

Question

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

Introduction:

Pakistan environmental Protection act (PEPA) 1997 was passed on 6 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, & ~~at~~ certain principles of PEPO 1984 were revised. Under PEPA 1997, an Environment Council, tribunal and agency was formed to enforce environmental laws. Besides it also prohibit certain pollution causing behaviors encompassing prohibiting high level of gases emitted from motor bikes,

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

Overview of PEPA 1997:

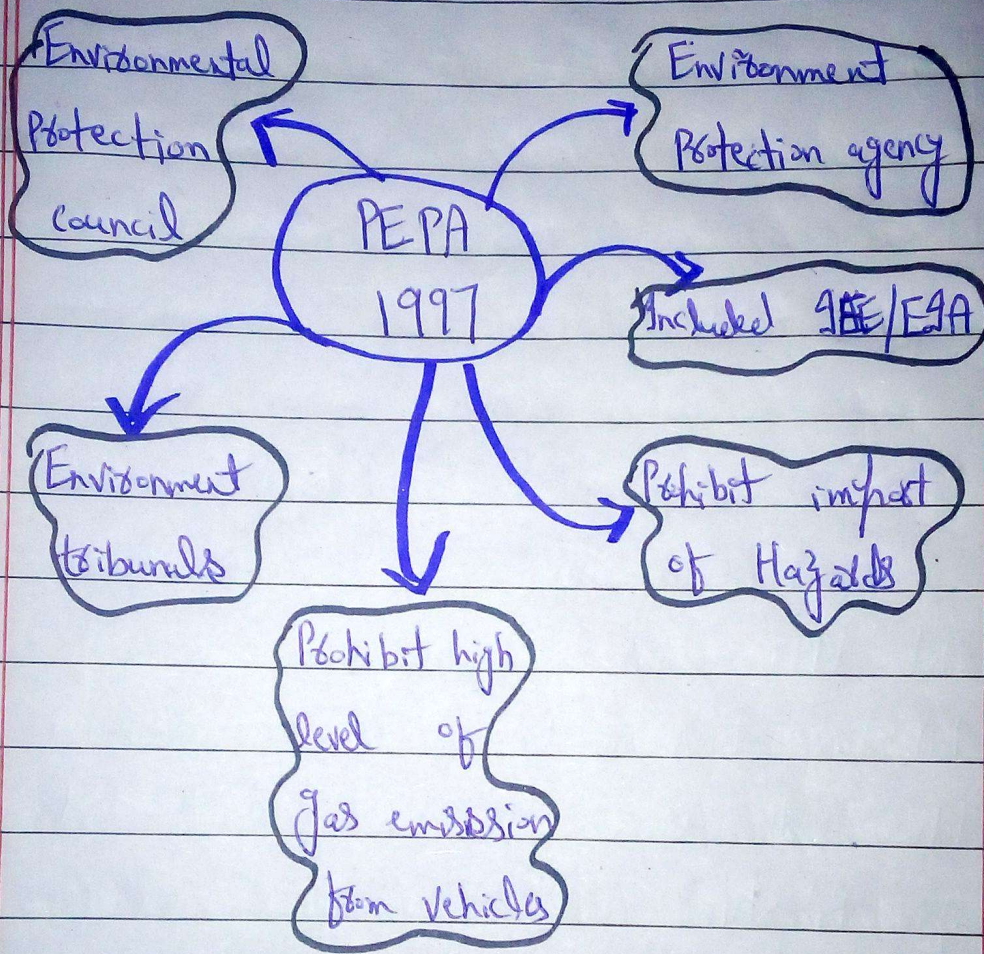
Pakistan Environmental Protection
Act 1997 was revised form of
Pakistan Environmental Protection ordinance
1983. It was approved by President
of Pakistan on 6 December 1997.

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 PEPA, 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, journalist and retired

expects. It oversees the implementation of environment rules.

