Continental/ hemiboreal coniferous forest

Picea abies in Stołowe Mountains, Poland
By Crusier[Public domain], via Wikimedia Commons

Vegetation

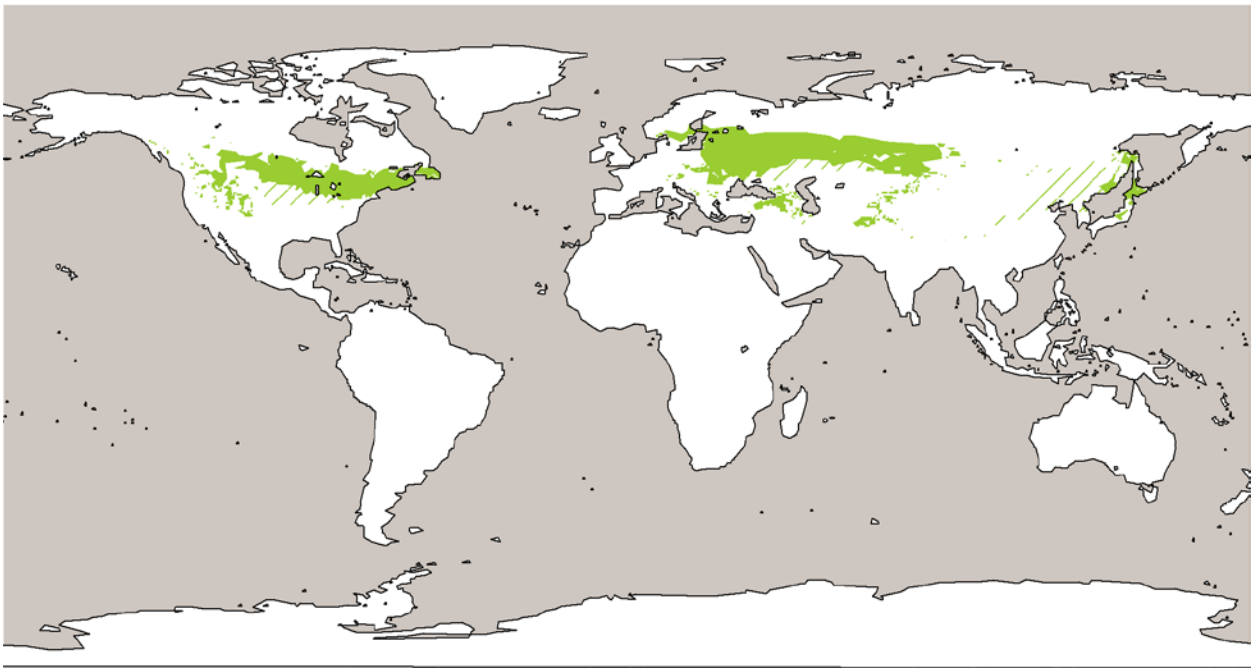
Continental/ hemiboreal coniferous forest are dominated by needleleaf trees. Needleleaf trees (conifers)—a group that includes pine (*Pinus*), fir (*Abies*), spruce (*Picea*), larch (*Larix*), and others—have needle-shaped leaves and produce seeds in cones.

Climate

Continental/ hemiboreal broadleaf deciduous or mixed forests are found in cold (or continental) climates with temperature of the coldest month averaging below -3°C and that of their warmest month averaging >10°C (Dsa, Dsb, Dwa, Dwb, Dfa, Dwb in the Köppen-Geiger climate system).

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 543 metric tons CO_2-equivalents per hectare over a 50 year time frame (t CO_2-eq ha^{-1} 50 yrs^{-1}). This includes 462 t CO_2-eq ha^{-1} 50 yrs^{-1} from storage of organic matter that would result in greenhouse gas release if cleared and 82 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 372 metric tons CO_2-equivalents per hectare (t CO_2-eq ha^{-1} 50 yrs^{-1}). This is a 32% 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 1,011 miles/1,628 km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 693 miles/1,115 km.