

Future of the giants

Habitat loss and climate change are putting many species in peril, including dipterocarps – sentinels of many tropical rainforests. A research team from the National University of Singapore (NUS) recently quantified how the dual threat could impact dipterocarp trees in the Philippines, a biodiversity hotspot home to many animal species found nowhere else in the world.

WHAT ARE DIPTEROCARPS?

- These trees are foundations of many tropical rainforest ecosystems.

- They are among the tallest of all trees in the tropics, and provide homes for many animal species.

- Some researchers believe that dipterocarps can serve as proxies for what happens to the habitat.

In the Philippines, lowland dipterocarp forests are home to many rare species found nowhere else in the world. They include:

Northern sooty woodpecker
(*Mulleripicus funebris*)

Status: Near threatened

Found: Only on Luzon, Marinduque, Catanduanes and the Polillo Islands



Rufous-headed hornbill
(*Rhabdotorrhinus waldeni*)

Status: Critically endangered

Found: Islands of Panay and Negros in the Visayas



Luzon tarictic hornbill
(*Mulleripicus funebris*)

Status: Near threatened

Found: Found only on Luzon and nearby islands in the northern Philippines

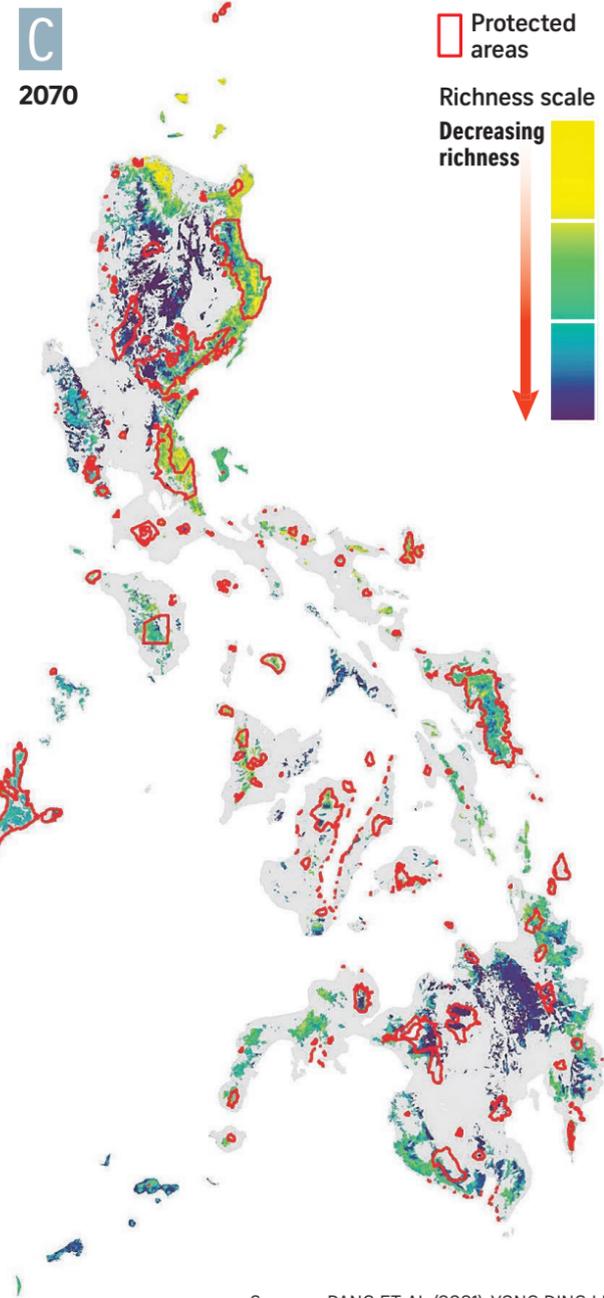
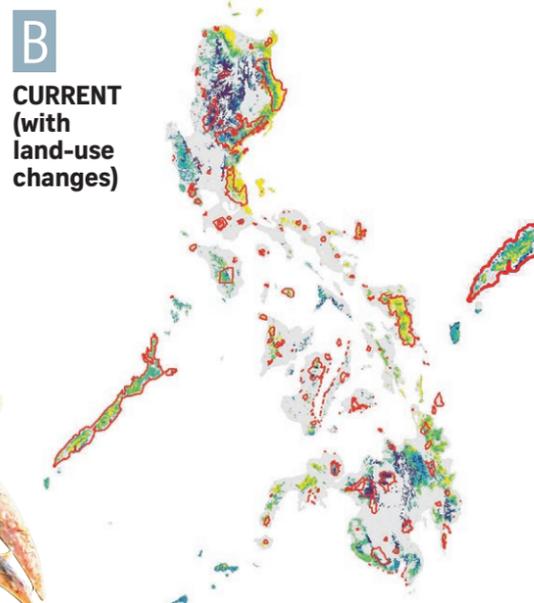
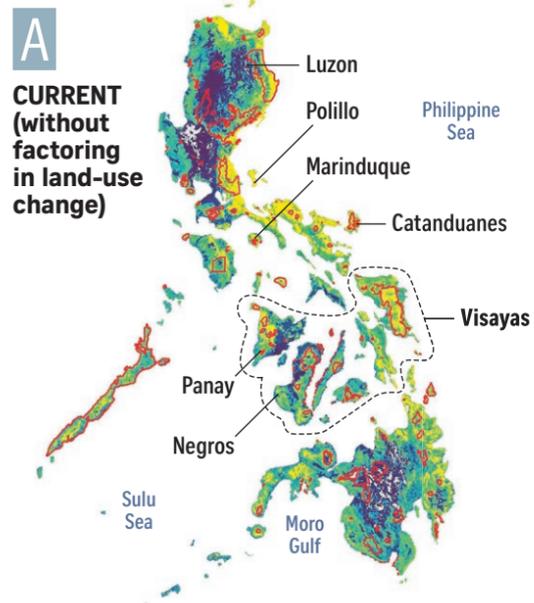


FINDINGS

A • The researchers first plotted out where dipterocarp species in the Philippines can be found. They zoomed in on **19 native species of trees** that can be found throughout the archipelago, using data from a global database.

B • Land-use changes shrank available habitats **by a minimum of 50 per cent.** • This includes forests being converted into plantations or human settlements, for instance.

C • Climate change is expected to shrink this by a further 27 per cent in a high emissions scenario, where no action is taken to reduce the emissions of heat-trapping greenhouse gases. • As more heat accumulates in the atmosphere, the climate system responds. Symptoms of this include **erratic rainfall patterns and warmer temperatures**, which can affect tree growth.



Sources: PANG ET AL (2021), YONG DING LI
PHOTOS: CON FOLEY, DAVID G. QUIMPO/HARIBON FOUNDATION 2019, YONG DING LI, MA. ROVELYN D. TUMANENG AND ROVEN D. TUMANENG STRAITS TIMES GRAPHICS

Habitat of the rufous-headed hornbill in Aklan, situated in the north-west region of Panay Island.

