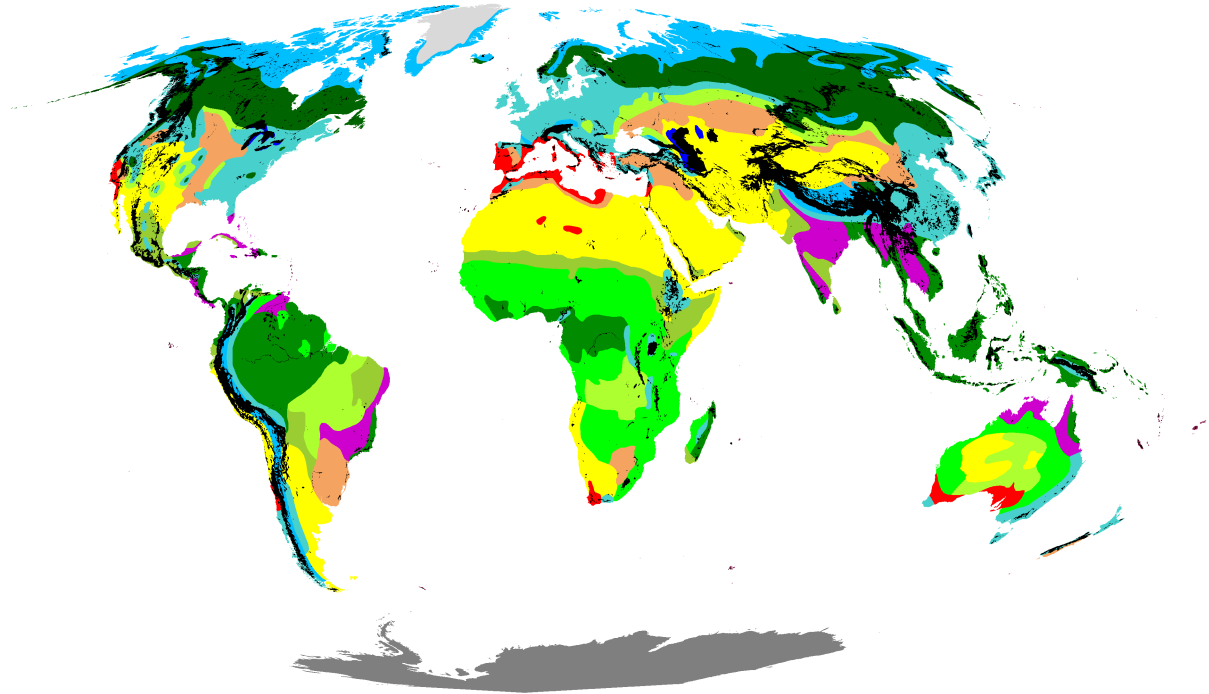


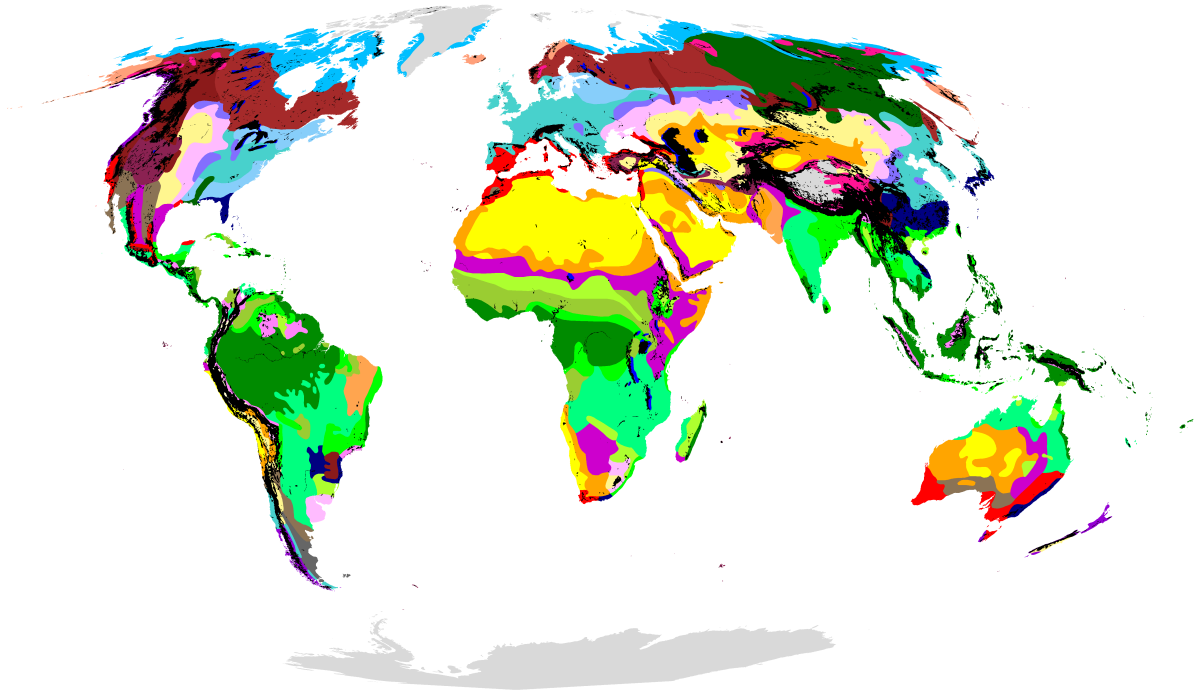
**High-resolution maps and legends of established global concepts for biomes,
ecozones and climate zones that were processed within this study**

