

CSIR NET Life Science Unit 9

Organisms of Conservation Concern

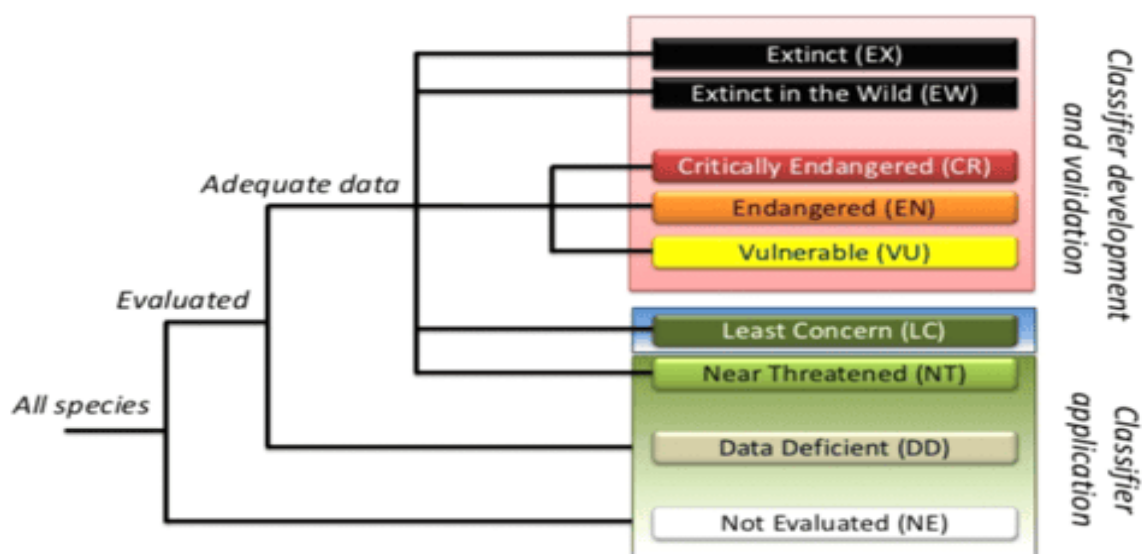
Introduction:

The conservation status of any group of organisms indicates whether the belonging group still exists or not and what the group's possibilities are to reach up to extinct status in the near future. When assessing the conservation status of any group or species for this account many factors are taken that are not only the number of individuals remaining but also assesses the increase and decrease the overall population over time, the success rate of breeding, and known threat to the group for conservation. Various systems and status exist and are in use at international, multi-country, national and local levels as well as for consumer use.

IUCN Red data book:

The list of Threatened Species which is widely known as the IUCN Red List is the most comprehensive list. The objective of this list is to evaluate the conservation status of plant and animal species with a global approach. From its small beginning over time, The IUCN Red List has grown in size and complexity and now this list plays a continuous prominent role in guiding conservation activities of governments, NGOs, and scientific institutions. In 1994 The introduction of a scientifically rigorous approach to determine risks of extinction that is applicable to all species made this a world standard. A Red List of IUCN provides a systematic list of plants and animals into various categories.

IUCN Red List Categories



Definition of various categories:

A. Extinct (EX)

A taxon/group is known as Extinct when there is confirmation that the last individual has died.

B. Extinct in wild (EW)

A group or taxon is known as Extinct in the Wild when it is well known that only to survive in cultivation conditions.

C. Critically Endangered (CR)

A group or taxon is said Critically Endangered when available evidence it is be facing an extremely high risk of extinction in the wild. And they follow the following criteria;

Criteria for Critically Endangered (CR)

a. Reduction in population size: when a group or species reduces population $\geq 90\%$ over the last 10 years or three generations, which condition is longer and cause of reduction are reversible and ceased.

Or

Reduction of the population when a group or species shows $\geq 80\%$ over the last 10 years or three generations, any of condition is longer, but the causes of reduction or reduction not ceased and not be reversible.

b. Geographic range in the form of either B1 OR B2;

B.1. in this type occurrence of Extent estimated is to be not more than 100 km², and these estimates indicate severely fragmented or known to exist at only a single location.

B.2. in this type estimated area of occupancy to be not more than 10 km², and an estimate indicates severely fragmented or known to exist at only a single location.

c. Size of Population estimated the number less than 250 mature individuals and an estimated continuing show decline of at least 25% within three years or one generation, whichever is longer.

d. in this criteria Population size is estimated to be the number of less than 50 mature individuals.e. in this criterion quantitative analysis shows the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is the longer.

D. Endangered (EN)

A group or taxon is considered as endangered when the available evidence faces a very high risk of extinction in the wild. Criteria for Endangered:

a. Reduction in population size: when a group or species reduces population $\geq 70\%$ over the last 10 years or three generations, which condition is longer and cause of reduction are reversible and ceased.

Or

Reduction of the population when a group or species shows $\geq 50\%$ over the last 10 years or three generations, any of condition is longer, but the causes of reduction or reduction not ceased and not be reversible.

b. Geographic range in the form of either B1 OR B2;

B.1.in this type occurrence of Extent estimated is to be not more than 5000 km², and these estimates indicate severely fragmented or known to exist at only a single location.

