Tundra

MUSK OX IN TUNDRA
GREENLAND
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Vegetation

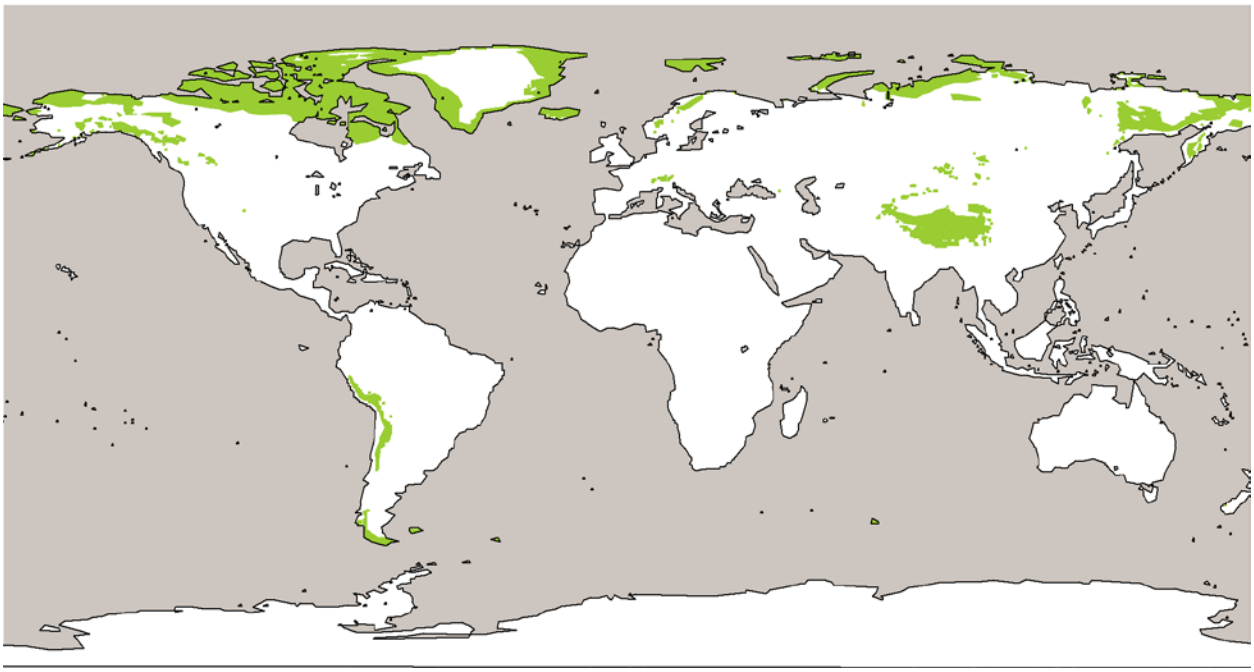
Tundra vegetation is composed of dwarf shrubs, grasses, sedges, mosses, and lichens. It may also be partially barren.

Climate

Tundra is found in tundra climates (ET in Köppen-Geiger climate system), which are characterized by average temperatures below 10°C in all 12 months of the year, but with average temperatures of the warmest month exceeding freezing (0°C).

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 208 metric tons CO_2-equivalents per hectare over a 50 year time frame (t CO_2-eq ha^{-1} 50 yrs^{-1}). This includes 176 t CO_2-eq ha^{-1} 50 yrs^{-1} from storage of organic matter that would result in greenhouse gas release if cleared and 32 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 181 metric tons CO_2-equivalents per hectare (t CO_2-eq ha^{-1} 50 yrs^{-1}). This is a 13% 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 387 miles/623 km (counting greenhouse gasses only). Counting biophysical effects, clearing the vegetation would be equivalent to driving 337 miles/542 km.