WHITTAKER 1975



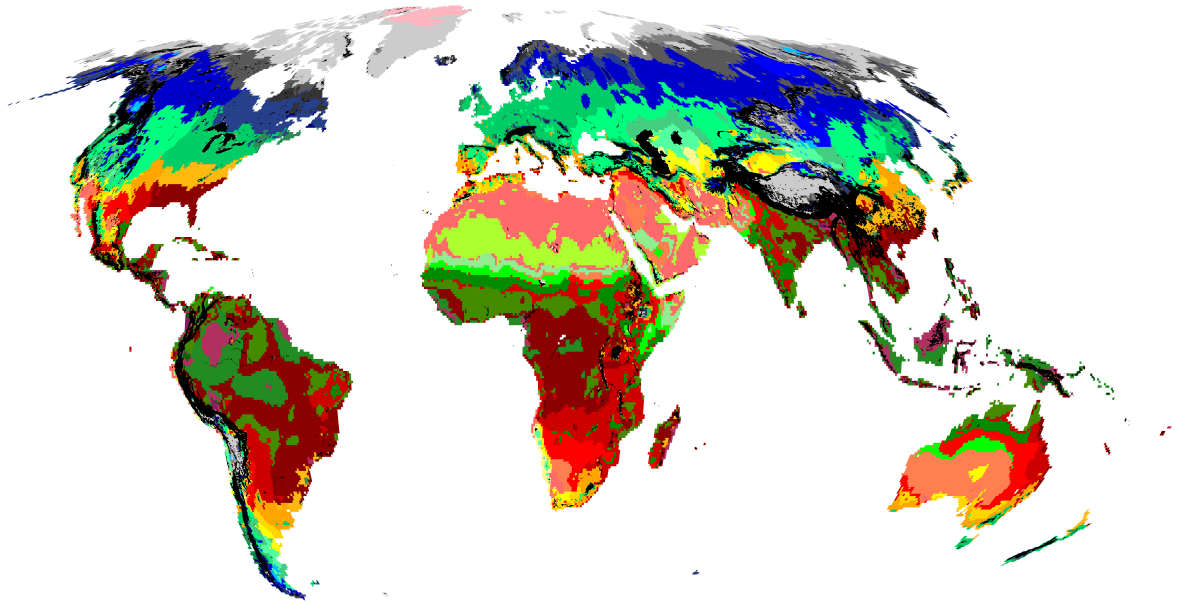
- | | |
|----------------------------|--------------------------|
| ■ Tropical rainforest | ■ Temperate grassland |
| ■ Tropical savanna | ■ Boreal forest |
| ■ Tropical thornwood | ■ Tundra & Alpine |
| ■ Woodland | ■ Ice |
| ■ Desert & Semidesert | ■ Inland water |
| ■ Mediterranean | ■ Oceanic islands |
| ■ Tropical seasonal forest | ■ Undefined |
| ■ Temperate forest | ■ Mountain and lake mask |

