

CONSERVATION STRATEGIES



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CONSERVATION STRATEGIES

There are four complementary strategies for biodiversity conservation:

1. In situ strategy
2. Ex-situ strategy
3. Reduction of anthropogenic pressure
4. Rehabilitation of endangered species.

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1. In situ strategy

Production of a group of typical ecosystems through network of protected areas as recognized by the UNEP & World Conservation Union (IUCN)

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A. Protected areas:

UNEP recognized six management categories of protected areas

- Category Ia: Strict nature reserve
- Category Ib: Wilderness area
- Category II: National park
- Category III: Natural Monument
- Category IV: Habitat/Species management area
- Category V: Protected seascape
- Category VI: Managed resource protected area

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Benefits of protected areas:

- Maintaining viable populations of all native species and subspecies.
- Maintaining the number and distribution of communities and habitats and conserving the genetic diversity of all the present species.
- Preventing human-caused introductions of alien species.

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B. Marine protected areas:

Since 1986, IUCN established global system of marine protected areas (MPAs)

Main objectives:

- Protection and restoration of depleted population of marine organisms.
- Protection of endangered species & critical habitats.
- Conserving and restoring marine ecosystem health for effective fishing management.
- To maintain biodiversity and ecological process of marine and coastal ecosystems.
- 4,116 protected areas in the UN list, contain marine and coastal elements, covering 4.3 million hectares.

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C. Marine biosphere reserve:

One of the approaches to conserve marine biodiversity is to identify biodiversity hotspots that are worth protection

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2. Ex-situ conservation strategies:

- a) Seed gene banks
- b) In-vitro gene banks
- c) DNA-storage

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3. Botanical Gardens, Zoos and Aquarium.

4. Restoration of Endangered species

1) Reintroduction programme:

- Release of captive breed or wild collected individuals in areas where they existed earlier but are currently absent .

2) Augmentation programmes:

- Release of individuals to increase the existing population size and genetic diversity of species.

3) Introduction programmes:

- Establishment of populations outside their historic range.

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5. Sustainable use and public participation

- 1) Public awareness among fisher folks to conserve marine biodiversity at village, town and state level.
- 2) Ecotourism:

6. Incentive programs: