

## Question

Discuss in detail the salient features of Pakistan environmental protection act 1997?

### Introduction:

Pakistan environmental Protection act (PEPA) 1997 was passed on 6<sup>th</sup> December, 1997. Its fundamental purpose is the conservation, protection of environment. It was amendment of PEPo 1984. In the new amendment certain new policy measures were added, of certain principles of PEPo 1984 were revised. Under PEPA 1997, an Environment Council, tribune and agency was formed to enforce environmental laws. Besides it also prohibit certain pollution causing behaviour encompassing prohibiting high level of gases emitted from motor bikes,

ban on impacts of hazard material and mandatory analysis of EIA of construction projects through IAE. In short it was momentous step to conserve the environment and mitigate environmental hazards.

## Overview of PEPA 1997:

Pakistan Environmental Protection

Act 1997 was revised from of Pakistan Environmental Protection ordinance 1983. It was approved by President of Pakistan on 6 December 1997.

It involves the

conservation, protection,

rehabilitation of environment

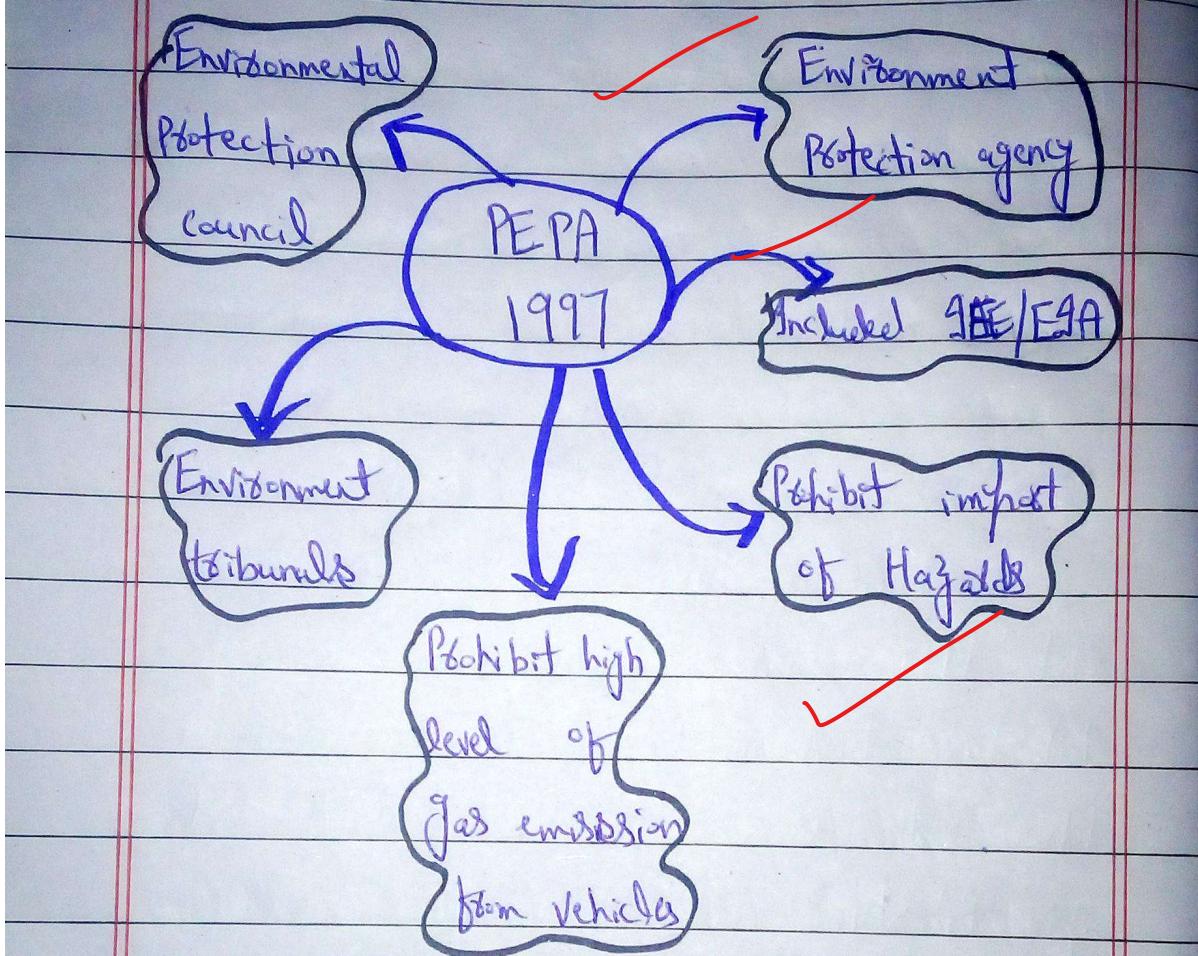
and control of pollution

to attain sustainable

development

It also establish environmental funding mechanism and protection of species.

