

Half of mangrove ecosystems at risk: conservationists

May 22 2024, by Agnès PEDRERO



A man plants mangroves at a beach at Pekan Bada, Indonesia's Aceh province.

Half of the world's mangrove ecosystems are at risk of collapse due to climate change, deforestation and pollution, according to a study published Wednesday.

The International Union for Conservation of Nature (IUCN), known for its red list of threatened species, has for the first time taken stock of the world's mangroves, evaluating 36 different regions.

IUCN director general Grethel Aguilar said the assessment "highlights the urgent need for coordinated conservation of mangroves—crucial habitats for millions in vulnerable communities worldwide".

Mangroves are trees or shrubs that grow mainly in seawater or brackish water along coastlines and tidal rivers, in equatorial climes.

Released on the International Day for Biodiversity, IUCN said its findings show that "50 percent of the [mangrove ecosystems](#) assessed are at risk of collapse"—categorized as either vulnerable, endangered or critically endangered.

According to the assessment, 20 percent were at severe risk of collapse.

Mangroves are threatened by deforestation, development, pollution, and dam construction.

However, the risk is increasing due to [sea-level rise](#) and the greater frequency of severe storms associated with climate change.

Around 15 percent of the world's coasts are covered by mangroves, covering about 150,000 square kilometers.



A plastic bottle and rubbish are seen near mangrove trees during the World Mangrove Day in Banda Aceh on July 26, 2023.

Disastrous disappearance

Climate change threatens a third of mangrove ecosystems assessed, due to rising sea levels.

According to estimates, at the current rate, a quarter of the global area of mangroves is expected to be submerged in the next 50 years, IUCN said.

The northwest Atlantic Ocean, the northern Indian Ocean, the Red Sea, the South China Sea, and the Gulf of Aden coasts are expected to be particularly severely affected.

"Mangrove ecosystems are exceptional in their ability to provide essential services to people, including coastal disaster risk reduction, [carbon storage](#) and sequestration, and support for fisheries," said Angela Andrade, chair of the IUCN commission on ecosystem management.

"Their loss stands to be disastrous for nature and people across the globe."

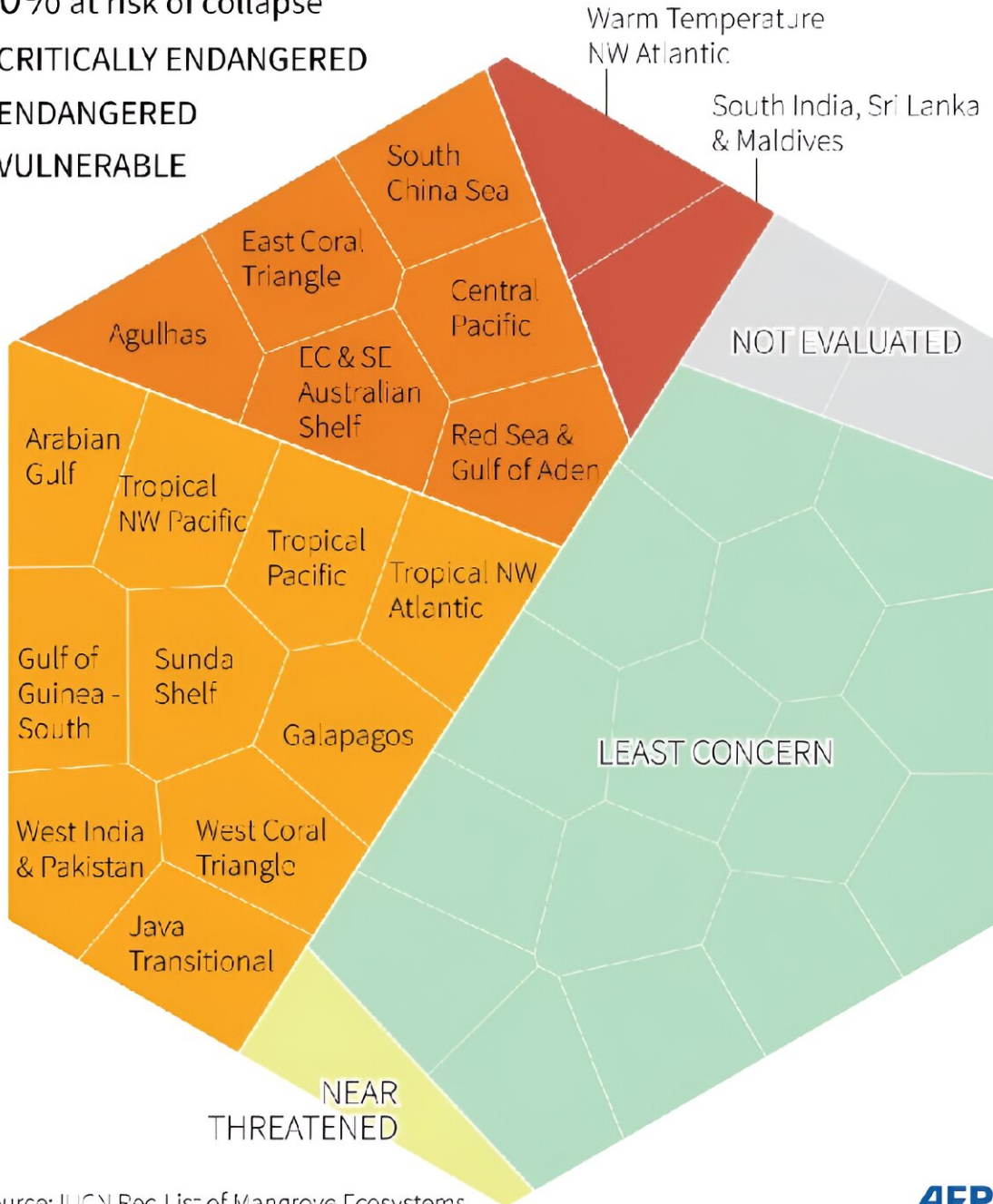
The study said looking after mangroves was essential for mitigating the effects of climate change, with healthy ecosystems coping better with sea level rise and providing inland protection from the effects of severe storms.

Half of mangroves at risk of collapse

Regional mangrove ecosystems by IUCN threat status

50% at risk of collapse

- CRITICALLY ENDANGERED
- ENDANGERED
- VULNERABLE



Source: IUCN Rec List of Mangrove Ecosystems



Graphic showing 50% of mangrove ecosystems in the IUCN threat categories of Vulnerable, Endangered, or Critically Endangered at risk of collapse, which

represents around 50% of the world's mangrove area, according to the IUCN Red List.

Without significant improvement by 2050, [climate change](#) and rising sea levels will lead to the loss of 1.8 billion tonnes of carbon stored in mangroves.

Mangroves currently store nearly 11 billion tons of carbon—almost three times the amount of carbon stored by tropical forests of the same size.

Maintaining good sediment circulation and allowing mangroves to expand inland will help them cope with sea level rise, IUCN said. It also called for the restoration of mangroves which have already disappeared.

"A very good study of mangrove change globally that was published in 2022 indicates about 5,000 square kilometers of mangrove were lost" between 1996 and 2020, IUCN's Marco Valderrabano told AFP.

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