

Importance of biodiversity

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BY:-MRS.RINKI KUMARI

DEPTT.OF EDUCATION

MMHA&PU,PATNA

BENEFITS OF BIODIVERSITY

Consumptive value:

- Food/Drink
- Fuel
- Medicine
- Better crop varieties
- Industrial Material

Non-Consumptive Value:

- Recreation
- Education and Research
- Traditional value

Ecological services:

- Balance of nature
- Biological productivity
- Regulation of climate
- Degradation of waste
- Cleaning of air and water
- Cycling of nutrients
- Control of potential pest and disease causing species
- Detoxification of soil and sediments
- Stabilization of land against erosion
- Carbon sequestration and global climate change
- Maintenance of Soil fertility

- Pollution
- Hunting
- Global warming and climate change
- Agriculture
- Domino effect



RECENT ISSUES ON BIODIVERSITY

- Some 75 per cent of the genetic diversity of crop plants been lost in the past century.
- Some scientists estimate that as many as 3 species per hour are going extinct and 20,000 extinctions occur each year.
- Roughly one-third of the world's coral reef systems have been destroyed or highly degraded.
- About 24 per cent of mammals and 12 per cent of bird species are currently considered to be globally threatened.
- More than 50 per cent of the world's wetlands have been drained, and populations of inland water and wetland species have declined by 50per cent between 1970 and 1999.

CONSERVATION OF BIODIVERSITY

- Biodiversity inventories
- Conserving Biodiversity in protected Habitats-
 - *In situ* conservation
 - *Ex situ* conservation
- Seed Bank, Gene Bank, Pollen Bank, DNA Bank



ZOO



Gene Bank



Tiger, Bandhavgarh National Park

Bandhavgarh National Park

- Restoration of Biodiversity
- Imparting Environmental Education
- Enacting, strengthening and enforcing Environmental Legislation
- Population Control
- Reviewing the agriculture practice
- Controlling Urbanization
- Conservation through Biotechnology

Biodiversity Conservation

In situ

Ex situ

Sacred groves and lakes

Biosphere Reserves

National parks, wildlife sanctuaries

Sacred plant home garden

Terrestrial

Seed Bank, Gene bank, Cryopreservation

Marine

Botanical garden, Zoological garden, Aquaria

BIODIVERSITY IN INDIA

Categories	No. of Indian Species	% of Indian species Evaluated	Species Threatened In India
Mammals	386	59	41%
Birds	1219	–	7%
Reptiles	495	73	46%
Amphibians	207	79	57%
Freshwater Fish	700	46	70%

Source- Based on Kumar et.al 2000

BIODIVERSITY CONVENTIONS

- The first convention on biodiversity organized at Rio De Janeiro, capital of Brazil from June 5 to 16, 1992 named as United Nation Conference On Environment and Development (UNCED), better known as Rio Summit to maintain ecological balance and enrich biodiversity. The agreement on biodiversity signed by 150 countries including three programmes-
 - ❖ To ensure conservation of biodiversity
 - ❖ Sustainable use of biodiversity
 - ❖ Rational and equitable share of profit to accrue from use of genetic resources.
- The second convention organized at Johannesburg in 2002 called World Summit On Sustainable Development (WSSD) where the Biodiversity and Sustainable Ecosystem Management was the issue.

- The International Conference held on Biodiversity in Relation to Food & Human Security in a warming planet 15-17 February, 2010 in Chennai.
- International Conference on Wildlife & Biodiversity Conservation held on 3 to 5 June, 2010 at Dal lake, Srinagar, Kashmir.
- Indian Biodiversity Congress (IBC) & Indian Biodiversity Expo(IBE) will be held on 27-31 December at Thriuvananthapuram, Kerala.



Biodiversity is life
Biodiversity is our life

CONCLUSION

Biodiversity is our life. If the Biodiversity got lost at this rate then in near future, the survival of human being will be threatened. So, it is our moral duty to conserve Biodiversity as well our Environment. Long-term maintenance of species and their management requires co-operative efforts across entire landscapes. Biodiversity should be dealt with at scale of habitats or ecosystems rather than at species level.