Environment protection agency

It has basic two functions

- | | |
|---|--|
| (i) | (ii) |
| Investigate environmental issues and non compliance | Search of any person |
| It also include inquiry on complaint of other person. | or summon person to get environmental documents information if they violate and arrest such person |

Regulation of motor vehicles

Gaseous emissions from vehicles which exceeds standards of PEPA, 1997 or has degraded impacts on environment shall be banned. All vehicles ^{owners} are required to install pollution control devices in vehicles.

d- Inclusion of JEE and EIA

All the construction or other projects that have environmental impact must be assessed through JEE or Environment Impact Assessment and ~~the~~ 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

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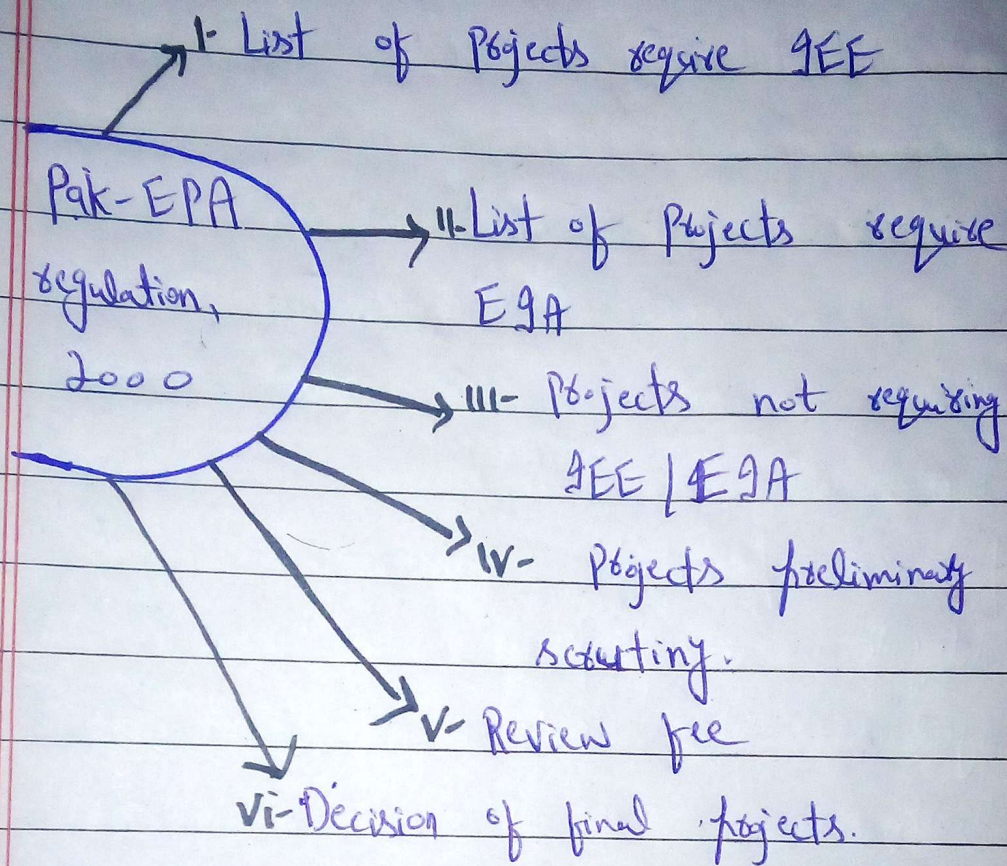
must be delegated to provincial and local governments.

g- Provincial environmental agencies:

under PEPA, 1997; powers of environment agencies were defined these will be established in each province. Provincial government must delegate its ^{environmental} powers to environmental agencies for enforcement of environment laws.

PAK-EPA (Review of JEE/EIA) regulation 2000

Rules of PEPA 1997 were examined under PAK-EPA 2000, certain rules were framed and new PAK-EPA 2000. It consist of total eight schedules mainly focused on list of projects that require JEE & EIA.



Conclusion

PEPA-1997 was landmark 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 powers to them.

Question

How different climates types are formed in the world? Discuss tropical, polar and dry categories of climate. write characteristics. 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 latitude and based on sea distance. For the classification of climates Vladimir Koffen developed specific climate classification system which encompass; Moist Sub tropical, Dry climate, Polar climate, Tropical moist and Moist continental climate. All these climates vary from warm summer to moist

and cool summer and intense winters.
South Asia countries generally Pakistan,
India and Bangladesh lies in monsoon
climate region having warm summer
and high rainfall.

How different climate types
are formed?

