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Mammals facing extinction threat

By Richard Black

Environment correspondent, BBC News website, Barcelona



The seas are one of the ecosystems threatened by human activities

At least 25% of the world's mammal species are at risk of extinction, according to the first assessment of their status for a decade.

The Red List of Threatened Species says populations of more than half of mammalian species are falling, with Asian primates particularly at risk.

The biggest threat to mammals is loss of habitat, including deforestation. But there is good news for the African elephant, whose recovery leads to removal from the high-risk list.

This year's Red List looks at 5,487 mammals, and concludes that 1,141 are currently on the path towards disappearance.

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Julia Marton-Lefevre, IUCN

This may be an under-estimate, the authors caution, as there is not enough data to make an assessment in more than 800 cases. The true figure could be nearer to one- third.

"Within our lifetime, hundreds of species could be lost as a result of our own actions, a frightening sign of what is happening to the ecosystems where they live," said Julia Marton-Lefevre, director-general of the International Union for the Conservation of Nature (IUCN) which publishes the Red List.

"We must now set clear targets for the future to reverse this trend, to ensure that our enduring legacy is not to wipe out many of our closest relatives."

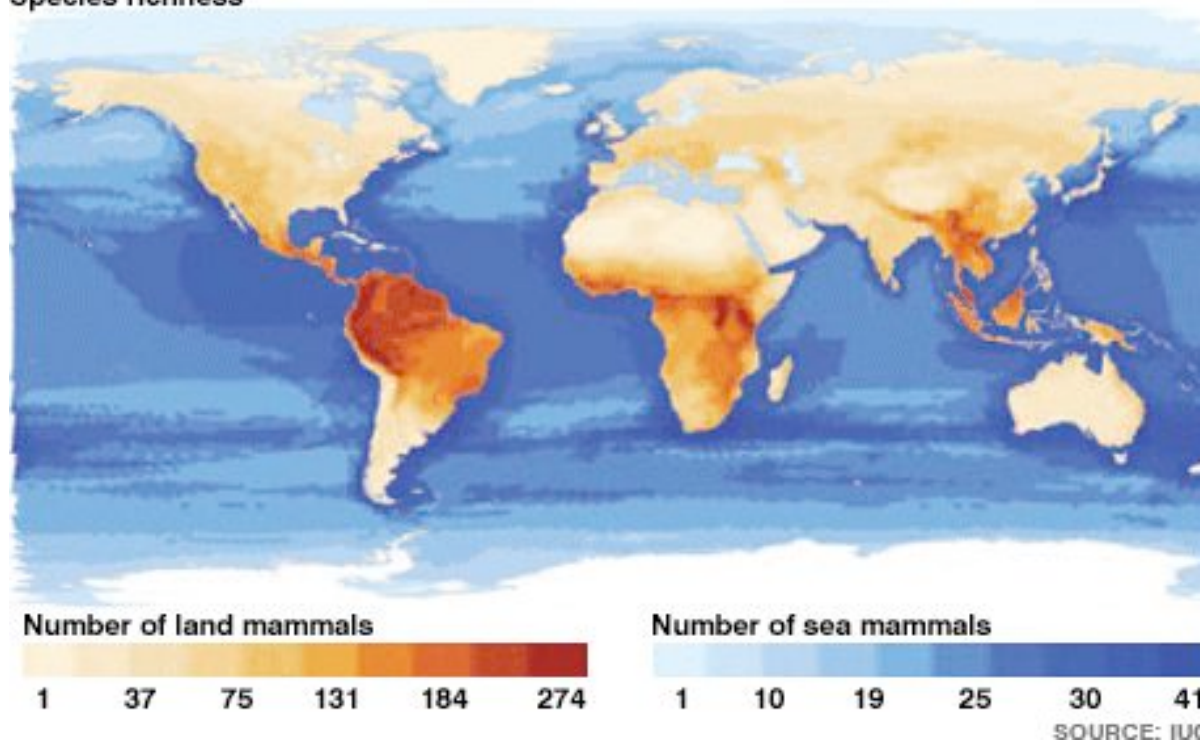
The report's authors said the current concern with financial matters must not be allowed to obstruct the decline in the Earth's natural systems.

"The financial crisis is nothing compared with the environmental crisis," the deputy head of IUCN's species programme, Jean-Christophe Vie, told BBC News.

"It's going to affect a few people, whereas the biodiversity crisis is going to affect the entire world. So there is a risk that because of the financial crisis, people are going to say 'yeah, the environment is not that urgent'; it is really urgent."

GLOBAL DIVERSITY OF MAMMALS

Species richness



About 40% of mammal species are compromised because human expansion is putting a squeeze on their habitat.

This is especially important across the tropics, the regions with the highest diversity of land-based mammals.

South and Southeast Asia are identified as regions where extinctions are especially likely in coming years, as that is where the size and living standards of the human population are rising fastest.



Demise of the devils and other mammals under threat

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The second biggest threat on land is identified as hunting, for food or medicines.

