

BUSINESS INSIDER INDIA

Southeast Asian forests may be more resilient to climate change than we thought, new study offers hope

27 December 2023

Climate change mitigation is very much like your typical school group project: everyone's involved, but only a handful are putting in the appropriate amount of work; there's so much to do, yet barely any time or money to do it. In the face of such restricted resources, you have to pick and choose your battles to maximise the end results.

This stands true even in the case of tree conservation. Planting saplings is only the first step, you also have to spend years ensuring the plants reach maturity and self-dependence. Even then, it is supremely important that you pick a tree resilient enough to not crumble to the ongoing climate onslaught. This step has proven somewhat tricky for conservationists, but a new study might shimmer a ray of hope.

For decades, scientists believed that during the Last Glacial Maximum, roughly 19,000 years ago, Southeast Asia was transformed from lush rainforest into a vast, dry savannah. This assumption fueled concerns about the resilience of the region's rainforests in the face of a warming planet. However, new research reveals a far more complex picture of the past, with a mosaic of diverse closed and open forest types persisting throughout Southeast Asia during the era.

The team analysed data from 59 paleoenvironmental sites across the region, including pollen grains preserved in lakes and other biochemical signatures. While there was an expansion of grasslands in some areas, forests also persisted. This suggests that Southeast Asia's tropical forests may be more resilient to climate change than we previously thought, provided a diversity of landscape types is maintained.

The researchers propose that during the cooler and drier climate of the Last Glacial Maximum, montane forests above 1,000 meters in elevation thrived, while lowland areas experienced a shift to seasonally dry forests with a naturally grassy understory. This variances in forest types provided a more diverse and resilient ecosystem than a uniform savannah would have offered.

The findings of this study suggest that protecting a variety of forest types, including montane forests and seasonally dry forests, could be crucial for preventing the "savannisation" of the region's rainforests in the face of climate change.

"Maintaining forest types that facilitate resilience should be a conservation objective for the region," explains lead author Rebecca Hamilton. "Our work suggests that prioritising protection of forests above 1000 metres alongside seasonally dry forest types could be important for preventing future 'savannisation' of Asia's rainforests."

The research also offers a more optimistic outlook for the future of the region's biodiversity. The presence of diverse forest types during the Last Glacial Maximum suggests that species may have more

options for adapting to changing climates, providing hope for the survival of threatened plants and animals.

Source: <https://www.businessinsider.in/sustainability/news/southeast-asian-forests-may-be-more-resilient-to-climate-change-that-we-thought-new-study-offers-hope/articleshow/106295875.cms>