## Salient features of PEPA 1997



### a- Environment Protection Council:

Initially under PEP, 1983  
 a environmental council was formed  
 headed by President, yet under PEPA 1997  
 it was revised and headed by  
 Prime minister. Its members are business  
 community, NGOs, journalists and educational

effects. It oversight the implementation of environment rules.

## Environment protection agency

It has basic two functions

(i) Investigate environmental issues and non compliance

It also include inquiry on complaint of other federation

(ii) Search of any federation or government

to get environmental documents information if they violate <sup>law</sup> and arrest such federation

## Regulation of motor vehicles

Gasous emissions from vehicles

which exceed standards of PEPA,

1997 as has degraded impacts

on environment shall be banned.

All vehicles <sup>owners</sup> are required to install pollution control devices in vehicles.

### d- Inclusion of EIA and EGA

ALL the construction of other projects that have environmental impact must be assessed through EIA or Environment Impact Assessment and owners of projects must obtain approval from federal agency for their project.

### e- Environmental tribunal under PEPA:

Government is required to establish environmental tribunal under PEPA, 1997. Tribunal must be formed in all four provinces and hear cases related to environment law violation and imposed penalties like closure of projects and sentencing.

### f- Delegation of powers:

powers of federal government related to environment governance

must be delegated to <sup>federal</sup>  
and local governments.

### g- Provincial environmental agencies:

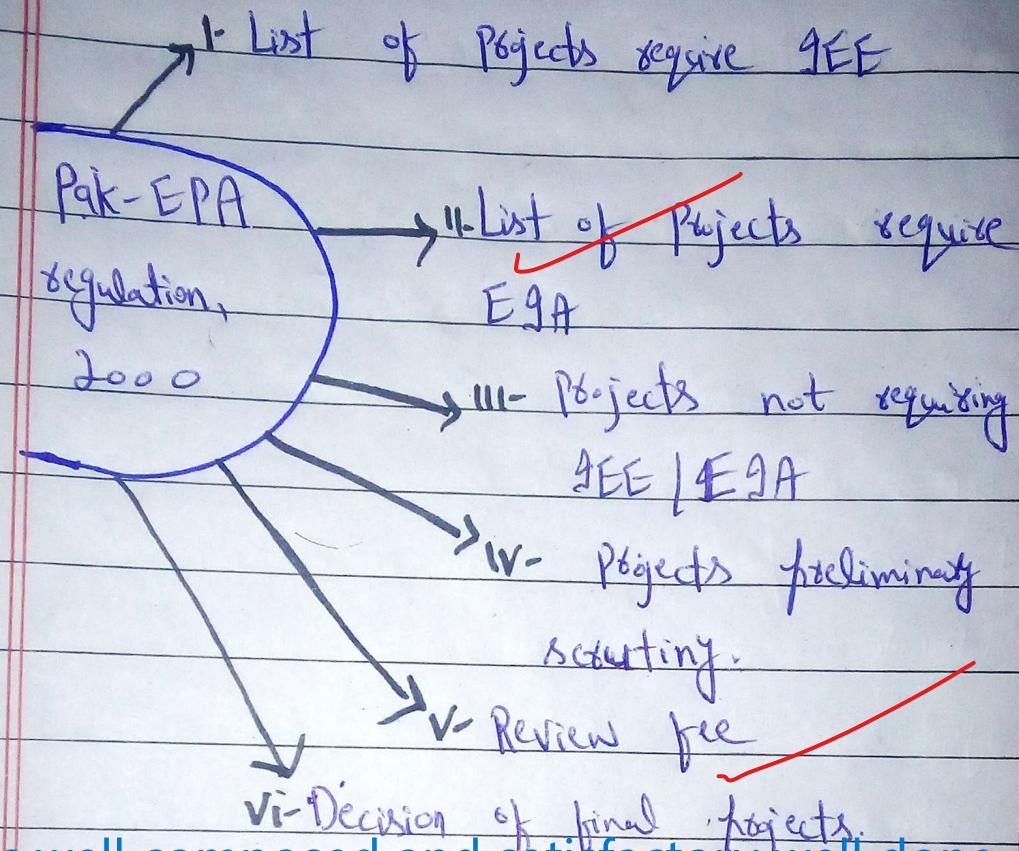
under PEPA, 1997; powers  
of environment agencies ~~were~~ defined  
those will be established in each

Province: <sup>environmental</sup> provincial government must  
delegate its powers <sup>to</sup> environmental  
agencies for enforcement of environment  
laws.