SCHMITHÜSEN 1976



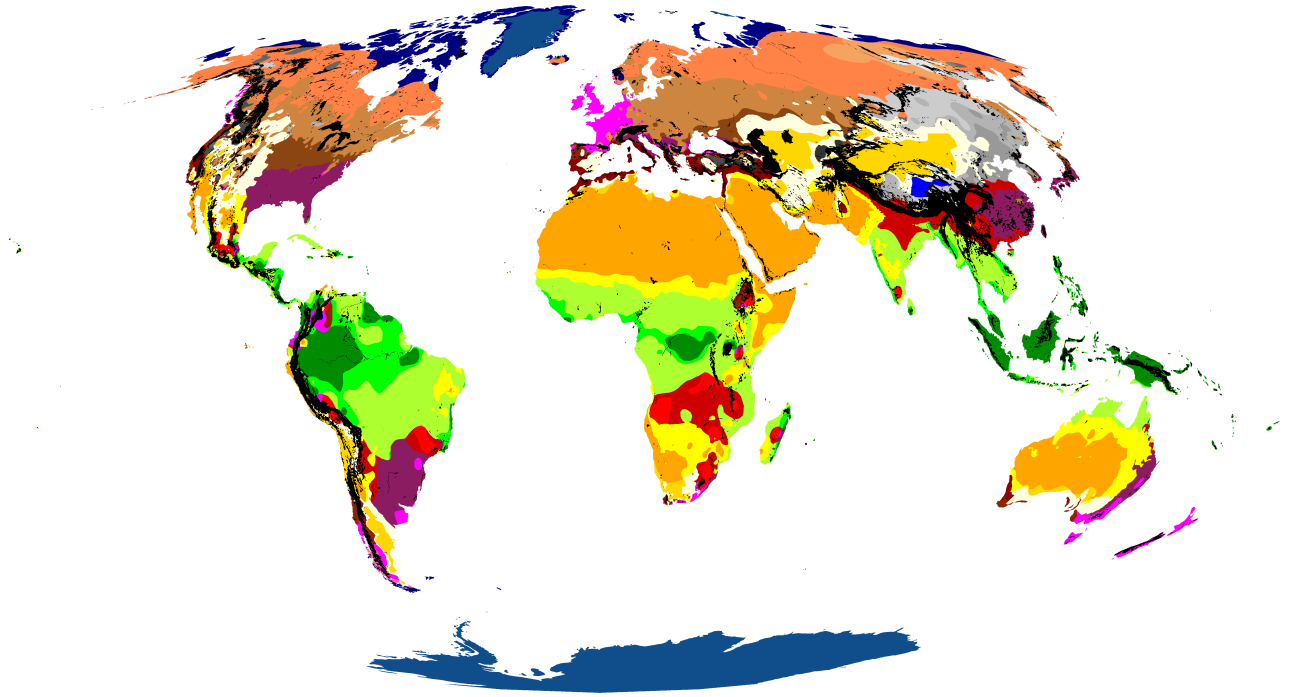
- | | |
|-----------------------------------|--------------------------------|
| ■ Tropical rainforest | ■ Transition steppe |
| ■ Tropical semi evergreen forest | ■ Summer green steppe |
| ■ Moist savanna | ■ Summer green deci. forest |
| ■ Dry savanna | ■ Summer green mix. forest |
| ■ Tropical dry forest | ■ Mountainous conif. forest |
| ■ Tropical mountainous rainforest | ■ Temperate rainforest |
| ■ Wet Puna | ■ Evgreen boreal conif. forest |
| ■ Thorn savanna | ■ Summer green conif. forest |
| ■ Thorn succulent forest | ■ Subpolar meadows, shrub |
| ■ Semidesert | ■ Mountainous vegetation |
| ■ Dry desert | ■ Tundra |
| ■ Sclerophyllous vegetation | ■ Subantarctic heath |
| ■ Thorn shrub succulent | ■ Cold desert |
| ■ Laurel forest | ■ Oceanic islands |
| ■ Coniferous dry shrub | ■ Inland water |
| ■ Dry steppe cushion | ■ Mountain and lake mask |