Definition of climate:

climate refers to

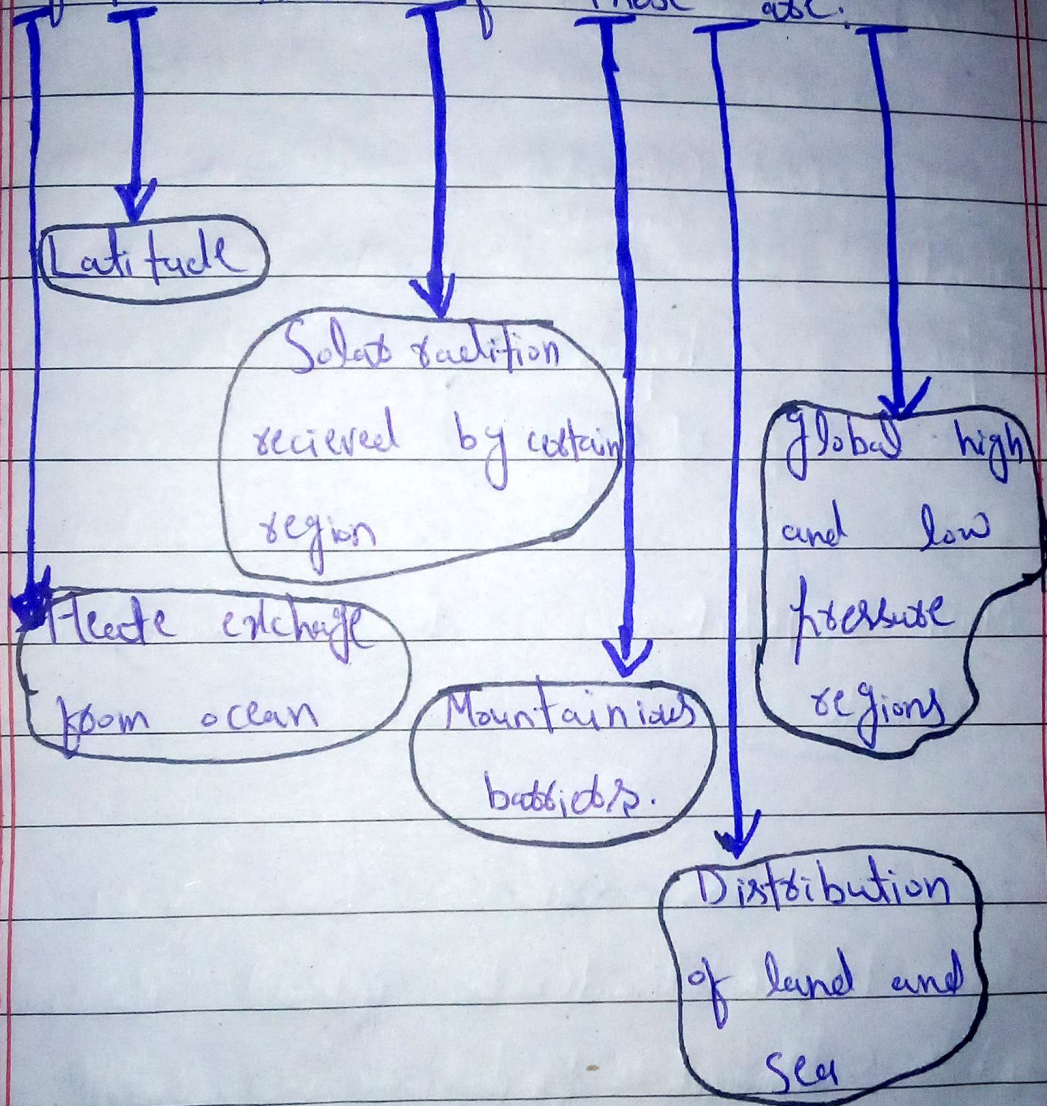
"average weather in terms
of mean and variability
over certain time span
and certain area"

climates 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:



Köppen classification system of climate:

