FACULTY OF ENGINEERING AND TECHNOLOGY

Lecture- 20

Biodiversity-Part 4

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Threats to biodiversity

Habitat loss

Forests are major habitats for wildlife therefore deforestation directly cause extinction and loss of biodiversity.

An estimated 18 million acres of forest are lost each year, due in part to logging and other human practices, destroying the ecosystems on which many species depend.

Tropical rainforests in particular, such as the Amazon, hold a high percentage of the world's known species, yet the regions themselves are in decline due to humans.

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Solutions:

Companies and corporations can adopt best practices and refuse to use timber that contribute to deforestation.

Individuals can also reduce problem of habitat loss by adopting 3R’s i.e., reduce consumption of forest goods, reuse them and recycle them.

National and international laws and treaties aimed at protecting forest and wildlife can reduce the threat.

Poaching

Poaching is illegal hunting or capturing of wild animals.

Poaching is another major threat to wild animals after habitat destruction.

Wild animals are poached worldwide on large scale. Elephants and rhinos are prime target of poachers.

Wild animals are either killed for products obtained from them or are captured for illegal trade.

Solution:

Strict international and national laws can restrict poaching.

Sources: https://images.app.goo.gl/8risdeDyuwdaBEdX8

Man-wildlife conflicts

Man-wildlife conflict is the negative impact of man's activities on wildlife. *Major causes are*:

• Habitat fragmentation and shrinking of habitats

• Increased disturbance due to collection of fuel wood, fodder, etc.

• People have to go deeper and deeper, year by year for collecting firewood

• Decreased number of prey.

Method to promote wildlife and reduce man-wildlife conflicts

• Capacity building of forest guards

• Increased vigilance and protection of identified locations using hi-tech surveillance tools like sensors for knowing Animal movement.

Construction of highways/railways bypassing wildlife rich areas like **Trans-Canada Highway bypassed Banff National park**

Expansion of protected reserves

Safe animal zones creation

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Endangered and Endemic species of India

Endangered species are animals or plants which exist in very less number and if not conserved properly, will extinct. In India, around 450 plant species, 100 mammals and around 150 types of birds are considered as endangered.

Some of the Endangered species of India:

1. Asiatic Lion
2. Bengal Tiger
3. Great Indian Rhinoceros
4. Asian Elephant
5. Ganges River Dolphin
6. Great Indian Bustard (Bird)
7. Sandal wood tree
8. Leatherback Tortoise
9. Spider wort (plant)
10. Himalayan Quail (Bird)

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Endemic species of India

Endemic species are plants or animals exist in some particular regions and nowhere in the world. Unless conserved, these also will disappear from earth.

In India, endemic species are mostly in Himalaya and Western Ghats.

The endemic species in India are:

1. Asiatic Lion
2. Kashmir Stag
3. Indian Giant Squirrel
4. Lion tailed Macaque
5. Namdapha Flying Squirrel
6. Nilgiri Langur
7. Brown Palm Civet
8. Nilgiri Tahr
9. Nilgiri Barberry (plant)
10. Ilex gardneriana (plant)

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Conservation of Biodiversity

Conservation of biodiversity refers to the protection or preservation of wildlife and natural resources.

Types of Conservation:

Conservation can broadly be divided into two types:

1. In-situ conservation

2. Ex-situ conservation

In-situ Conservation:

It is on site conservation of genetic resources in natural populations of plant or animal species, such as forest genetic resources in natural populations of tree species.

It is the process of protecting an endangered plant or animal species in its natural habitat, either by protecting the habitat itself, or by defending the species from predators.

In-situ conservation is being done by declaring area as protected area.

In India following types of natural habitats are being maintained: 1. **National Park 2. Wildlife Sanctuary 3. Biosphere Reserves**

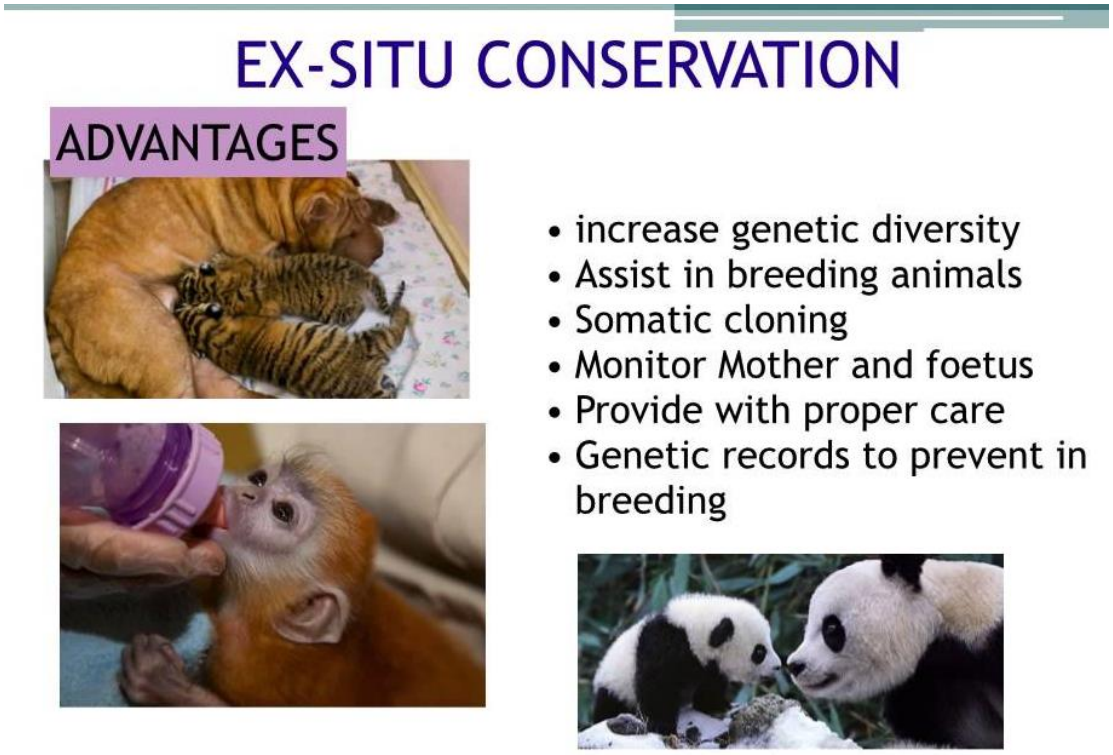
India has over 600 protected area which includes over 105 national parks, 553 wildlife sanctuaries and 18 biosphere Reserves

Ex-situ conservation:

Ex-Situ Conservation is the preservation of components of biological diversity outside their natural habitats.

This involves conservation of genetic resources of wild and cultivated species, using diverse techniques and facilities.

Such strategies include establishment of botanical gardens, zoos, conservation strands and gene, pollen seed, seedling, tissue culture and DNA banks.



Sources: https://images.app.goo.gl/5rusbRQU9fTs4muz6


THANK YOU :)