

Environment Class 08

5th March, 2024 at 9:00 AM

DISCUSSION ON LAST CLASS & QUESTIONS (09:10 AM)

WORLD HERITAGE CONVENTION, 1972 (09:46 AM)

- It is under **UNESCO**.
- It is the only convention which links together the concept of **nature conservation and preservation of cultural** properties.
- Member nations of the convention identify potential sites and play a role in protecting and preserving them.
- They are supported by the **World Heritage Fund**.
- A world heritage site can have environmental, cultural or both significance.
- In India, there are 7 Natural Heritage Sites, 1 Mixed Heritage Site and 34 Cultural Heritage Sites.
- **The natural heritage sites are:**
 - Great Himalayan National Park Conservation Area (2014)
 - Kaziranga National Park (1985)
 - Keoladeo National Park (1985)
 - Manas Wildlife Sanctuary (1985)
 - Nanda Devi and Valley of Flowers National Parks (1988, 2005)
 - Sundarbans National Park (1987)
 - Western Ghats (2012)
- The only Mixed World Heritage Site is Khangchendzonga National Park.
- All member nations nominate certain places in the tentative list.
- **In India, this includes:**
 - Namdapha National Park
 - Wild Ass Sanctuary
 - Neora Valley National Park
 - Desert National Park
 - Chilika Lake
 - Satpura Tiger Reserve
 - Keibul Lamjao Conservation Area, etc.
- **Jingkieng Jri:** Living Root Bridge.
- **Belaghat and Lamet Ghat:** They are often known as the Grand Canyon of India. (Note: Gandikota Fort in Andhra Pradesh is also called as Grand Canyon).

CONVENTION ON MIGRATORY SPECIES (10:06 AM)

- It is also called as **Bonn Convention**.
- This convention aims to provide sustainable use of migratory animals and their habitat. The agreement may range from legally binding treaties to non-legally binding mechanisms.
- The convention maintains two appendices.
- **Appendix 1: Migratory species threatened with extinction are listed here.**
- **Appendix 2: Migratory Species that will significantly benefit from global cooperation are listed here.**
- India is a party to the convention.
- Indian sub-continent is part of the Central Asian Flyway Network.
- Hundreds of migratory birds are found within this network.

THE INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES, 2001 (10:16 AM)

- This is under the Food and Agriculture Organization (FAO).
- The treaty aims to conserve and sustainably use all plant genetic resources used for food and agriculture.
- It also aims at **Fair and Equitable Sharing of Benefits**, arising out of their use in harmony with the Convention on Biological Diversity.
- Under the treaty, 64 most important crops are put into an easily accessible global pool of genetic resources which is available freely to member nations.
- However, the treaty presents recipients of genetic resources for claiming IPR in the form they receive genetic resources.

BIODIVERSITY IN INDIA (10:25 AM)

- With **2.4 percent of land area**, India accounts for **8 percent** of recorded species.
- The entire country can be classified into 10 biogeographic zones.
- Biogeographic zones are regions of the earth's surface that have distinct patterns of flora and fauna, due to a unique combination of environmental characteristics such as temperature, precipitation, soil type, and geological history, climatic changes among others.
- **Zone 1: Trans-Himalayas**
- It includes part of Sikkim, Ladakh and the Tibetan Plateau.
- The flora includes scanty alpine steppes, and some wild fauna such as Sheep, goats, black bears, wolves, snow leopards etc.
- **Zone 2: Himalayas:**
- These are the youngest mountain sequences in the world.
- The flora can vary from grassy meadows to alpine forests and moist deciduous forests.
- The region also includes some amazing fauna such as Hangul, Musk Deer, and Snow Leopard.
- **Zone 3: India Desert:**
- This can be further divided into the **Great Indian Desert in Thar, Rajasthan and Rann of Kutch in Gujarat.**
- Thar desert is known for foxes, snakes, camels, gazelles, and a highly endangered bird Great Indian Bustard.
- Rann of Kutch is known for some endemic animals such as wild ass, migratory birds such as flamingos etc can be spotted here.
- **Zone 4: Semi-Arid Areas**
- It is characterized by discontinuous vegetation and soil which remains a deficit of water.
- In Gir forest, the endangered Asiatic lion is found.
- Some large herbivores such as black buck, gazelles, etc.
- **Zone 5: Western Ghats**
- It is a Biodiversity hotspot, known for high endemism and evergreen forests.
- **Zone 6: Deccan peninsula:**
- It is known for its Deciduous forests and many river systems such as Narmada, Tapi, Mahanadi, and Godavari.
- Trees of timber value such as sal and teak.
- Many species of deer and antelope such as Sambhar deer.
- **Zone 7: Gangetic Plains:**
- One of the most fertile regions of the world, known for deciduous forests with trees of timber value.
- Fauna includes one-horned rhinos, Asian elephants, wild water buffalo, and swamp deer among others.
- **Zone 8: Northeast India**
- One of the richest regions in terms of biodiversity, but also one of the poorest in human development.
- This region is known for wild varieties of domesticated plants such as banana, citrus, and mango among others.
- The fauna includes rhinos, wild buffalo, swamp deer, pygmy hog, and elephants.
- **Zone 9: Islands**
- This comprises two groups of islands in the Bay of Bengal and the Arabian Sea.
- known for high levels of endemism in both flora and fauna, beautiful corals, and evergreen and mangrove forests.

