

# Wildlife Protection in India – Part 1

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## Topic List

- IUCN Categories & Red List
- WPA, 1972 & Its Amendments
- NWAP (National Wildlife Action Plan)
- Species Recovery Programme
- CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora)
- Important Conservation Projects of India
  - Tiger
  - Elephant
  - Rhino
  - Lion
  - Cheetah
  - Great Indian Bustards
  - Vultures
  - Dolphins
  - Others (in PDF material)

## IUCN (International Union for Conservation of Nature)

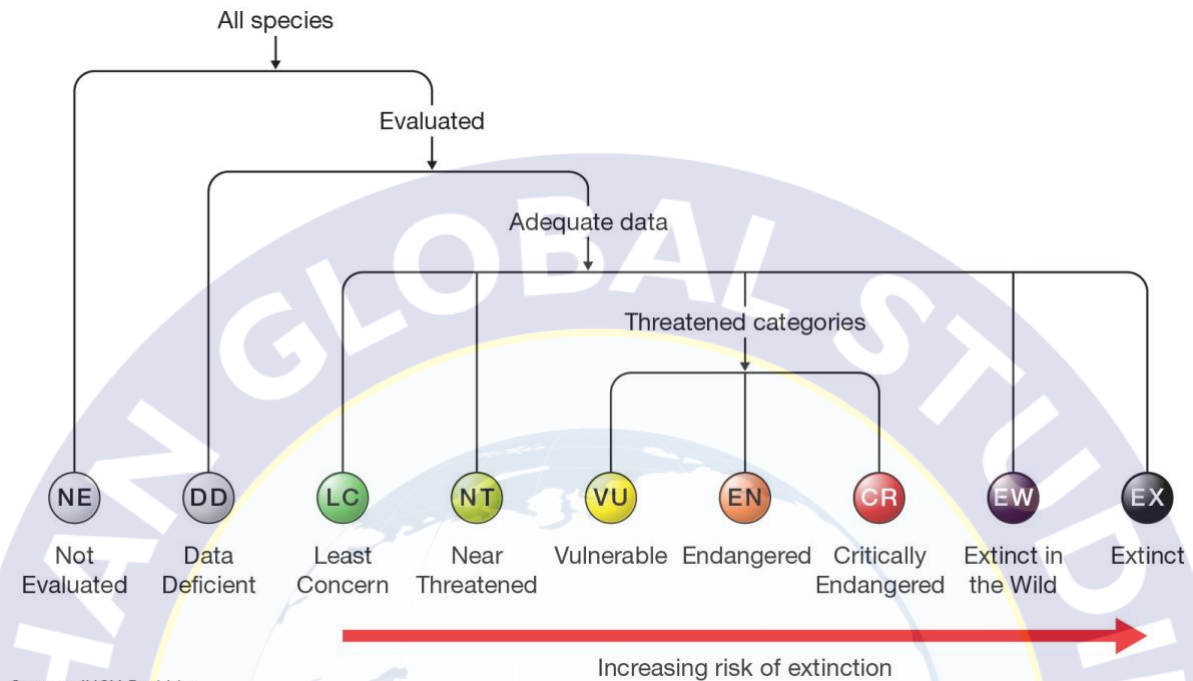
- Established in 1948
- HQ: Gland, Geneva
- Unique membership union of government and civil society organizations
- World's largest and most diverse environmental network with 1,400 Member organizations and 16,000 experts
- Global authority on the status of the species and protected areas and measures needed to safeguard them
- Publishes threat categories of species, Red List
- Classifies Protected Areas
- Seven commissions dedicated to:
  1. Species survival
  2. Environmental law

