Corals added to IUCN Red List of Threatened Species for first time

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For the first time in history, the IUCN Red List of Threatened Species includes ocean corals in its annual report of wildlife going extinct.

A comprehensive study of marine life sponsored by Conservation International (CI) and implemented jointly with the IUCN (World Conservation Union) used data from the Galapagos-based Charles Darwin Research Station and other regional institutions to conclude that three species of corals unique to the Galapagos Islands could soon disappear forever.

The 2007 IUCN Red List designates two of the corals – Floreana coral (Tubastraea floreana) and Wellington's solitary coral (Rhizopsammia wellingtoni) – as Critically Endangered, while a third – Polycyathus isabela – is listed as Vulnerable. The Red List also includes 74 Galapagos seaweeds, or macro-algae, with 10 of them receiving the most threatened status of Critically Endangered. Prior to 2007, only one algae species had been included on the Red List.

"There is a common misconception that marine species are not as vulnerable to extinction as land-based species," said Roger McManus, CI's vice president for marine programs. "However, we increasingly realize that marine biodiversity is also faced with serious environmental threat, and that there is an urgent need to determine the worldwide extent of these pressures to guide marine conservation practice."

The Galapagos marine research was conducted by the Global Marine

Species Assessment (GMSA), a joint initiative of IUCN and CI launched in 2005 with the support of dozens of experts and research institutions. The GMSA is studying a large portion of Earth's marine species to determine the threat of extinction.

"These Galapagos corals and algae are the first of many marine species that will be added to the Red List due to our findings," said GMSA Director Kent Carpenter of Old Dominion University in Virginia. "What is significant is that climate change and over-fishing – two of the biggest threats to marine life – are the likely causes in these cases."

Scientists blame climate change for more frequent and increasingly severe El Niño events that have caused dramatic rises in water temperatures and reduced nutrient availability around the Galapagos Islands in the Eastern Tropical Pacific Ocean, off South America. The warmer water harms corals and algae, both of which constitute the structural foundation of unique and diverse marine ecosystems.

Corals build reefs that are habitat for fish and other marine life, and also are a major attraction for divers in the Galapagos, where tourism makes a significant contribution to the local and national economy.

The recovery of algae species following strong El Niño events is harmed by over-fishing of the natural predators of sea urchins, which feed on the algae. Mushrooming urchin populations scour rocks clean of algae, depleting a major food source for other species such as the Galapagos marine iguana.

"Marine ecosystems are vulnerable to threats at all scales – globally through climate change, regionally from El Niño events, and locally when over-fishing removes key ecosystem building blocks," said Jane Smart, head of the IUCN Species Program. "We need more effective solutions to manage marine resources in a more sustainable way in light

of these increasing threats."

Other coral and algae species lacked sufficient information to determine their IUCN Red List status, so they received the designation of Data Deficient. Researchers believe many of these species are likely to be listed as threatened with extinction when more detailed information becomes available.

The GMSA is the first strategic global review of the conservation status of marine species, including every marine vertebrate species and selected invertebrates and plants. Funded predominantly by CI, the five-year GMSA initiative is engaging experts from around the world to compile and analyze all existing information on the status of approximately 20,000 marine species to determine their risk of extinction according to the IUCN Red List Categories and Criteria. The resulting analysis will identify marine "hotspots" of high conservation priority in order to focus protection efforts on their habitats and species.

Source: Conservation International