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The IUCN Species Survival Commission

2000 IUCN Red List of Threatened Species™



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2000 IUCN Red List of Threatened Species

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Media Release

Confirming the Global Extinction Crisis

A call for international action as the most authoritative global assessment of species loss is released

London, Washington, Geneva, Ottawa. 28 September 2000 Embargoed 17.00h GMT.

The global extinction crisis is as bad or worse than believed, with dramatic declines in populations of many species, including reptiles and primates, according to the *2000 IUCN Red List of Threatened Species*, released today.

Since the last assessment in 1996, Critically Endangered primates increased from 13 to 19, and the number of threatened albatross species has increased from three to 16 due to long-line fisheries. Freshwater turtles, heavily exploited for food and medicinal use in Asia, went from 10 to 24 Critically Endangered species in just four years.

These are among the alarming facts announced by the world's largest international conservation organisation, with the publication of the *Red List*, the most authoritative and comprehensive status assessment of global biodiversity.

The release comes a week before the second World Conservation Congress in Amman, Jordan, where members of IUCN - The World Conservation Union will meet to define global conservation policy for the next four years, including ways of addressing the growing extinction crisis.

"The fact that the number of critically endangered species has increased - mammals from 169 to 180; birds from 168 to 182, was a jolting surprise, even to those already familiar with today's increasing threats to biodiversity. These findings should be taken very seriously by the global community," says Maritta von Bieberstein Koch-Weser, IUCN's Director General.

"The Red List is solid documentation of the global extinction crisis, and it reveals just the tip of the iceberg," says Russell A. Mittermeier, President of Conservation International and Chair of IUCN's Primate Specialist Group. "Many wonderful creatures will be lost in the first few decades of the 21st century unless we greatly increase levels of support, involvement and commitment to conservation."

Human and financial resources must be mobilised at between 10 and 100 times the current level to address this crisis, the Red List analysis report says. IUCN should join forces with a wide range of partners, continue to develop strong relationships with governments and local communities, and engage the private sector at a new level, it adds.

A total of 11,046 species of plants and animals are threatened, facing a high risk of extinction in the near future, in almost all cases as a result of human activities. This includes 24 percent (one in four) of

mammal species and 12 percent (one in eight) of bird species. The total number of threatened animal species has increased from 5,205 to 5,435.

Indonesia, India, Brazil and China are among the countries with the most threatened mammals and birds, while plant species are declining rapidly in South and Central America, Central and West Africa, and Southeast Asia.

Habitat loss and degradation affect 89 percent of all threatened birds, 83 percent of mammals, and 91 percent of threatened plants assessed. Habitats with the highest number of threatened mammals and birds are lowland and mountain tropical rainforest. Freshwater habitats are extremely vulnerable with many threatened fish, reptile, amphibian and invertebrate species.

For the IUCN Red List system, scientific criteria are used to classify species into one of eight categories: Extinct, Extinct in the Wild, Critically Endangered, Endangered, Vulnerable, Lower Risk, Data Deficient and Not Evaluated. A species is classed as threatened if it falls in the Critically Endangered, Endangered or Vulnerable categories.

While the overall percentage of threatened mammals and birds has not greatly changed in four years, the magnitude of risk, shown by movements to the higher risk categories, has increased. The *1996 IUCN Red List of Threatened Animals* included 169 Critically Endangered and 315 Endangered mammals; the 2000 analysis now lists 180 Critically Endangered and 340 Endangered mammals. For birds, there is an increase from 168 to 182 Critically Endangered and from 235 to 321 Endangered species.

In the last 500 years, human activity has forced 816 species to extinction (or extinction in the wild). The increase in known bird extinctions is partly due to improved documentation and new knowledge, but 103 extinctions have occurred since 1800, indicating an extinction rate 50 times greater than the natural rate. Many species are lost before they are even discovered.

A total of 18,276 species and subspecies are included in the 2000 Red List. Approximately 25 percent of reptiles, 20 percent of amphibians and 30 percent of fishes (mainly freshwater) so far assessed are listed as threatened. Since only a small proportion of these groups has been assessed, the percentage of threatened species could be much higher.