3. Protected areas
4. Social policies
5. Economic policies
6. Ecosystem management
7. Education and communication

## IUCN Protected Area Categories

- **IUCN Category Ia - Strict Nature Reserve:** Protected for **scientific study, environmental monitoring, education**; preserves **biodiversity and geological features**; minimal human disturbance.
- **IUCN Category Ib - Wilderness Area:** Larger than Ia, less stringent protection; focuses on **biodiversity and ecosystem processes**; limited human visitation; supports **indigenous lifestyles**.
- **IUCN Category II - National Park:** Similar to Ib but allows more **human visitation**; supports **local economies through tourism**; acts as a barrier for **species and community protection**.
- **IUCN Category III - Natural Monument or Feature:** Protects **natural monuments and habitats**; often has **high cultural or spiritual value**; includes both natural and culturally-influenced features.
- **IUCN Category IV - Habitat or Species Management Area:** Focuses on **specific species or habitats** needing continuous protection; management includes **anti-poaching, habitat creation**.
- **IUCN Category V - Protected Landscape or Seascape:** Covers large areas with a **conservation plan**; accommodates **for-profit activities**; maintains balance between **community interaction and nature**.
- **IUCN Category VI - Protected Area with Sustainable Use of Natural Resources:** Allows **sustainable resource use**; focuses on keeping some areas in **natural condition**; supports **traditional practices** with minimal impact.

## IUCN Categories



- **NE (Not Evaluated):** This category is applied to species that have not yet been assessed against the IUCN criteria. These species may not have been studied enough yet, or data may not have been collected for an assessment. This does not indicate conservation status.
- **DD (Data Deficient):** This status is assigned when there is not enough information available to make a direct, or indirect, assessment of its risk of extinction. This can occur due to a lack of data on its population size, distribution, or trends, or significant uncertainties regarding threats.
- **LC (Least Concern):** Species in this category are widespread and abundant, and do not qualify for any of the higher risk categories (Critically Endangered, Endangered, Vulnerable, or Near Threatened). This designation indicates that the species is not currently facing a significant risk of extinction in the wild.
- **NT (Near Threatened):** These species do not currently meet the criteria for Critically Endangered, Endangered, or Vulnerable, but they are close to qualifying for or are likely to qualify for a threatened category in the near future. This status serves as an alert that although not immediately threatened, these species could be at risk soon without ongoing conservation measures.
- **VU (Vulnerable):** Species classified as Vulnerable are at a high risk of extinction in the wild. This may be due to a rapid decline in population size, a restricted geographic range, or other factors that pose threats to its existence.
- **EN (Endangered):** Endangered species face a very high risk of extinction in the wild. The causes can be a further decline in population, very small or restricted populations, or other significant threats that are rapidly pushing the species towards complete disappearance.

- **CR (Critically Endangered):** This is the highest risk category for species still found in the wild. Species in this category are facing an extremely high risk of extinction due to immediate threats that have resulted in very low or rapidly declining population numbers.
- **EW (Extinct in the Wild):** This category is assigned to species that are known only to survive in captivity or as a naturalized population outside their historical range. These species are no longer found in their natural habitat and exist only in man-made environments or controlled settings.
- **EX (Extinct):** This category is used when there is no reasonable doubt that the last individual of the species has died. Extinction is a profound loss and indicates that the species no longer exists anywhere on Earth.

### The 3 Threat Categories

Categories	Risk Level	Decline Over the Last Decade or Three Generations
Critically Endangered (CR)	Extremely high risk	80-90%
Endangered (EN)	Very high risk	50-70%
Vulnerable (VU)	High risk	30-50%

## IUCN Red List

### Overview of the IUCN Red List

- **Introduction:** The International Union for Conservation of Nature (IUCN) launched the Red List of Threatened Species in 1994, providing an objective system to assess the extinction risk for various species.
- ★ **Purpose:** The list serves as a global standard for evaluating the conservation status of species, helping to monitor biodiversity loss and guide conservation efforts.

### Criteria for Assessing Species

- **Quantitative Criteria:** The IUCN uses five main criteria to evaluate the risk of extinction:
  - Rate of population decline
  - Geographic range
  - Population size
  - Restriction of species to a small area
  - Probability of extinction based on quantitative analysis

### Categories of Threat

- **Extinct (EX):** No remaining individuals in the wild, confirmed through surveys.
- **Extinct in the Wild (EW):** Species only survive in captivity or outside their natural habitat.
- **Critically Endangered (CR):** Extremely high risk of extinction, with declines of 80-90% over the last decade or three generations, or very small population sizes.



