Maritime temperate broadleaf forest

New Zealand
Credit: Alan J. Tepley

Vegetation

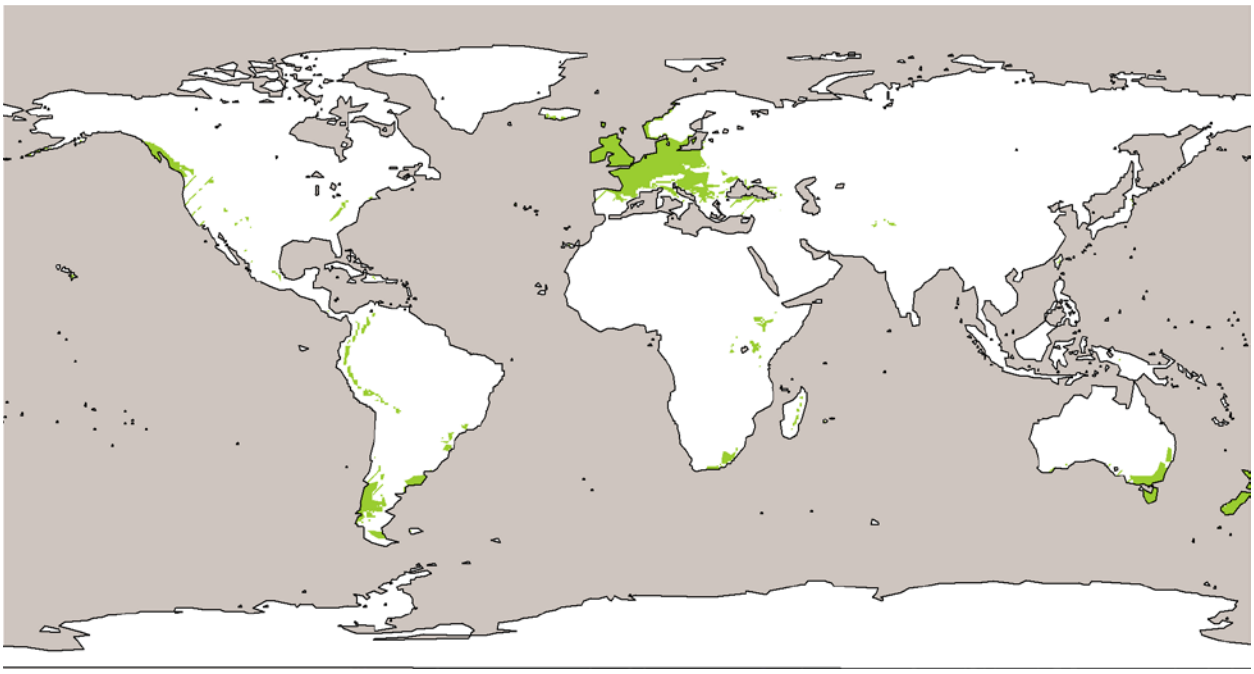
Maritime temperate broadleaf forests are dominated by broadleaf trees. Also known as hardwoods, broadleaf trees have flat leaves and produce seeds protected by fruits.

Climate

Maritime temperate broadleaf forests are found in temperate or tropical highland climates with no dry season or a moderately dry summer (Köppen-Geiger climate system zones Csb, Cfb, Cfc).

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 Maritime temperate broadleaf in this network include the following sites:

- La Planada, Colombia
- Laupahoehoe, USA
- Palamanui, USA
- Speulderbos, Netherlands
- Wytham Woods, UK

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

GREATER BLUE MOUNTAINS AREA IN AUSTRALIA.

LAURISILVA OF MADEIRA IN PORTUGAL.

Climate regulation value

The average greenhouse gas value for ecosystems of this type is 969 metric tons CO_2-equivalents per hectare over a 50 year time frame (t CO_2-eq ha^{-1} 50 yrs^{-1}). This includes 653 t CO_2-eq ha^{-1} 50 yrs^{-1} from storage of organic matter that would result in greenhouse gas release if cleared and 316 t CO_2-eq ha^{-1} 50 yrs^{-1} 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 913 metric tons CO_2-equivalents per hectare (t CO_2-eq ha^{-1} 50 yrs^{-1}). This is a 6% decrease relative to the value based on greenhouse gas regulation alone.

Considering an average car, emitting 1.1 lb CO_2 per mile driven, clearing 100 square feet (9.3 m^2) of this ecosystem type would, on average, be equivalent to driving 1,802 miles/2,899km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 1,698 miles/2,732 km.