As well as the animal species listed as threatened, 1,885 are classified as lower risk/near threatened - a category that has no specific criteria, and is used for species that come close to qualifying as Vulnerable. The majority of 'near threatened' animal species are mammals (602 - mainly bats and rodents) and birds (727).

A total of 5,611 threatened plants are listed, but as only approximately 4 percent of the world's described plants have been evaluated, the true percentage of threatened plant species is much higher. With 16 percent of conifers (the most comprehensively assessed plant group), known to be threatened, the scale of threat for plants may be similar to that for some of the animals.

As well as classifying species according to their extinction risk, the Red List provides information on species range, population trends, main habitats, major threats and conservation measures, both already in place, and those needed. It allows better insight than ever before into the processes driving extinction.

The 2000 Red List provides the basic knowledge about the status of biodiversity that can be used by conservation planners and decision-makers around the world to establish priorities and take the necessary action.

The 2000 IUCN Red List has been produced for the first time on CD-ROM and is searchable on its own website at www.redlist.org. The Analysis is published as a booklet.

A Closer Look at the Trends

With approximately 1.75 million known species, and many millions yet to be discovered, the IUCN Red List only scratches the surface in extinction risk assessments. Yet the 2000 Red List has made many significant advances.

Since 1996, all bird species have been re-assessed by BirdLife International and its partners; all primates have been re-assessed; many other mammals including antelopes, bats, cetaceans, otters, wild pigs, wild cattle, wild goats and some rodents have been re-assessed; and there has been improved coverage of sharks, rays and sawfishes.

All Southeast Asian freshwater turtles have been assessed, and a number of new reptile and amphibian assessments from Brazil, the Philippines, and the former Soviet Union are included.

All assessments from *The World List of Threatened Trees* have been incorporated and updated. New assessments for plants from Cameroon, Galápagos, Mauritius and South Africa are included, along with comprehensive assessments for two carnivorous plant groups. For the first time, almost 100 moss assessments have been included.

The status of animals

Mammals

The greatest change among the mammals is in the number of threatened primates, which increased from 96 to 116 species. This number is partly due to a revised taxonomy, but there are many changes caused by increased habitat loss and hunting, particularly the bush-meat trade. There was an increase from 13 to 19 Critically Endangered species and 29 to 46 Endangered.

Birds

Birds are by far the best-known group with a relative wealth of distribution and population data available allowing BirdLife International to produce a global status analysis that forms a major component of the Red List. The most significant changes have been in the albatrosses and petrels, with an increase from 32 to 55 threatened species. Sixteen albatross species are now threatened compared to only three in 1996, as a result of long-line fishing. Of the remaining five albatross species, four are now near-threatened. Threatened penguin species have doubled from five to 10. These increases reflect the growing threats to the marine environment.

Doves, parrots and perching birds (passerines), especially those species in Southeast Asia, have also shown marked increases in threatened species due to the vast deforestation in countries such as the Philippines.

Reptiles, Amphibians and Fishes

The increase in the number of listed reptiles, from 253 threatened in 1996 to 291 in 2000, is mostly due to a focused analysis of the status of freshwater turtles and tortoises, especially freshwater turtles in Southeast Asia. The number of Critically Endangered species has increased from 10 to 24 and Endangered from 28 to 47 species.

The rapidly deteriorating status of tortoises and freshwater turtles in Southeast Asia is due to heavy exploitation for food and medicinal use. Hunting of these species is unregulated and unmanaged, and the harvest levels are far too high for the species to sustain. As populations disappear in Southeast Asia, there are disturbing signs that this trade is increasingly shifting to the Indian Subcontinent, and further afield to the Americas and Africa. Other Asian species, such as snakes and salamanders, are also heavily exploited for use in traditional Chinese medicine, but the effects of this and other pressures on most of these species have not yet been assessed.