- **Endangered (EN):** Very high risk of extinction, with declines of 50-70% over the last decade or three generations.
- **Vulnerable (VU):** High risk of extinction, with declines of 30-50% over the last decade or three generations.
- **Near Threatened (NT):** Close to meeting the criteria for threatened status.
- **Least Concern (LC):** Species are widespread and abundant.
- **Data Deficient (DD):** Insufficient data to assess extinction risk.
- **Not Evaluated (NE):** Species not yet assessed by the IUCN.

#### Application and Impact

- **Global Use:** The IUCN Red List is used by governments and organisations to prioritise conservation efforts.
- **Scientific Assessment:** Annually updated by thousands of scientists globally, ensuring accuracy and relevance.
- **Public Accessibility:** Available as an online database, offering detailed data on species status and trends.

#### Significance of the Red List

- **Biodiversity Monitoring:** Highlights the ongoing decline in global biodiversity and the impact of human activity.
- **Conservation Tool:** Provides essential data for assessing the effectiveness of conservation measures and adapting strategies accordingly.
- **Statistical Analysis:** Allows scientists to examine trends in species status, the effectiveness of conservation efforts, and the evolution of threats over time.

By continuously updating the IUCN Red List and adapting its criteria to current data, the list plays a critical role in global biodiversity conservation efforts.

#### Latest IUCN Red List

- **Release Date and Event:** The International Union for Conservation of Nature (IUCN) released the new Red List of Threatened Species on December 12, 2023, at the United Nations Climate Conference in Dubai.
- **Biodiversity Tracker:** The IUCN is recognized as the leading global tracker of biodiversity.
- **Growing Threat List:** The updated Red List now includes 157,000 species, marking an increase of approximately 7,000 species from the previous year.
- **Extinction Risks:** Over 44,000 species are currently threatened with extinction, an increase of about 2,000 species from last year.
- **Impact of Climate Change:** Climate change has been identified as a significant factor worsening the biodiversity crisis, affecting approximately 6,700 species that are currently threatened with extinction.

- **Specific Species Affected:**

- Atlantic salmon populations have decreased by nearly a quarter from 2006 to 2020 and are now classified as near threatened.
- The Central South Pacific and East Pacific green turtles are at increased risk due to climate change impacts such as higher sea levels and warming waters.
- **Freshwater Fish:** A comprehensive assessment revealed that about 25% of freshwater fish species are at risk of extinction, compounded by factors like pollution, overfishing, and the intrusion of saltwater into rivers due to rising sea levels.
- **Amphibians at Risk:** Approximately 41% of amphibian species, such as frogs and salamanders, are under threat, primarily due to climate change impacts like higher temperatures and drought.
- **Conservation Successes:** Notable improvements in the conservation status of some species were reported, such as the scimitar-horned oryx, which moved from being classified as extinct in the wild to endangered due to successful reintroduction efforts in Chad.

### Some threatened species of India

Species with Scientific Name	Type of Animal	Threat Category	Where it is found in India	Reasons for Threat
1. Rameshwaram Parachute Spider (Poecilotheria hanumavilasumica)	Arachnid	Critically Endangered	Tamil Nadu	Habitat destruction, human-wildlife conflict
2. Peacock Tarantula (Poecilotheria metallia)	Arachnid	Critically Endangered	Tamil Nadu	Habitat destruction, human-wildlife conflict
3. White-bellied Heron (Ardea insignis)	Bird	Critically Endangered	Eastern Himalayas	Habitat destruction, poaching
4. Great Indian Bustard (Ardeotis nigriceps)	Bird	Critically Endangered	Grasslands of India	Habitat destruction, hunting
5. Baer's Pochard (Aythya baeri)	Bird	Critically Endangered	Wetlands of India	Habitat destruction, hunting
6. Spoon-billed Sandpiper (Calidris pygmaea)	Bird	Critically Endangered	Coastal areas of India	Habitat destruction, hunting
7. Yellow-breasted Bunting (Emberiza aureola)	Bird	Critically Endangered	Grasslands of India	Habitat destruction, hunting
8. Christmas Island Frigatebird (Fregata andrewsi)	Bird	Critically Endangered	Andaman and Nicobar Islands	Habitat destruction, hunting
9. Siberian Crane (Grus leucogeranus)	Bird	Critically Endangered	Wetlands of India	Habitat destruction, hunting
10. White-rumped Vulture (Gyps bengalensis)	Bird	Critically Endangered	India-wide	Habitat destruction, poisoning
11. Indian Vulture (Gyps indicus)	Bird	Critically Endangered	India-wide	Habitat destruction, poisoning
12. Slender-billed Vulture (Gyps tenuirostris)	Bird	Critically Endangered	India-wide	Habitat destruction, poisoning

