Temperate closed shrubland

CAPE OF GOOD HOPE
SOUTH AFRICA
CREDIT: KRISTINA J. ANDERSON-TEIXEIRA

Vegetation

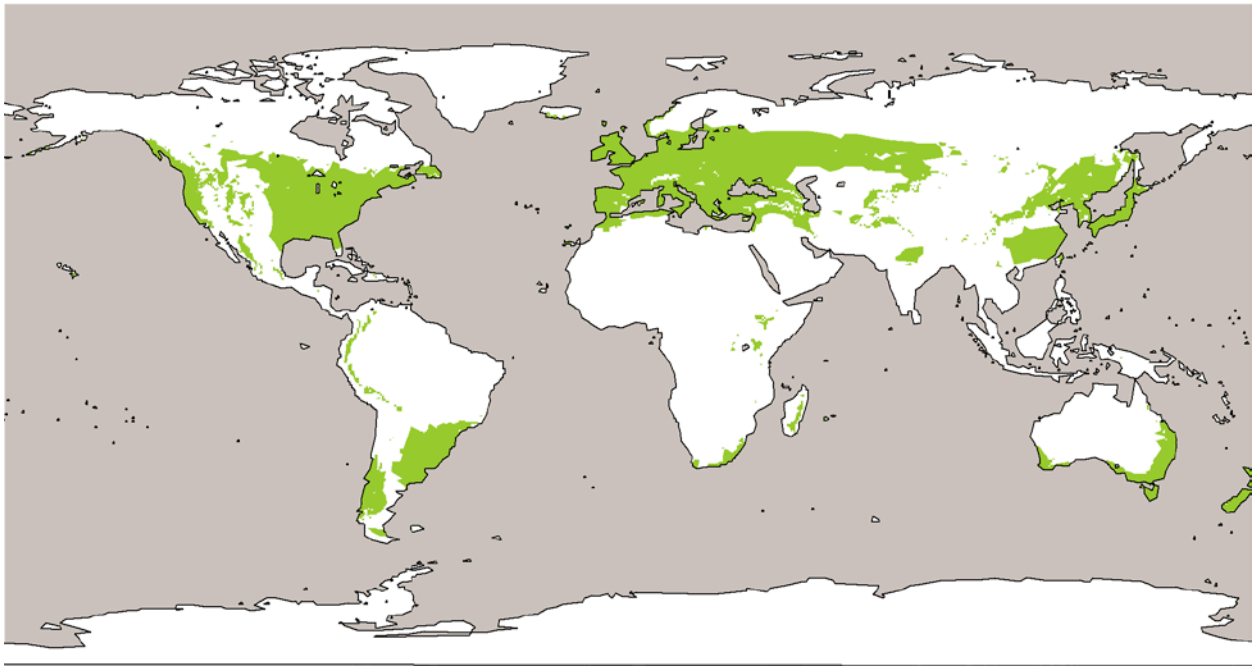
Temperate closed shrubland is dominated by shrubs.

Climate

Temperate closed shrubland is found in non-arid temperate climates, represented by 13 climate zones defined by the Köppen-Geiger climate system: Cfa, Cfb, Cfc, Csa, Csb, Csc, Cwc, Dfa, Dfb, Dsa, Dsb, Dwa, Dwb.

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.



Climate regulation value

The average greenhouse gas value for ecosystems of this type is 460 metric tons CO_2-equivalents per hectare over a 50 year time frame (t CO_2-eq ha^{-1} 50 yrs^{-1}). This includes 290 t CO_2-eq ha^{-1} 50 yrs^{-1} from storage of organic matter that would result in greenhouse gas release if cleared and 170 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 376 metric tons CO_2-equivalents per hectare (t CO_2-eq ha^{-1} 50 yrs^{-1}). This is an 18% 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 856 miles/1377 km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 696 miles/1124 km.