Changes in the listings for fishes are largely due to improved coverage of the sharks and rays. The 1996 Red List included 32 species, while the 2000 edition includes assessments for 95 species, with increases from 7 to 19 listed as Vulnerable and 7 to 17 as Endangered. The coverage of marine species in the Red List is still limited, as there has been no systematic assessment, except for marine mammals, seabirds, marine turtles, and a few other groups of species. However, assessments for sharks and rays, coral reef fishes, seahorses, and groupers and wrasses, have provided evidence of a number of inherent extinction risk factors. These include low reproductive potential and restricted range, and are added to threats such as over-exploitation, habitat destruction and degradation, and the effects of disease and invasive species. Increased efforts over the next few years to expand the Red List assessments to other groups of marine species are expected to confirm that extinction risk in the marine environment is increasing and that marine species share many of the threats that so seriously affect terrestrial and freshwater ecosystems.

A number of amphibian species have shown rapid and unexplained disappearances, for example in Australia, Costa Rica, Panama and Puerto Rico.

Although a systematic assessment has not been carried out, work undertaken by fish scientists, fisheries research agencies, and aquatic biologists around the world, point to an extremely serious deterioration in the status of river-dwelling species. This is largely due to water development projects and other habitat modification. One of the major threats to lake-dwelling species is introduced species. It is expected that the increased focus on these species over the next three years will provide further evidence of the world-wide crisis in freshwater biodiversity.

Invertebrates

Despite the large numbers of threatened invertebrates (1,928 species), this number is proportionally extremely low considering that 95 percent of all known animals are invertebrates. The majority of the assessments relate to better known regions such as the United States, Europe, and Australia. Groups with the most threatened species include inland water crustaceans (408), insects (555 - mainly butterflies, dragonflies and damselflies), and molluscs (938 - mostly terrestrial and freshwater species).

The status of plants

The IUCN Red List includes 5,611 species of threatened plants, many of which are trees, since these species have been relatively thoroughly assessed. The total number of globally threatened plant species is still small in relation to the total number of plant species, but this is because most plant species have still not been assessed for their level of threat. The only major plant group to have been comprehensively assessed is the conifers, of which 140 species (16 percent of the total) are threatened. Assessments undertaken by The Nature Conservancy (not yet incorporated in the Red List) indicate that one-third of the plant species in North America are threatened.

Where are the threatened species?

Mammals

Madagascar has more Critically Endangered and Endangered primates than anywhere in the world. Identified as a biodiversity "hotspot," Madagascar has extremely high levels of endemism (species that occur in only one location) but has already lost more than 90 percent of its original natural vegetation.

As in 1996, Indonesia harbours the highest number of threatened mammals (135 species). India (80 species) and Brazil (75 species) have moved ahead of China (72 species). Thailand (32 species) and the United States (29 species) are displaced from the "top 20" by Cameroon (38 species) and the Russian Federation (35 species). Tanzania (38 species) has also moved up from 20th to 14th position.

Twenty-five countries have more threatened species than scientists previously predicted. Of these, 19 are island states, including Australia. Species restricted to islands are generally more vulnerable to extinction.

Birds

The Philippines, another biodiversity hotspot, has lost 97 percent of its original vegetation and has more Critically Endangered birds than any other country.

Threatened birds are concentrated in tropical Central and South America, and Southeast Asia. Indonesia has the most threatened birds (115), followed by Brazil with 113 species. Colombia, China, Peru and India follow, with 78, 76, 75 and 74 species respectively. The overall results are similar to those for 1996 with all the same countries appearing prominent except for Papua New Guinea (32 species) which is now replaced by Tanzania (33 species). New Zealand and the Philippines have by far the highest percentage of threatened species with 42 percent and 35 percent respectively.

BirdLife International's distribution map of all threatened birds shows that globally they are unevenly distributed. They occur on more than 20 percent of the Earth's land surface but less than 5 percent of the land holds almost 75 percent of all threatened birds.

Plants

Based on data reviewed so far, the figures indicate that South and Central America, Central and West Africa and Southeast Asia have the highest number of threatened species.