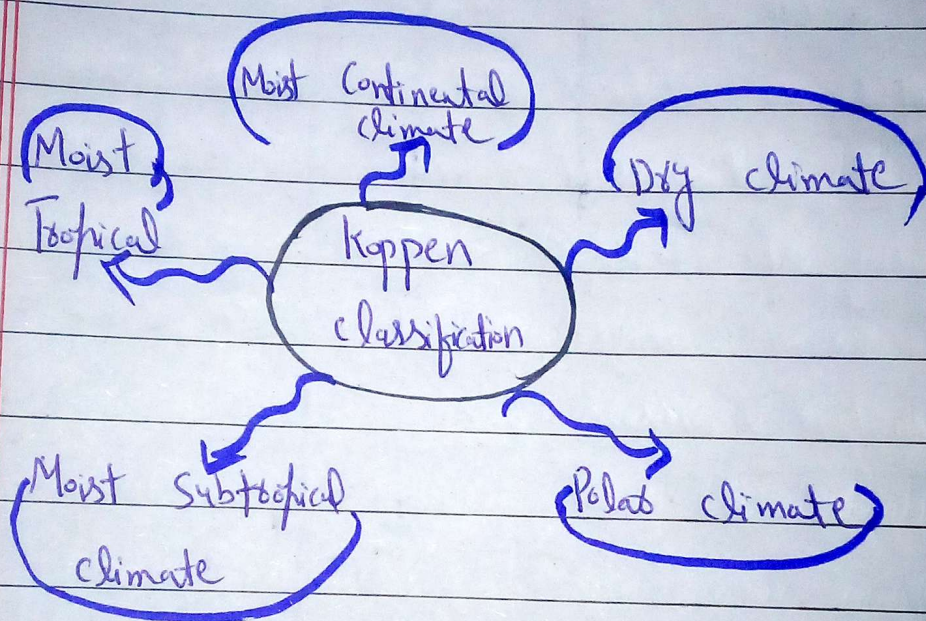
To classify climates, Köppen classification system was developed by

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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 months. 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**

Very less
rainfall 4-12 inches.
consist of deserts
which 12% of total
land area.

rainfall is high
10-20 inches to
support its greenland
region. more
season variations.

Polar climate:

This climate has very low temperature with intense cold periods. temperature during warmest period is less than 10° Celsius. It is usually found in North America and Antarctica regions. There are further two climate

categories formed based on this climate types

Polars Tundra climate

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

Polars Ice cap climate

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

Conclusion:

climates are average weather patterns formed by various factors specially influence of latitude, sea level, wind and pressure. Different

categories of climate vary from region to region based on Köppen classification. These are crucial role in the conservation of flora and fauna which inhabit 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 in in maintainance of natural ecosystem and to sustain life on Earth. However, number of

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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 created to protect endangered species of fauna and flora.

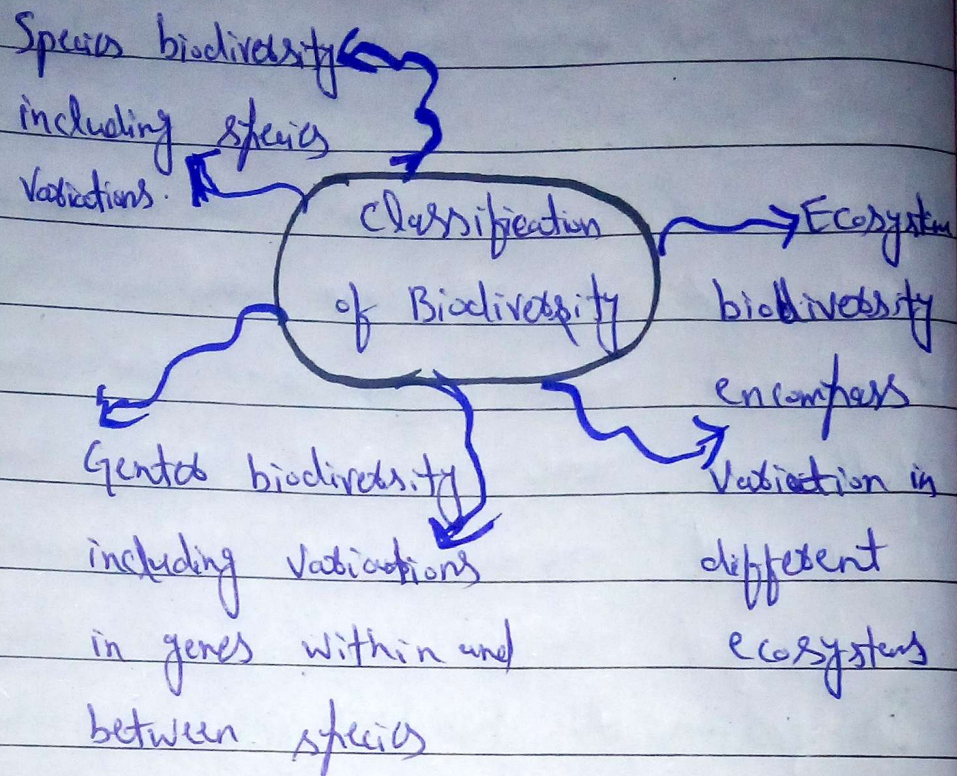
Definition of Biodiversity:

