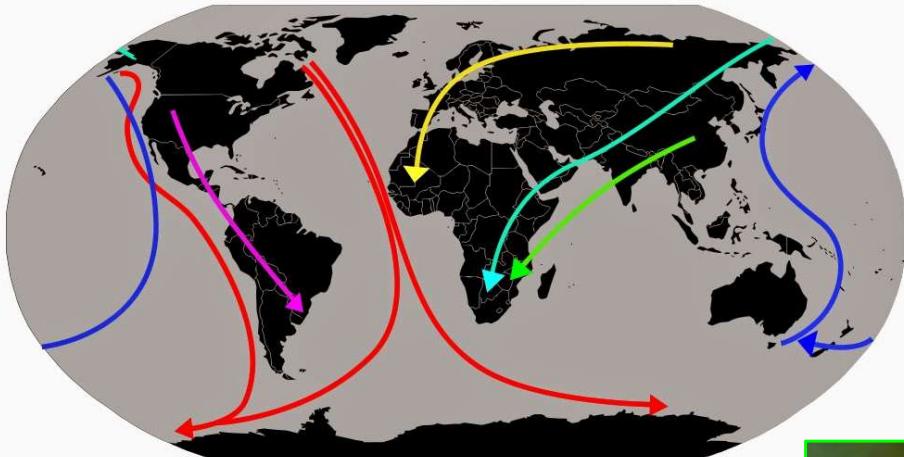
MIGRATION

Migration is the periodic movement of a species of animals or birds from the place where it has been living to a new area and its subsequent return journey to the original home.



MIGRATION

Birds who **Cover Long Distances** to reach another land are known as the Migratory Birds.



- | | | |
|-----------------------|---|-------------------------|
| Oenanthe oenanthe | — | Northern Wheatear |
| Sterna paradisaea | — | Arctic Tern |
| Falco amurensis | — | Amur Falcon |
| Puffinus tenuirostris | — | Short-tailed Shearwater |
| Philomachus pugnax | — | Ruff |
| Buteo swainsoni | — | Swainson's Hawk |



MIGRATION

When animals and birds migrate, it is usually to find **Abundant Food** and a **Favourable Place To Breed**.



MIGRATION

They fly for Laying Eggs as the Weather in their natural habitat Becomes Very Cold and Inhospitable.



MIGRATION

The Precise Methods by which animals Navigate and know where to go are still obscure.

Birds have much Sharper Eyesight and Better Visual Memory Of Ground Clues than humans.

Eyesight of Humans

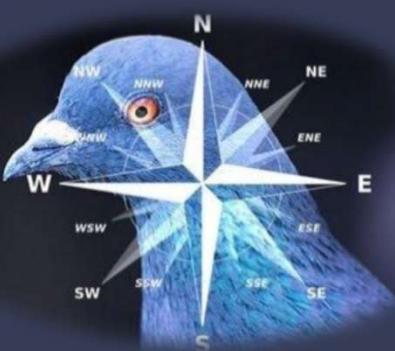


Sharper Eyesight Of Birds



MIGRATION

- In long-distance flights, they appear to navigate with the help of the Sun and stars,



MIGRATION

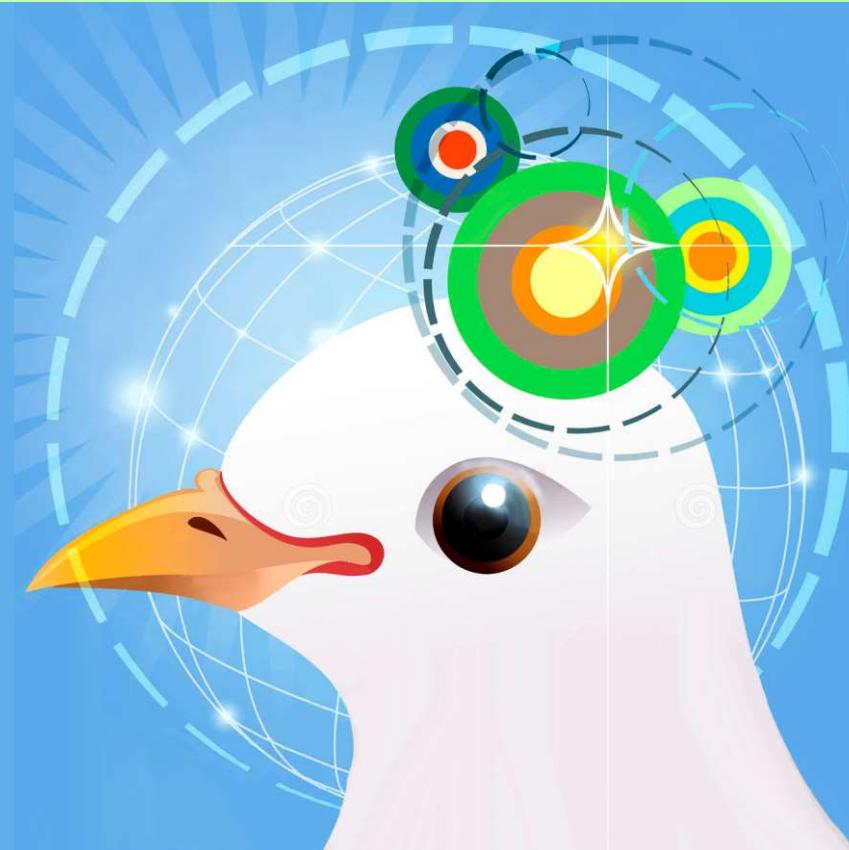
- In long-distance flights, they appear to navigate with the help of the Sun and stars, possibly in combination with a 'reading' of Earth's magnetic field.