However, where hunting has been controlled and conservation programmes implemented, as with southern and eastern populations of the African elephant, populations and entire species can recover.

The elephant's risk status is lowered from Vulnerable to Near Threatened.

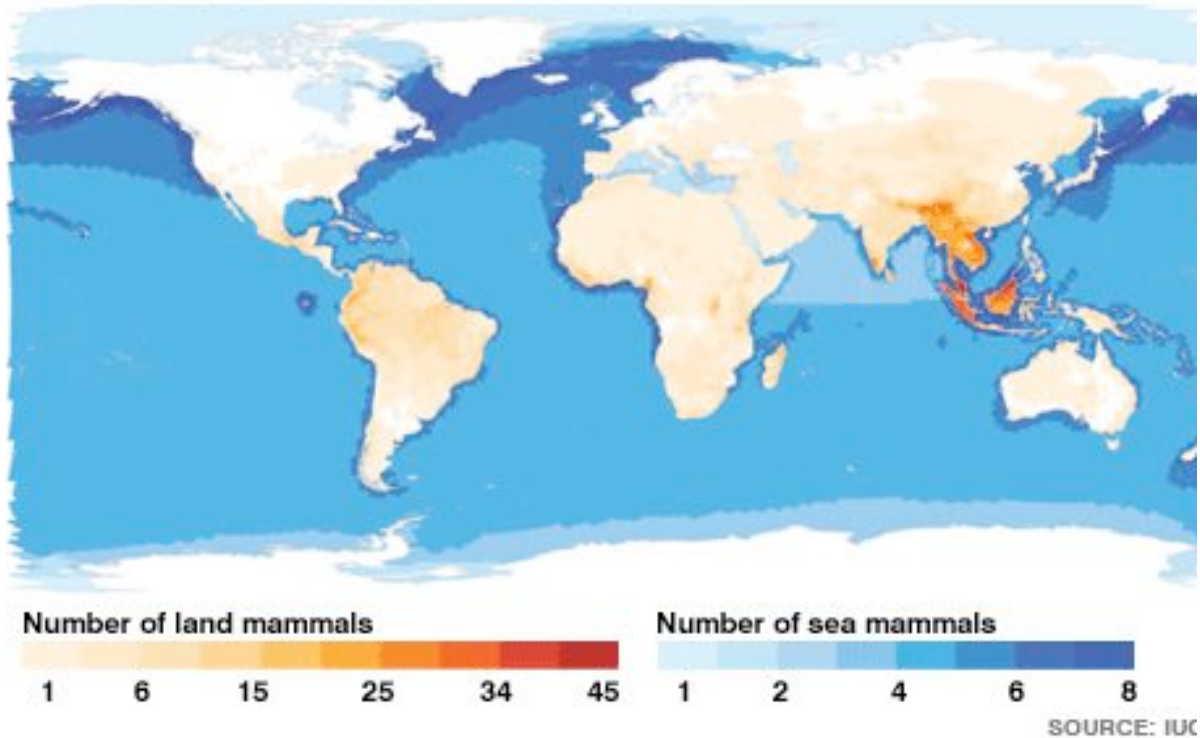
Some species are included for very specific reasons, such as the Tasmanian devil which has been decimated by a viral cancer.

In the seas, bycatch - entanglement in fishing nets, which is usually although not always accidental - emerges as the biggest factor behind current declines, affecting a staggering 79% of marine mammals.

The assessment - which is also published in the journal *Science* - warns that lack of data about marine mammals may be masking a bigger decline.

"Whales, dolphins, porpoises, and sirenians (manatees and dugong) are so difficult to survey that declines that should result in a Vulnerable listing would go undetected at least 70% of the time," the authors write.

NUMBER OF GLOBALLY THREATENED SPECIES



Outside the mammal arena, the Indian tarantula enters the Red List for the first time, a consequence of over-harvesting for the pet trade. A further 366 amphibians have been added to the list. This is the most threatened animal group of all, with about one-third on the high-risk list. A new assessment of climate impacts on the natural world suggests that many species not currently on the danger list will enter it as temperatures rise, particularly in East Africa and parts of South America.

RED LIST DEFINITIONS

Extinct - Surveys suggest last known individual has died

Critically Endangered - Extreme high risk of extinction. Some Critically Endangered species are also tagged Possibly Extinct

Endangered - Species at very high risk of extinction

Vulnerable - Species at high risk of extinction

Near Threatened - May soon move into above categories

Least Concern - Species is widespread and abundant

Data Deficient - not enough data to assess

The Red List is published approximately once every year. Although designed as the definitive global list of threatened species, in practice the rankings come from assessments covering different types of plants and animals, and

some areas of the list will be more up to date than others.

An assessment of sharks, originally slated for inclusion this year, was delayed and will probably be released later in the year.

In an attempt to make species assessments more certain, the Zoological Society of London (ZSL) is developing what they colloquially term a "Dow Jones index" for biodiversity.