### PAK-EPA (Review of GEE/EIA) regulation

2000

Rules of PEPA 1997 were  
examined under PAK-EPA 2000, certain  
rules were formed and new  
PAK-EPA 2000. It consists of total  
eight schedules mainly focused on  
list of projects that require GEE  
or EIA.



answer is well composed and satisfactory well done  
content is fine

## 12/20 Conclusion

PEPA-1997 was launchmark step by government of Pakistan to ensure conservation of environment and control of pollution causing agents. It also created strong compliance mechanism via environmental agencies at provincial level and tribunals by delegating power to them.

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## Question

How different climates types are formed in the world? Discuss tropical, polar and dry categories of climate. What characteristics do they have? How will they respond to climate change....?

## Introduction

Climates are basically average temperature and weather of particular area and time span. Climates vary over places and latitudes and based on sea distance. For the classification of climates Vladimir Köppen developed specific climate classification system which encompasses Moist Subtropical, Dry climate, Polar climate, Tropical moist and Moist continental climate. All these climates vary from warm summers to moist

and cold summers and intense winters.

South Asia countries generally Pakistan,

India and Bangladesh lie in monsoon

climate region having warm summers

and high rainfall.

## How different climate types are formed?

### Definition of Climate:

Climate refers to

"average weather in terms

of mean and variability

over certain time span

and certain area"