The term Biodiversity was coined by Walter Rosen in 1986.

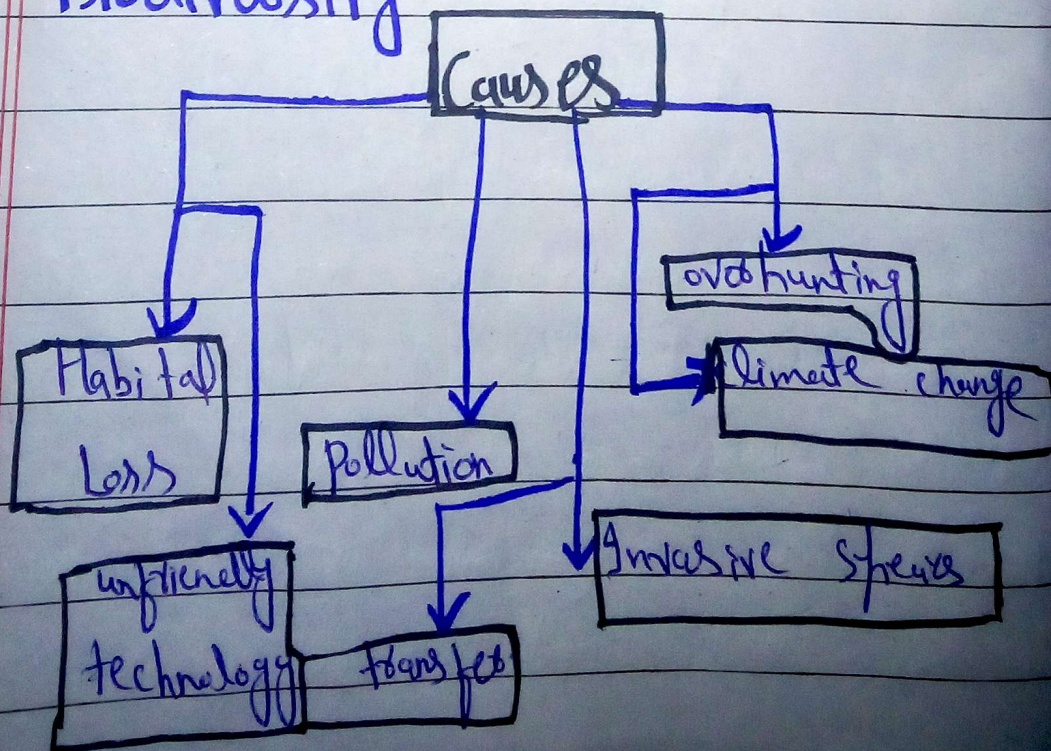
According to Convention on Biodiversity.

Biodiversity is the variability of living organisms in terrestrial, aquatic and marine ecosystem and various ecological complexities of them are all 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 toxins.

c- overhaunting:

overhaunting of certain animal species make them endangered or even extinction. certain laws are formed to prevent overhaunting. But this practice

is kept 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 predating those species or taking away their natural habitat putting them at risk.

e- Transfer of unfriendly Technology:

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

b- Climate change:

Lastly, the recent climate trends including global warming causing intense heat waves, or high rainfall causing flooding are major globalizing 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 resources.
- Discovering new species to improve quality of biodiversity.
- Plannings to use resources in much efficient ways.
- Preventive measure to protect from

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hazardous substances that are threatening to the species existence.

Besides two methods are in practice to conserve biodiversity.

~~Ex~~ Ex 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

In situ conservation

It include conserving species in natural environment. population is protected in natural environment. It is used for ^{wild} fauna and flora. It include National Parks, Sanctuaries.

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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 ensure the conservation of species.