- **Zone 10: Coastline**
- India has more than 7500 km of coastal line known for extensive deltas of Krishna-Godavari and Kaveri, the region is known for Mangrove vegetation, coconut trees, etc.
- Fauna includes Dugongs, Dolphins, etc.

CONSERVATION STRATEGIES (11:12 AM)

- **Ex-Situ (Outside Natural Habitat)**
- Zoos
- Botanical Garden
- Cryopreservation
- Gene banks
- **In situ (In natural Habitat)**
- National Parks
- Wildlife Sanctuaries
- Biosphere Reserves
- Wetlands/Ramsar sites
- Reserved and Protected Forests
- Ecologically Sensitive Zones
- Sacred Groves
- Biodiversity Heritage Sites
- **Important Bird Areas:** Birdlife International and Bombay Natural History Society (BNHS)

WILDLIFE PROTECTION ACT 1972 (11:21 AM)

- The act laid down strict measures to prevent, hunting, poaching and trapping of wild animals.
- The act also recognizes authorities, for implementation of the act.
- E.g. Every state has a **Chief Wildlife Warden**. They have the power to grant, refuse or cancel permission to hunt wildlife and establish check posts.
- **Protected Area Network Under the Act:**
- This act recognizes National Parks, Wildlife Sanctuaries, Community Reserves and conservation reserves.
- **National Park:**
- **National Park** as a concept was introduced by IUCN, and it has been adopted all across the world.
- E.g. In India, there are 106 National Parks, which are declared to protect wildlife in areas of ecological importance.
- Both **central and state governments** can declare it.
- In National Parks, human activity is not allowed, even grazing of livestock, the private tenurial rights are not allowed.
- National Park cannot be downgraded to the status of a sanctuary, no alteration of the boundaries of national park shall be made except on the recommendation of the **National Board for Wildlife**.
- Any proposal to alter the boundary also requires approval by the state legislature.
- **Wildlife Sanctuaries:**
- The fundamental difference between a national park and a wildlife sanctuary is the **level of protection**.
- Very similar to parks, sanctuaries are also the areas of ecological importance known for wildlife.
- However, limited human activities are permitted such as the Grazing of animals, a sanctuary can be created for a particular species whereas National Parks are not focused on one species.
- Even sanctuaries can be declared by **both National and State governments**.
- In India, there are **565 wildlife sanctuaries**.

National Park	Wildlife Sanctuary
Areas of ecological importance are known for wildlife.	Areas of ecological importance are known for wildlife.
Declared by both national and state govt.	Declared by both national and state govt.
Human activity is not permitted.	Certain activities are permitted.
Cannot be downgraded to a wildlife sanctuary.	Can be upgraded to a national park.
Focus on the entire ecosystem.	Can be created for specific species.

COMMUNITY AND CONSERVATION RESERVE (11:53 AM)

- They were categorized as per the amendment to the Act in 2002.
- They typically act as buffer zones to connector and migration corridors between established parks and sanctuaries of reserved and protected forests of India.
- Areas are designated as conservation reserves if they are unhabitated and completely owned by the government of India.
- If used for subsistence by communities, it is called a community reserve.

MARINE PROTECTED AREAS (12:05 PM)

- It is essentially a space in the ocean where human activities are more strictly regulated.
- They can have the status of park, sanctuary and reserve also.

The topic for the Next Class: Conservation Measures (continued)