Climate varies from place to place,

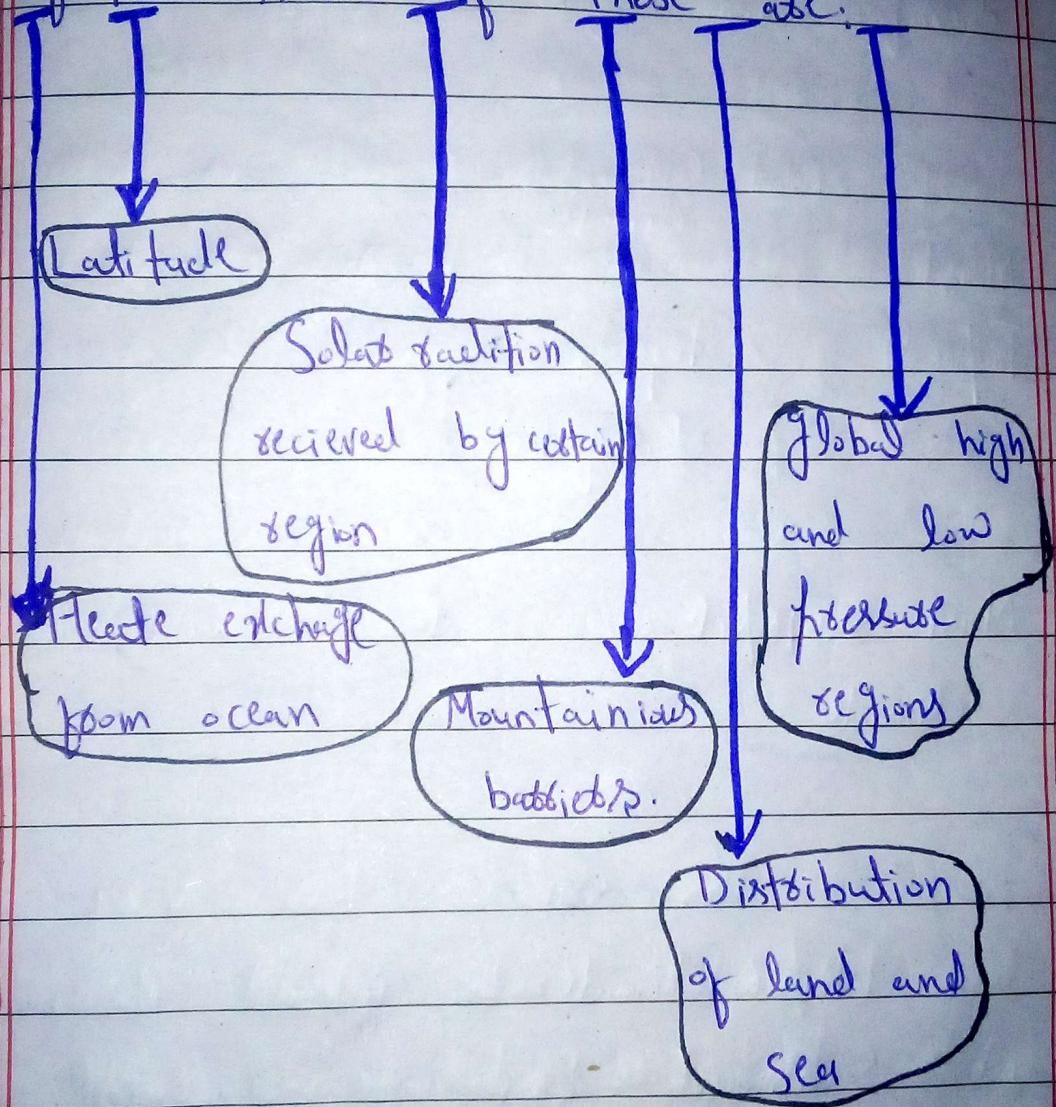
vegetation, latitude and sea distance

Region's weather pattern tracked

over 30 years is climate

## Formation of Climate:

Climate of particular area  
are formed based on number of  
factors. Some of these are:

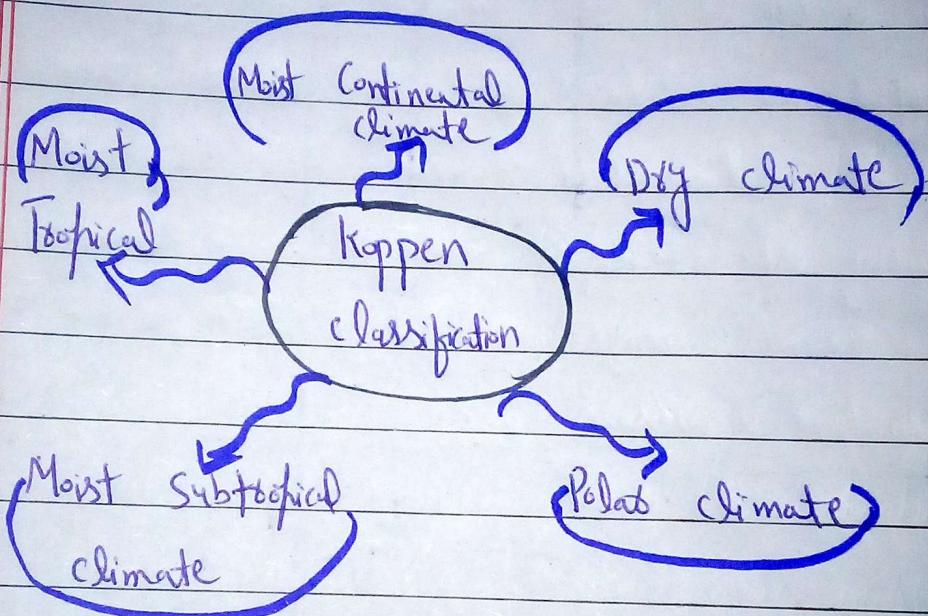


## Koppen classification system of Climate:

To classify climates, Koppen classification system was developed by

Climatologist Wladimir Koppen in 1918

This system was revised number of times. In this system climates are classified into five categories.



## Tropical climate:

This climate is formed Northward and Southward from tropical. In this climate temperature is usually high and precipitation is 1500 mm.

It is further categorized in three forms.

Moist  
Tropical  
climate

Rain Forest: Temperature

is high, due to warm  
surface and humidity  
more rainfall occurs.

Very little season change

Monsoon climate: rainfall

is greater, specially in  
7-9 month. in dry winter

Very less rainfall present  
in South Asia.

Savanna: precipitation is

less, has dry winter

rainfall usually in summer.

## Dry Climate:

It is formed in North  
and South regions of equator, evaporation  
rate is high but precipitation is  
very less because air is blocked due  
to its mountainous regions.

It further divided into two forms.

Dry Arid climate      Dry. Semi-Arid climate

Vety less rainfall 4-12 inches.	Rainfall is high 10-20 inches to sufficient for greenery.
consist of desots which 12% of total land area.	region, more season variations.