Species with Scientific Name	Type of Animal	Threat Category	Where it is found in India	Reasons for Threat
13. Masked Finfoot ( <i>Heliopais personatus</i> )	Bird	Critically Endangered	Wetlands of India	Habitat destruction, hunting
14. Bengal Florican ( <i>Houbaropsis bengalensis</i> )	Bird	Critically Endangered	Grasslands of India	Habitat destruction, hunting
15. Bugun Liocichla ( <i>Liocichla bugunorum</i> )	Bird	Critically Endangered	Eastern Himalayas	Habitat destruction, hunting
16. Himalayan Quail ( <i>Ophrysia superciliosa</i> )	Bird	Critically Endangered	Himalayas	Habitat destruction, hunting
17. Jerdon's Courser ( <i>Rhinoptilus bitorquatus</i> )	Bird	Critically Endangered	Grasslands of India	Habitat destruction, hunting
18. Pink-headed Duck ( <i>Rhodonessa caryophyllacea</i> )	Bird	Critically Endangered	Wetlands of India	Habitat destruction, hunting
19. Red-headed Vulture ( <i>Sarcogyps calvus</i> )	Bird	Critically Endangered	India-wide	Habitat destruction, poisoning
20. Lesser Florican ( <i>Sypheotides indicus</i> )	Bird	Critically Endangered	Grasslands of India	Habitat destruction, hunting
21. Sociable Lapwing ( <i>Vanellus gregarius</i> )	Bird	Critically Endangered	Wetlands of India	Habitat destruction, hunting
22. Millepora boschmai	Fish	Critically Endangered	Coastal areas of India	Habitat destruction, overfishing
23. Pygmy Hog ( <i>Sus salvanius</i> )	Mammal	Critically Endangered	Eastern Himalayas	Habitat destruction, hunting
24. Andaman White-toothed Shrew ( <i>Crociodura andamanensis</i> )	Mammal	Critically Endangered	Andaman and Nicobar Islands	Habitat destruction, hunting
25. Jenkin's Andaman Spiny Shrew ( <i>Suncus aequatorius</i> )	Mammal	Critically Endangered	Andaman and Nicobar Islands	Habitat destruction, hunting
26. Nicobar White-tailed Shrew ( <i>Suncus nicobaricus</i> )	Mammal	Critically Endangered	Nicobar Islands	Habitat destruction, hunting
27. Kondana Rat ( <i>Maxomys kondana</i> )	Mammal	Critically Endangered	Western Ghats	Habitat destruction, hunting
28. Large Rock Rat ( <i>Hapalomys gisberti</i> )	Mammal	Critically Endangered	Western Ghats	Habitat destruction, hunting
29. Malabar Civet ( <i>Viverra civettina</i> )	Mammal	Critically Endangered	Western Ghats	Habitat destruction, hunting
30. Sumatran Rhinoceros ( <i>Dicerorhinus sumatrensis</i> )	Mammal	Critically Endangered	Eastern Himalayas	Habitat destruction, poaching
31. Javan Rhinoceros ( <i>Rhinoceros sondaicus</i> )	Mammal	Critically Endangered	Eastern Himalayas	Habitat destruction, poaching
32. Gharial ( <i>Gavialis gangeticus</i> )	Reptile	Critically Endangered	Wetlands of India	Habitat destruction, poaching
33. Hawksbill Turtle ( <i>Eretmochelys imbricata</i> )	Reptile	Critically Endangered	Coastal areas of India	Habitat destruction, overfishing
34. River Terrapin ( <i>Batagur baska</i> )	Reptile	Critically Endangered	Wetlands of India	Habitat destruction, overfishing
35. Bengal Roof Turtle ( <i>Batagur trivittata</i> )	Reptile	Critically Endangered	Wetlands of India	Habitat destruction, overfishing