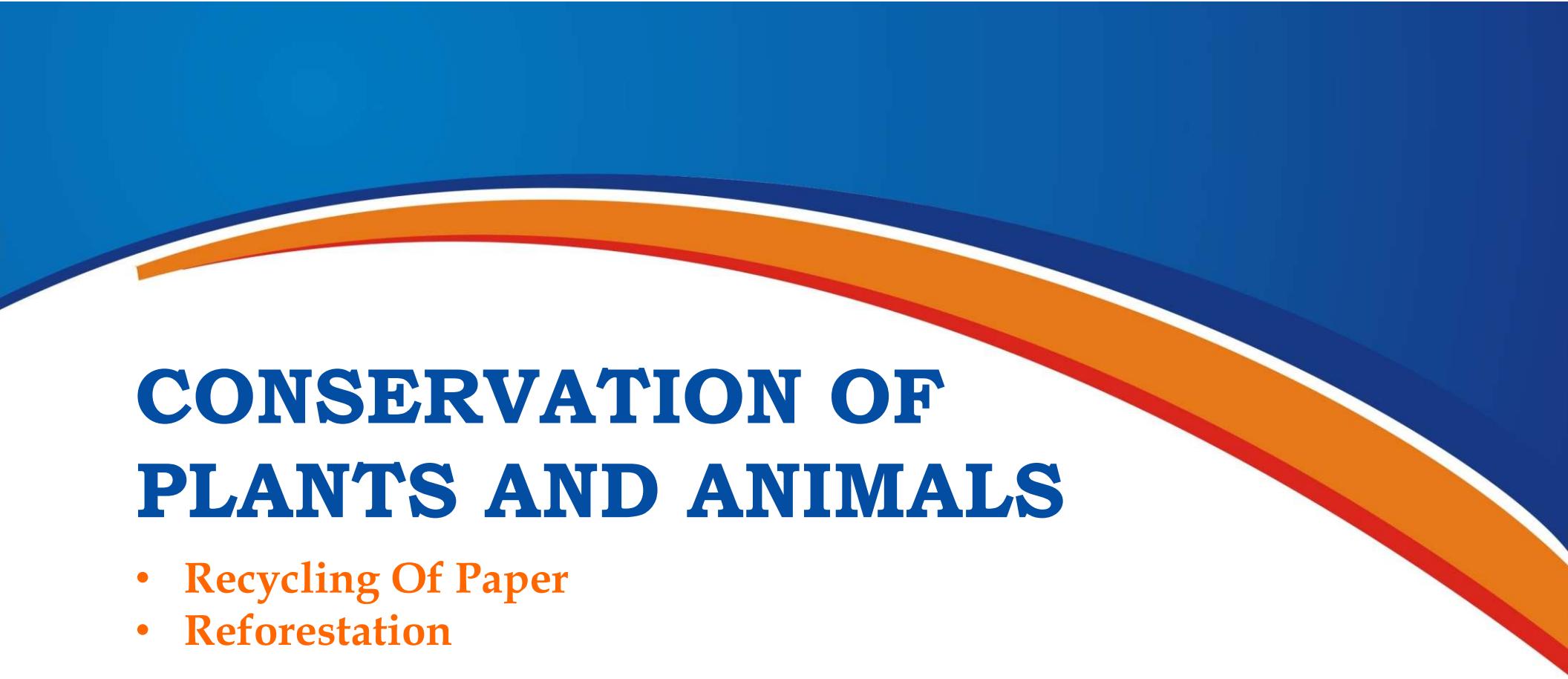
MIGRATION

This is achieved through an **Inbuilt 'Magnetic Compass'**,
which is a **Tiny Mass Of Tissue Between The Eye And Brain** in birds.

Inbuilt Magnetic Compass







CONSERVATION OF PLANTS AND ANIMALS

- Recycling Of Paper
- Reforestation

RECYCLING OF PAPER

Paper recycling is the **Process Of Recovering Waste Paper and Remaking It Into New Paper Products.**

Paper suitable to recycle is called **Scrap Paper.**



RECYCLING OF PAPER

Today, 90% Of Paper Pulp is made of **Wood**.



It takes 17 full grown trees to make one tonne of paper. Paper production accounts for about 35% of felled trees.



RECYCLING OF PAPER

Recycling Of Newsprint saves a Lot Of Wood.

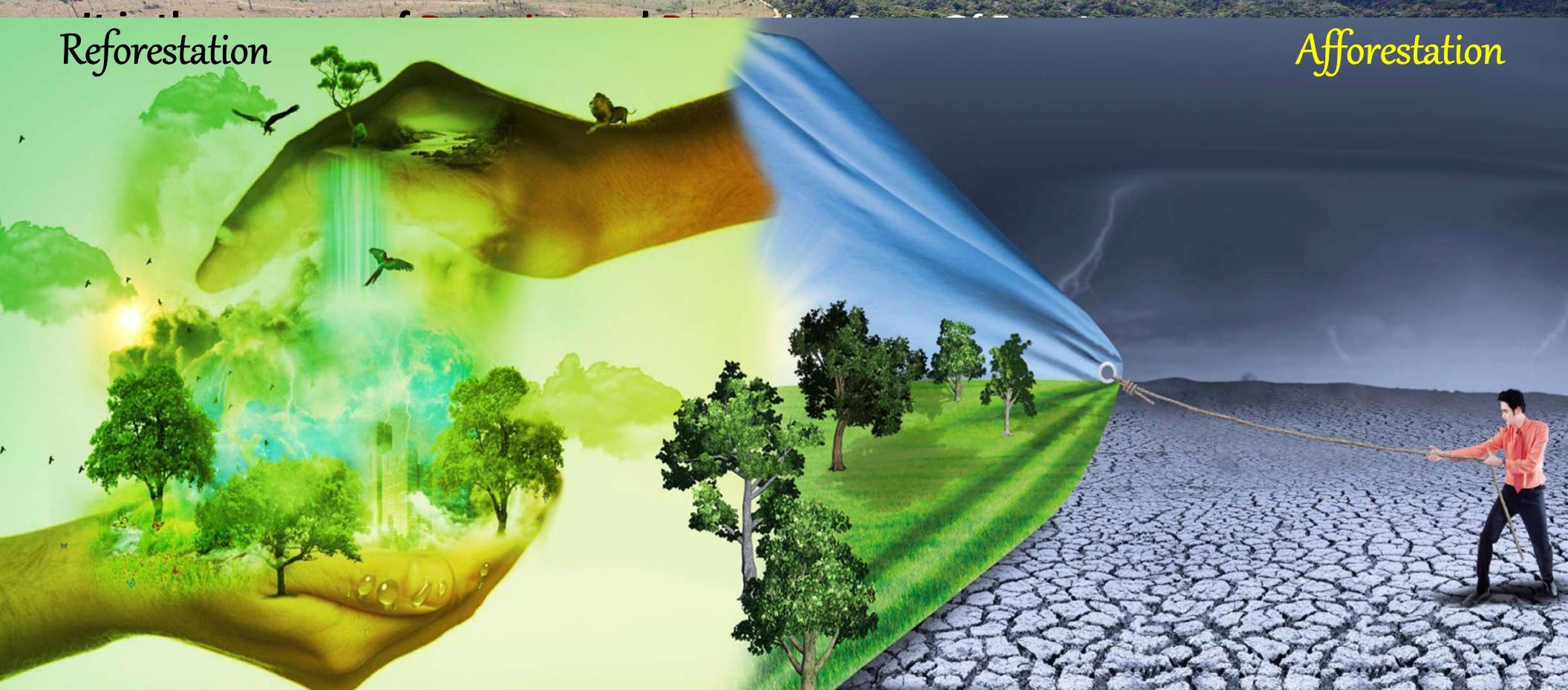




The amount of Harmful Chemicals
Used In Paper Making will also be
reduced.