### Polar climate:

This climate has vety low temperature with intense cold periods. temperature during warmest period is less than  $10^{\circ}$  celsius.

It is usually found in North America and Antarctica regions.

There are further two climate

categories formed in this climate  
types

Polar Tundra  
climate

Soil is permanently  
frozen to depth  
of 100 meters. Few  
plant and animals  
in this region  
exist. Summers are  
very short.

Polar Icecap  
climate

Permanently  
covered with  
ice. Few categories  
of plant and animals  
Temperature can't  
rise above  
freezing point.

### Conclusion:

Climate are average weather  
patterns formed by various factors  
specially influence of latitude, sea  
level, wind and pressure. It's different

categories of climate vary from region to region based on Koppen classification. These are crucial role in the conservation of flora and fauna which inhibit them.

any shift in their natural pattern has long term impacts on species.

### Question:-

What are the main causes of Biodiversity loss? How can we protect them:

## Introduction

Biodiversity, which is the variation of living organism in various ecosystem, plays a very important role in maintaining of natural ecosystem and to sustain life on Earth. However, number of

natural and man-made factors are causing annihilating impact on the conservation and survival of various species. certain measures including Ex-situ and In-situ conservation have been create to protect endangered species of fauna and flora.

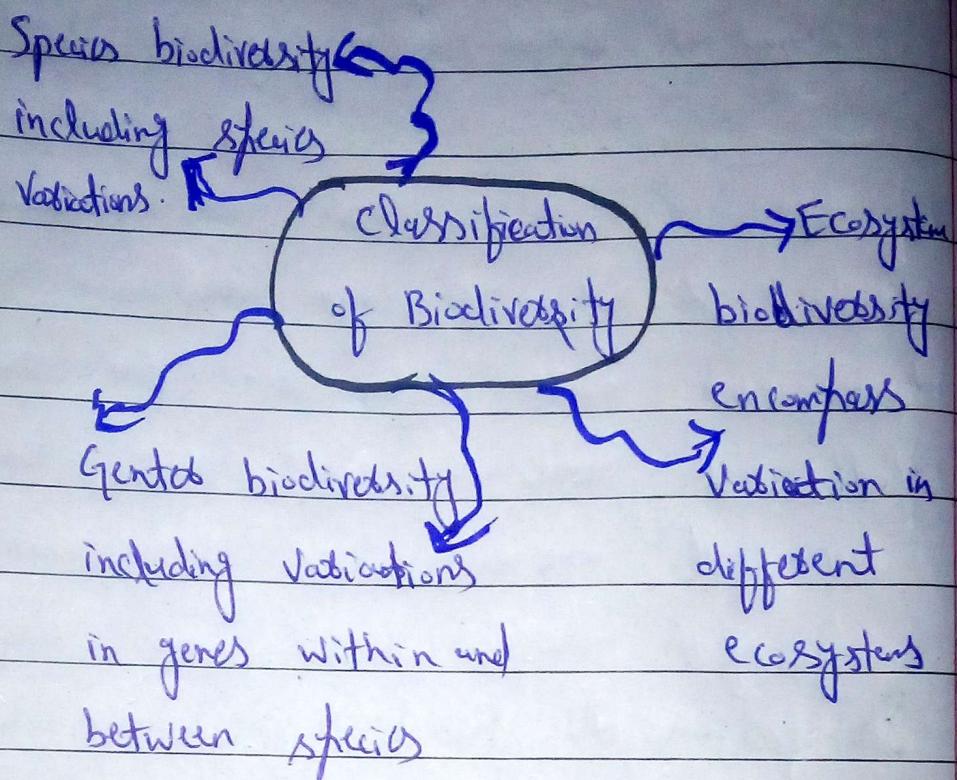
### Definition of Biodiversity:

The term Biodiversity was coined by Walter Rosen in 1986

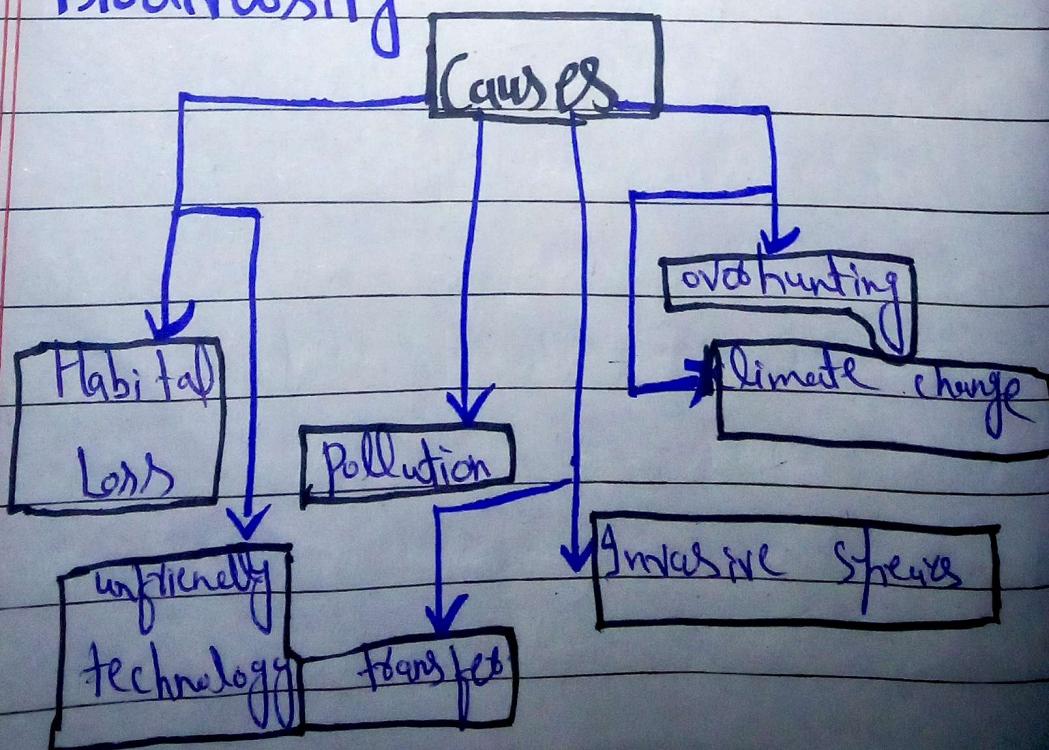
According to convention on Biodiversity.

Biodiversity is the variability of living organisms in terrestrial, aquatic and marine ecosystem and various ecological complexities of they are also part of Biodiversity.

These various organisms include plants, animals, insects and marine species.



## Main causes of loss of Biodiversity



## a- Habitat loss:

First main cause of loss of biodiversity is the loss of their natural habitat that is inhabited by them. It is either due to human activities like cutting of forest or natural events like flooding and fire eruption.

## b- Pollution causing biodiversity loss

Pollution is another factor causing loss of plants due to soil pollution or animals specially marine species loss due to water pollution that include high tides.

## c- Overhunting:

Overhunting of certain animals species make them endangered or even extinction. Certain animals are forced to practice overhunting. But this practice

is left on going through illegal ways and posing major threat to biodiversity.

#### d- Invasive species:

These are the species which are not part of certain environment but come from elsewhere to that environment and threaten the natural species of that context. They do so either by preying those species or taking away their natural habitat putting them out of fish.

#### e- Transfer of unfriendly Technology:

use, import or export of species-unfriendly technology also pose risk to species survival. As these technologies include hazardous practices of release of toxins which are intensely harmful to the biodiversity.

## f. Climate change:

Lastly, the recent climate trends including global warming causing intense heat waves, or high rainfall causing flooding are major jeopardizing factors behind the survival of animals and plants. These activities are triggered by malpractices and put the natural ecosystem at risk.

## How can we protect Biodiversity:

To protect biodiversity certain pragmatic measures must be adopted including:

- Regular survey of biological research
- Discovering new species to improve quality of biodiversity.
- Planning to use resources in much efficient ways.
- Preventive measure to protect from

hazardous substances that are threatening to the species existence.

Besides two methods are in practice to conserve biodiversity.

~~Ex~~ **In-situ conservation**  
 involve using genetic material to treat and grow species in laboratory providing them artificial environment: include Botanical garden and Zoo

**Conservation of Biodiversity**

**Ex-situ conservation**

It include conserving species in natural environment. population is

protected in natural environment

It is used for <sup>wild</sup> fauna

and flora. It include

National parks, Sanctuaries

## Conclusion:

To conclude, Biodiversity plays crucial role in survival of whole ecosystem and human being. As they are source of food, medicine, shelter, timber. But certain human activities alongside natural factors are causing them to deplete. States should develop collective rules with mandatory implementation mechanism to end the conservation of species.