Species with Scientific Name	Type of Animal	Threat Category	Where it is found in India	Reasons for Threat
36. Sispara Day Gecko (Cnemaspis sisparanensis)	Reptile	Critically Endangered	Western Ghats	Habitat destruction, hunting
37. Pondicherry Shark (Carcharhinus dussumieri)	Fish	Critically Endangered	Coastal areas of India	Habitat destruction, overfishing
38. Ganges Shark (Glyphis gangeticus)	Fish	Critically Endangered	Ganges River	Habitat destruction, overfishing
39. Knife-tooth Sawfish (Pristis pectinata)	Fish	Critically Endangered	Coastal areas of India	Habitat destruction, overfishing
40. Large-tooth Sawfish (Pristis perotteti)	Fish	Critically Endangered	Coastal areas of India	Habitat destruction, overfishing
41. Red Panda (Ailurus fulgens)	Mammal	Endangered	Eastern Himalayas	Habitat destruction, poaching
42. Asiatic Lion (Panthera leo persica)	Mammal	Endangered	Gujarat	Habitat destruction, human-wildlife conflict
43. Black-necked Crane (Grus nigricollis)	Bird	Vulnerable	North Eastern India	Habitat destruction, disturbance
44. Dhole (Cuon alpinus)	Mammal	Endangered	Across India	Habitat loss, human-wildlife conflict
45. Wild Water Buffalo (Bubalus arnee)	Mammal	Endangered	Central and North East India	Habitat destruction, interbreeding with domestic buffalo
46. Indian Elephant (Elephas maximus indicus)	Mammal	Endangered	Across India	Habitat destruction, human-elephant conflict
47. Nilgiri Tahr (Nilgiritragus hylocrius)	Mammal	Endangered	Western Ghats	Habitat destruction, poaching
48. Snow Leopard (Panthera uncia)	Mammal	Vulnerable	Northern Himalayas	Habitat destruction, poaching
49. Lion-tailed Macaque (Macaca silenus)	Mammal	Endangered	Western Ghats	Habitat destruction, human encroachment
50. Gangetic Dolphin (Platanista gangetica)	Mammal	Endangered	Ganges and Brahmaputra Rivers	Habitat destruction, pollution
51. One-horned Rhinoceros (Rhinoceros unicornis)	Mammal	Vulnerable	North Eastern India	Habitat destruction, poaching
52. Indian Pangolin (Manis crassicaudata)	Mammal	Endangered	Across India	Poaching, Trafficking
53. Asiatic Cheetah (Acinonyx jubatus venaticus)	Mammal	Extinct in the Wild	Previously in Rajasthan	Hunting, habitat destruction
54. Kashmir Stag (Cervus hanglu hanglu)	Mammal	Critically Endangered	Jammu and Kashmir	Habitat destruction, poaching
55. Golden Langur (Trachypithecus geei)	Mammal	Endangered	Assam and Bhutan	Habitat destruction, poaching
56. Green Sea Turtle (Chelonia mydas)	Reptile	Endangered	Coastal areas of India	Habitat destruction, poaching



Species with Scientific Name	Type of Animal	Threat Category	Where it is found in India	Reasons for Threat
57. Indian Bustard ( <i>Ardeotis nigriceps</i> )	Bird	Critically Endangered	Arid and semi-arid grasslands of India	Habitat destruction, hunting
58. Leatherback Turtle ( <i>Dermochelys coriacea</i> )	Reptile	Vulnerable	Andaman and Nicobar Islands	Habitat destruction, egg poaching
59. Indian Wild Ass ( <i>Equus hemionus khur</i> )	Mammal	Endangered	Gujarat	Habitat destruction, salt industry impact
60. Hoolock Gibbon ( <i>Hoolock hoolock</i> )	Mammal	Endangered	North Eastern India	Habitat destruction, human encroachment