Malaysia has by far the most threatened plant species - 681 - of which a large proportion are tropical timber trees. Indonesia, Brazil and Sri Lanka follow with 384, 338, and 280 threatened species respectively.

Reptiles, Amphibians, Fishes, and Invertebrates

These groups have not been comprehensively reviewed, therefore the current assessments reflect regional biases. For example, the United States emerges as having the most threatened species among fishes and invertebrates, partly because the status of inland water crustaceans and certain insect groups is well known there.

The number of threatened inland water species has increased in all groups except for the molluscs. A large proportion of these species is found in the United States, which has extremely rich freshwater biodiversity including 61 percent of the world's crayfishes, 29 percent of freshwater mussels, 17 percent of freshwater snails and 10 percent of freshwater fishes. A large proportion of these is considered threatened. Freshwater habitats are extremely vulnerable and species occurring in them are likely to face a much higher risk of extinction than those in terrestrial and marine environments.

Distribution of Birds and Mammals by Major Habitats

The top two habitats for threatened birds and mammals are lowland and montane tropical rainforest. Grasslands, shrublands, tropical monsoon forest and dry forest are also important to both groups. A total of 883 bird species (74 percent) depend almost entirely on a single habitat type and of these, 75 percent depend on forests. More than 900 threatened bird species use tropical rainforests and 42 percent of these are found in lowland rainforest while 35 percent occur in montane rainforest. For mammals, 33 percent occur in lowland rainforest and 22 percent in montane rainforest.

Birds appear more adaptable and able to survive in transformed habitats such as plantations, agricultural lands and urban areas. Mammals appear to be far less tolerant of transformed habitats and disturbance.

Conservation of extensive areas of tropical rainforest is essential to prevent the loss of a large number of species, most of which depend entirely on this habitat for survival. Grasslands, shrub lands and savannahs should also be prioritised for mammal and bird conservation.

An Overview of the Major Threats

Habitat Loss and Degradation

The most pervasive threat to birds, mammals and plants, is habitat loss and degradation, affecting 89 percent of all threatened birds, 83 percent of the threatened mammals assessed and 91 percent of the threatened plants. Agricultural activities (including crop and livestock farming, and timber plantations), extraction activities (mining, fisheries, logging, and harvesting), and development (human settlements, industry and associated infrastructure) are the three main causes of habitat loss. Agricultural activities affect 827 threatened bird species (70 percent of all), 1,121 plant species (49 percent of all) but surprisingly, only 92 (13 percent) of the threatened mammals. Extraction activities had the most impact on plants with 1,365 threatened species being affected (60 percent of all) and 622 threatened birds (53 percent of all).

Exploitation

Exploitation, including hunting, collecting, fisheries and fisheries by-catch, and the impacts of trade in species and species' parts, constitutes a major threat for birds (37 percent of all), mammals (34 percent of all), plants (8 percent of those assessed), reptiles and marine fishes. Figures show that 338 threatened bird species (28 percent of all) 212 mammals (29 percent of all), and 169 plants (7 percent of all) are impacted by hunting and collecting. Trade affects 13 percent of both threatened birds and mammals.

Alien Invasive Species

Alien invasive species (species that invade or are introduced to an area or habitat where they do not naturally occur) are a significant threat, affecting 350 (30 percent) of all threatened birds, and 361 threatened plant species (15 percent). The commonest cause of extinction of bird species since 1800, especially those on islands, is the introduction of alien invasive species such as the black rat.

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About IUCN

IUCN – The World Conservation Union was founded in 1948 and brings together 77 states, 112 government agencies, 735 NGOs, 35 affiliates, and some 10,000 scientists and experts from 181 countries in a unique world-wide partnership. Its mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. Within the framework of global conventions IUCN has helped over 75 countries to prepare and implement national conservation and biodiversity strategies. IUCN has approximately 1000 staff, most of whom are located in its 42 regional and country offices while 100 work at its Headquarters in Gland, Switzerland.