REFORESTATION

Reforestation is also referred to as Afforestation.



REFORESTATION

While selecting the plants for reforestation, one should be careful that **The Same Species Of Plants should be selected that were there at the respective area earlier.**



Because Plants Grow Efficiently In
Their Original Habitat.

REFORESTATION

This promotes the rapid Re-establishment of both Flora and Fauna in a forest.



REFORESTATION



Reforestation can take place **naturally** also.

In Natural Reforestation there is **No Role Of Human Beings.**



Forested area
is disturbed, it



REFORESTATION

The Forest Conservation Act (1980) is one of the Most Effective Legislations contributing to Reduction In Deforestation.

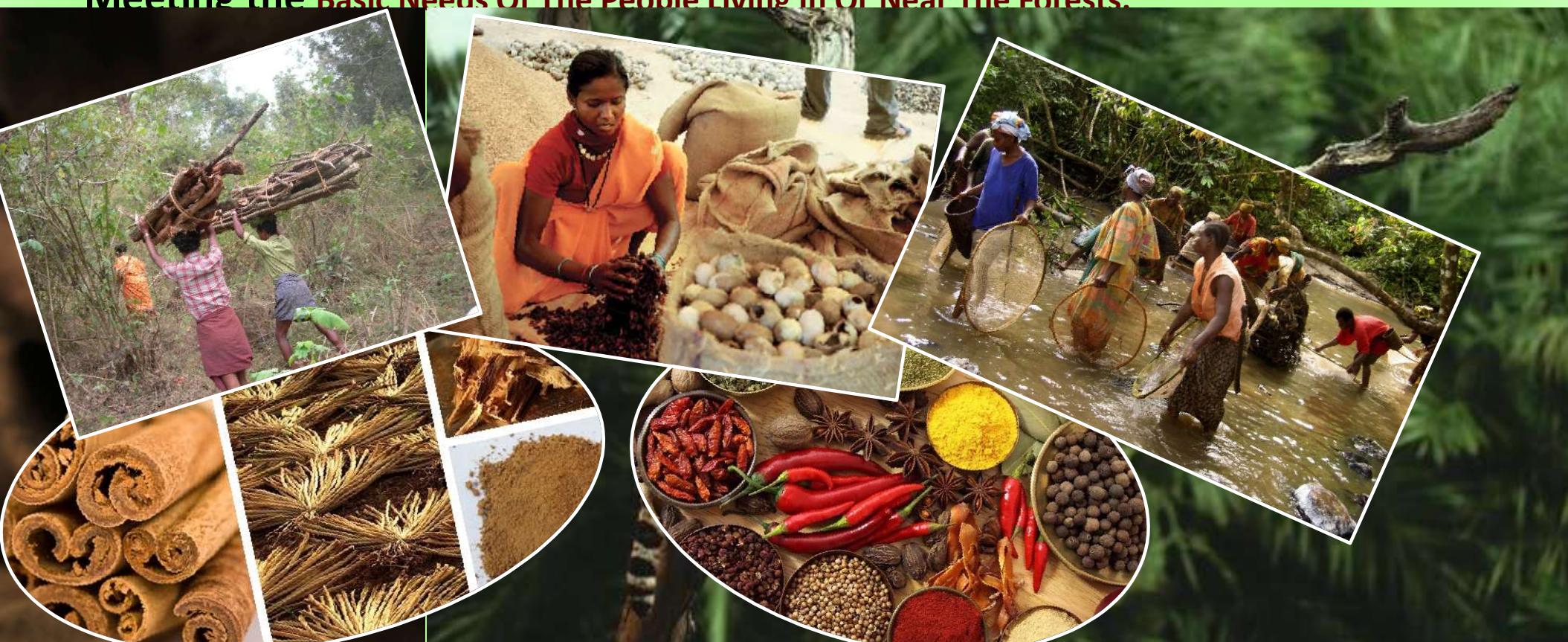


REFORESTATION

This Act Is Aimed At :

Preservation and Conservation of natural forests.

Meeting the Basic Needs Of The People Living In Or Near The Forests.



Thank You