

# Tropical everwet rainforest



**TANJUNG PUTING NATIONAL PARK**  
**CENTRAL KALIMANTAN, INDONESIA**  
CREDIT: KRISTINA J. ANDERSON-TEIXEIRA

## Vegetation

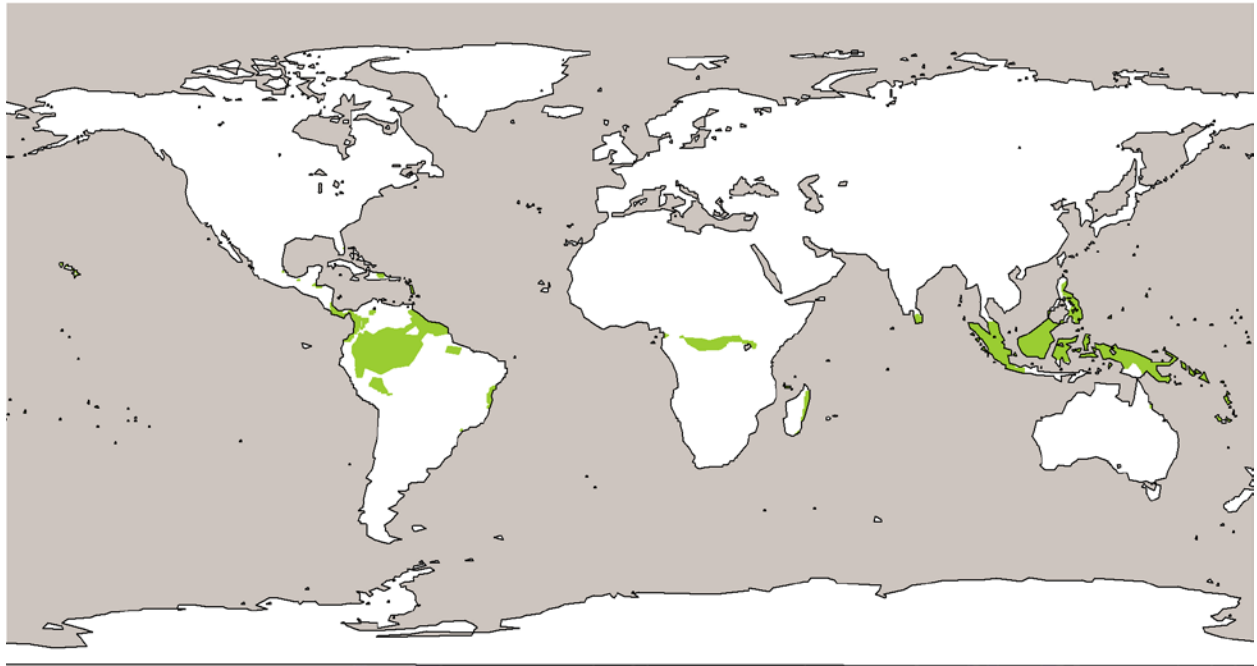
Tropical everwet rainforests are dominated by broadleaf trees. Also known as hardwoods, broadleaf trees have flat leaves and produce seeds protected by fruits. In this climate, the trees keep their leaves year-round.

## Climate

Under a tropical rainforest climate (Af in Köppen-Geiger system), there are no natural seasons and the temperature oscillate very little around 18°C. All 12 months have average precipitation of at least 60 mm. These climates usually occur within 5–10° latitude of the equator.

## Potential Distribution

This distribution map illustrates the climate zones in which this ecosystem type occurs, with stippled areas indicating climate zones where it is rare. It is not present in all parts of its climatic range.



# Examples

## CTFS-ForestGEO Forest Monitoring Sites

The Center for Tropical Forest Science- Forest Global Earth Observatory (CTFS-ForestGEO) is a Smithsonian-led global forest monitoring network, including over 6 million trees and over 10,000 tree species in over 60 forested sites worldwide. Scientific research at these sites includes measurements that help to quantify the climate regulation services of these and similar sites. Examples of Tropical everwet rainforest in this network include the following sites:

ITURI (EDORO AND LENDA), DEMOCRATIC REPUBLIC OF THE CONGO

WANANG, PAPUA NEW GUINEA

KUALA BELALONG, BRUNEI DARUSSALEM

DANUM VALLEY, MALAYSIA

LAMBIR, MALAYSIA

PASOH, MALAYSIA

PALANAN, PHILIPPINES

BUKIT TIMAH, SINGAPORE

SINHARAJA, SRI LANKA

MANAUS, BRAZIL

AMACAYACU, COLOMBIA

YASUNI, ECUADOR

## National Parks, Conservation Areas, or UNESCO Natural World Heritage Sites

DISCOVERY COAST ATLANTIC FOREST RESERVES, BRAZIL..

## Climate regulation value

The average greenhouse gas value for ecosystems of this type is 1,124 metric tons CO<sub>2</sub>-equivalents per hectare over a 50 year time frame (t CO<sub>2</sub>-eq ha<sup>-1</sup> 50 yrs<sup>-1</sup>). This includes 867 t CO<sub>2</sub>-eq ha<sup>-1</sup> 50 yrs<sup>-1</sup> from storage of organic matter that would result in greenhouse gas release if cleared and 256 t CO<sub>2</sub>-eq ha<sup>-1</sup> 50 yrs<sup>-1</sup> from ongoing greenhouse gas exchange between the ecosystem and the environment.

When biophysical effects are taken into account, the average climate regulation value for ecosystems of this type is 1,398 metric tons CO<sub>2</sub>-equivalents per hectare (t CO<sub>2</sub>-eq ha<sup>-1</sup> 50 yrs<sup>-1</sup>). This is a 24% increase relative to the value based on greenhouse gas regulation alone.

Considering an average car, emitting 1.1 lb CO<sub>2</sub> per mile driven, clearing 100 square feet (9.3 m<sup>2</sup>) of this ecosystem type would, on average, be equivalent to driving 2,090 miles/3,363 km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 2,601 miles/4,185 km.