B.2. in this type estimated area of occupancy to be not more than 500 km², and an estimate indicates severely fragmented or known to exist at only a single location.

c. Size of Population estimated the number less than 2500 mature individuals and an estimated continuing show decline of at least 20% within three years or three-generation, whichever is longer.

d. in this criteria Population size is estimated to be the number of less than 50 mature individuals.

e. in this criterion quantitative analysis shows the probability of extinction in the wild is at least 20% within 20 years or five generations, whichever is the longer.

C. Vulnerable (VU)

A group or taxon is considered as Vulnerable when the available evidence meets any of the criteria A to E for Vulnerable, and it is therefore considered to be facing a high risk of extinction in the wild.

E. Near Threatened (NT)

A group or taxon is known as Near Threatened when it has been evaluated against the criteria but it does not qualify for Critically Endangered, Endangered or Vulnerable now, it may be close to qualifying for a threatened category in the near future.

F. Least Concern (LC)

A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable, or Near Threatened.

G. Data Deficient (DD)

A Group or taxon is known to be Data Deficient when there is not sufficient information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status.

E. Not Evaluated (NE)

A taxon is known as Not Evaluated when it has not yet been evaluated against any of the criteria.

Table of Current list of animals in IUCN Categories Include:

Status group Animals	of	Extinct Atlas bear, Aurochs, Bali Tiger, Blackfin Cisco, Caribbean Monk Seal, Carolina Parakeet, Caspian Tiger, Dinosaurs, Dodo, Dusky Seaside Sparrow, Elephant Bird, Golden Toad, Great Auk, Haast's Eagle, Japanese Sea Lion, Javan Tiger, Labrador Duck, Moa, Passenger Pigeon, Pterosaurs, Saber-toothed cat, Schomburgk's deer, Short-faced bear, Steller's Sea Cow, Thylacine, Toolache Wallaby, Western Black Rhinoceros, Woolly Mammoth, Woolly Rhinoceros
----------------------------	----	---

Extinct in the Wild

Captive individuals survive, but there is no free-living, natural population. Examples: Barbary Lion (maybe extinct), Catarina Pupfish, Hawaiian Crow, Northern White Rhinoceros, Scimitar Oryx, Socorro Dove, Wyoming Toad

Critically Endangered

It faces an extremely high risk of extinction in the immediate future. Examples: Addax, African Wild Ass, Alabama Cavefish, Amur Leopard, Arakan Forest Turtle, Asiatic Cheetah, Axolotl, Bactrian Camel, Brazilian Merganser, Brown Spider Monkey, California Condor, Chinese Alligator, Chinese Giant Salamander, Gharial, Hawaiian Monk Seal, Iberian Lynx, Island Fox, Javan Rhino, Kakapo, Leatherback Sea Turtle, Mediterranean Monk Seal, Mexican Wolf, Mountain Gorilla, Philippine Eagle, Red Wolf, Saiga, Siamese Crocodile, Spix's Macaw, Southern bluefin tuna, Sumatran Orangutan, Sumatran Rhinoceros, Vaquita, Yangtze River Dolphin

Endangered

It faces a very high risk of extinction in the near future. Examples: African Penguin, African Wild Dog, Asian Elephant, Asiatic Lion, Blue Whale, Bonobo, Bornean Orangutan, Chimpanzees, Dhole, Ethiopian Wolf, Hispid Hare, Giant Otter, Giant Panda, Goliath Frog, Gorillas, Green Sea Turtle, Zebra, Hyacinth Macaw, Japanese Crane, Lear's Macaw, Malayan Tapir, Markhor, Persian Leopard, Proboscis Monkey, Pygmy Hippopotamus, Red-breasted Goose, Rothschild Giraffe, Snow Leopard, Steller's Sea Lion, Scops tang, Tiger, Vietnamese Pheasant, Volcano Rabbit, Wild Water Buffalo

Vulnerable

It faces a high risk of extinction in the medium-term. Examples: African Elephant, American paddlefish, Clouded Leopard, Cheetah, Dugong, Far Eastern Curlew, Fossa, Galapagos Tortoise, Gaur, Blue-eyed cockatoo, Golden Hamster, Whale Shark, Crowned Crane, Hippopotamus, Humboldt Penguin, Indian Rhinoceros, Komodo Dragon, Lesser White-fronted Goose, Lion, Mandrill, Maned Sloth, Mountain Zebra, Polar Bear, Red Panda, Sloth Bear, Takin, Yak

Near
Threatened

These species may be considered threatened in the near future. Examples: African Grey Parrot, American Bison, starry blenny, Asian Golden Cat, Blue-billed Duck, Emperor Goose, Emperor Penguin, Eurasian Curlew, Jaguar, Leopard, Magellan Penguin, Maned Wolf, Narwhal, Okapi, Solitary Eagle, Southern White Rhinoceros, Striped Hyena, Tiger Shark, White Eared Pheasant

Least Concern

There is no immediate threat to the survival of the species. Examples: American Alligator, American Crow, Indian Peafowl, Baboon, Bald Eagle, Brown Bear, Brown Rat, Brown-throated sloth, Canada Goose, Cane Toad, Common Wood Pigeon, Cougar, Common Frog, Orca, Giraffe, Grey Wolf, House Mouse, Palm cockatoo, cowfish, Mallard, Meerkat, Mute Swan, Platypus, Red-billed Quelea, Red-tailed Hawk, Rock Pigeon, Scarlet Macaw, Southern Elephant Seal, Milk shark, Red howler monkey.



Mentor Guru