The idea is to take a random sample of all the world's species, which will be representative of the whole, and revisit it regularly - perhaps once every five years - to gain a better idea of global trends.

"We are now emerging from the dark ages of conservation knowledge, when we relied on data from a highly restricted subset of species," said Jonathan Baillie, ZSL's director of conservation programmes.

The first group to be assessed this way is the land-dwelling vertebrates, but the project will eventually encompass insect, fungi, plants, and various types of marine creatures.

Survey Finds 'Bleak Picture' for World's Mammals

By Juliet Eilperin

Washington Post Staff Writer

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BARCELONA -- A quarter of the world's wild mammal species are at risk of extinction, according to a comprehensive global survey released here this morning.

The new assessment -- which took 1,700 experts in 130 countries five years to complete -- paints "a bleak picture," leaders of the project wrote in a paper being published in the journal *Science*. The overview, made public at the quadrennial World Conservation Congress of the International Union for the Conservation of Nature (IUCN), covers all 5,487 wild species identified since 1500. It is the most thorough tally of land and marine mammals since 1996.

"Mammals are definitely declining, and the driving factors are habitat destruction and over-harvesting," said Jan Schipper, the paper's lead author and the IUCN's global mammals assessment coordinator.

The researchers concluded that 25 percent of the mammal species for which they had sufficient data are threatened with extinction, but Schipper added the figure could be as high as 36 percent because information on some species is so scarce.

Land and marine mammals face different threats, the scientists said, and large mammals are more vulnerable than small ones. For land species, habitat loss and hunting represent the greatest danger, while marine mammals are more threatened by accidental killing through fishing bycatch, ship strikes and pollution.
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Although large species such as primates (including the Sumatran orangutan and red colobus monkeys) and ungulates (hoofed animals) might seem more physically imposing, the researchers wrote that these animals are more imperiled than small

creatures such as rodents or bats because they "tend to have lower population densities, slower life histories, and larger home ranges, and are more likely to be hunted."

Primates face some of the most intense pressures: According to the survey, 79 percent of primates in South and Southeast Asia -- including the Hainan gibbon -- are facing extinction.

Conservation International President Russ Mittermeier, one of the paper's co-authors and a primate specialist, said the animals are experiencing "a triple whammy" in the region.

"It's not that surprising, given the high population pressures, the level of habitat destruction, and the fairly extreme hunting of primates for food and medicinal purposes," Mittermeier said in an interview. He added that some areas in Vietnam and Cambodia are facing "an empty forest syndrome," where even such populous species as the crab-eating macaque or temple monkey are "actually getting vacuumed out of some areas where it was common."

In some cases the scientists have a precise sense of how imperiled a species has become: There are 19 Hainan gibbons left in the wild on the large island off China's southeast coast, Mittermeier said, which actually counts as progress because there used to be just a dozen. In other instances, such as with the beaked whale and jaguar, researchers have a much vaguer idea of their numbers. Among the hoofed animals who are endangered, scientists list the Dama gazelle and the Malaysian tapir.

Technological advances -- such as satellite and radio tagging, camera tracking and satellite-based GPS (global positioning system) mapping -- have helped scientists gauge the status of mammals and their habitat more thoroughly. The authors of the assessment wrote that most land mammals occupy "areas smaller than the United Kingdom," while "the range of most marine mammals is smaller than one-fifth of the Indian Ocean."

The findings come as other researchers are documenting new ways that human-generated emissions of greenhouse gases affect marine mammals. In a paper published Thursday in the journal *Geophysical Research Letters*, a team at the Monterey Bay Aquarium Research Institute found that ocean acidification spurred by carbon emissions will cause sounds to travel farther underwater, because increasingly acidic seawater absorbs less low- and mid-frequency sound.

By 2050, the researchers predicted, sounds could travel as much as 70 percent farther in parts of the Atlantic Ocean and other areas, which might improve marine mammals' ability to communicate but also increase the amount of background noise, which could prove disorienting.

"We understand the chemistry of the ocean is changing. The biological implications of that we really don't know," said the lead author, ocean chemist Keith Hester. "The magnitude to which sound absorption will change, based mainly on human contribution, is really astounding."

The authors of the IUCN's mammals assessment said the species declines they have observed are not inevitable. "At least 5 percent of currently threatened species have stable or increasing populations," they wrote, "which indicates that they are recovering from past threats."

"It comes down to protecting habitats effectively, through protected areas, and preventing hunting and other forms of exploitation," Mittermeier said. As one example of how conservation can work, he noted that in areas where scientific researchers work, animals stand a much better chance of surviving. "Where you have a research presence, it's as good or better than a guard force," he said.

Schipper offered the model of the U.S. effort to bring back the black-footed ferret, which was essentially extinct on the North American prairie as of 1996. "Now it's endangered, which, in this case, is a huge improvement," he said. "When governments and scientists commit resources to a project, many species can be recovered."