

Tropical Rainforests can Survive Global Warming

Source: TH

A recent study by IIT Kharagpur reveals tropical rainforests' potential resilience to global warming.

- The study examined fossilised tropical rainforests from Gujarat's Vastan coal mines, dating back 56 million years to the Palaeocene-Eocene Thermal Maximum (PETM), an era of extreme global warming.
 - The coal layers in Vastan are fossilised tropical rainforests with rich plant, pollen, mammal, and insect remains from the PETM era when India was a tropical island with high CO₂ levels.
 - **PETM,** a short interval of maximum temperature lasting approximately 100,000 years during the late Paleocene and early **Eocene epochs (roughly 55 million years ago).**
- Despite high atmospheric CO₂ during the PETM, tropical rainforests not only survived but diversified, likely sustained by "rainfall-buffered temperature"
 - Rainfall-Buffered Temperature: Increased rainfall during warming periods likely lowered temperatures, sustaining the rainforests.
- Rainforest: A <u>rainforest</u> is an area densely populated with tall, mostly evergreen trees (e.g. <u>Amazon</u> and <u>Western Ghats</u>) and receives substantial rainfall.
 - They are primarily situated between tropics (**Cancer and Capricorn**). These rainforests are found in Central and South America, western and central Africa, western India, Southeast Asia, the island of New Guinea, and Australia.



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