LEEMANS 1990



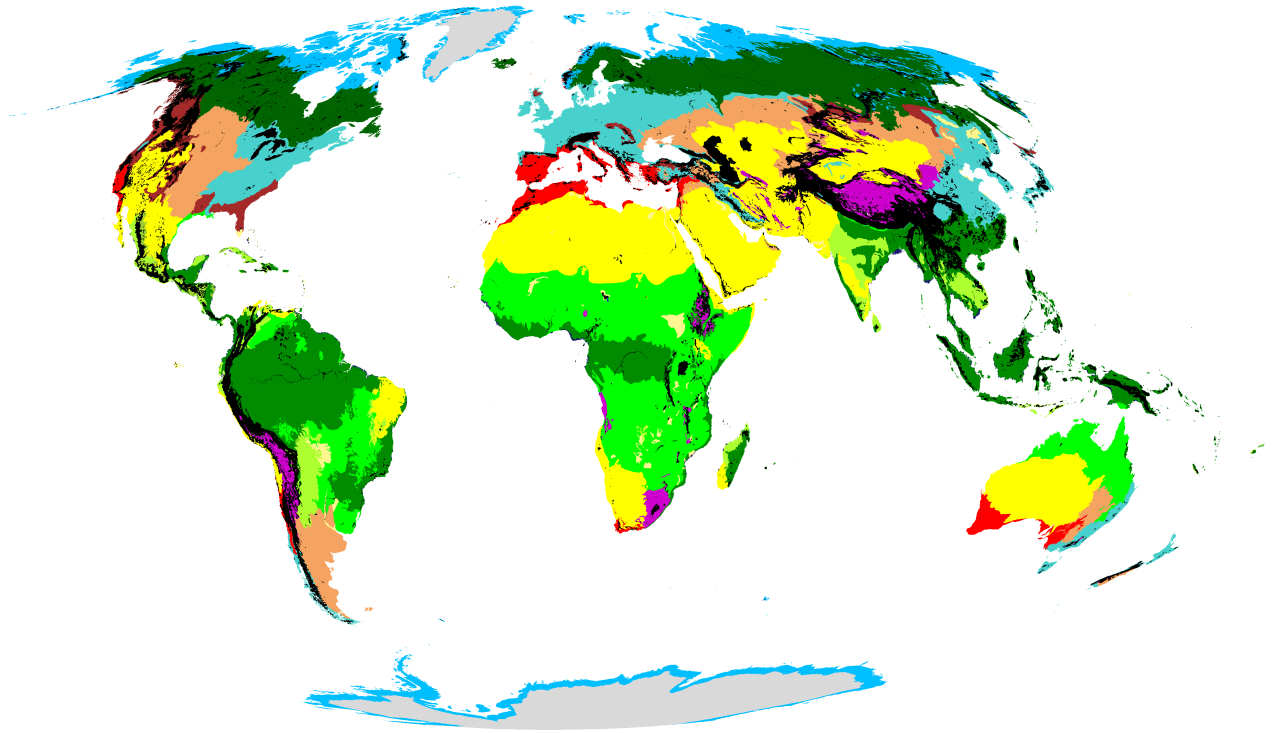
- | | |
|---------------------------|---------------------------|
| ■ Trop. wet forest | ■ Cool temp. rain forest |
| ■ Trop. moist forest | ■ Cool temp. wet forest |
| ■ Trop. dry forest | ■ Cool temp. moist forest |
| ■ Trop. very dry forest | ■ Cool temp. steppe |
| ■ Trop. thorn steppe | ■ Cool temp. desert bush |
| ■ Trop. desert bush | ■ Cool temp. desert |
| ■ Trop. desert | ■ Boreal rain forest |
| ■ Subtrop. rain forest | ■ Boreal wet forest |
| ■ Subtrop. wet forest | ■ Boreal moist forest |
| ■ Subtrop. moist forest | ■ Boreal dry bush |
| ■ Subtrop. dry forest | ■ Boreal desert |
| ■ Subtrop. thorn steppe | ■ Polar rain tundra |
| ■ Subtrop. desert bush | ■ Polar wet tundra |
| ■ Subtrop. desert | ■ Polar moist tundra |
| ■ Warm temp. rain forest | ■ Polar dry tundra |
| ■ Warm temp. wet forest | ■ Polar desert |
| ■ Warm temp. moist forest | ■ Ice |
| ■ Warm temp. dry forest | ■ Mountain and lake mask |
| ■ Warm temp. thorn steppe | |
| ■ Warm temp. desert bush | |
| ■ Warm temp. desert | |

PEEL et al. 2007 (Köppen-Geiger)



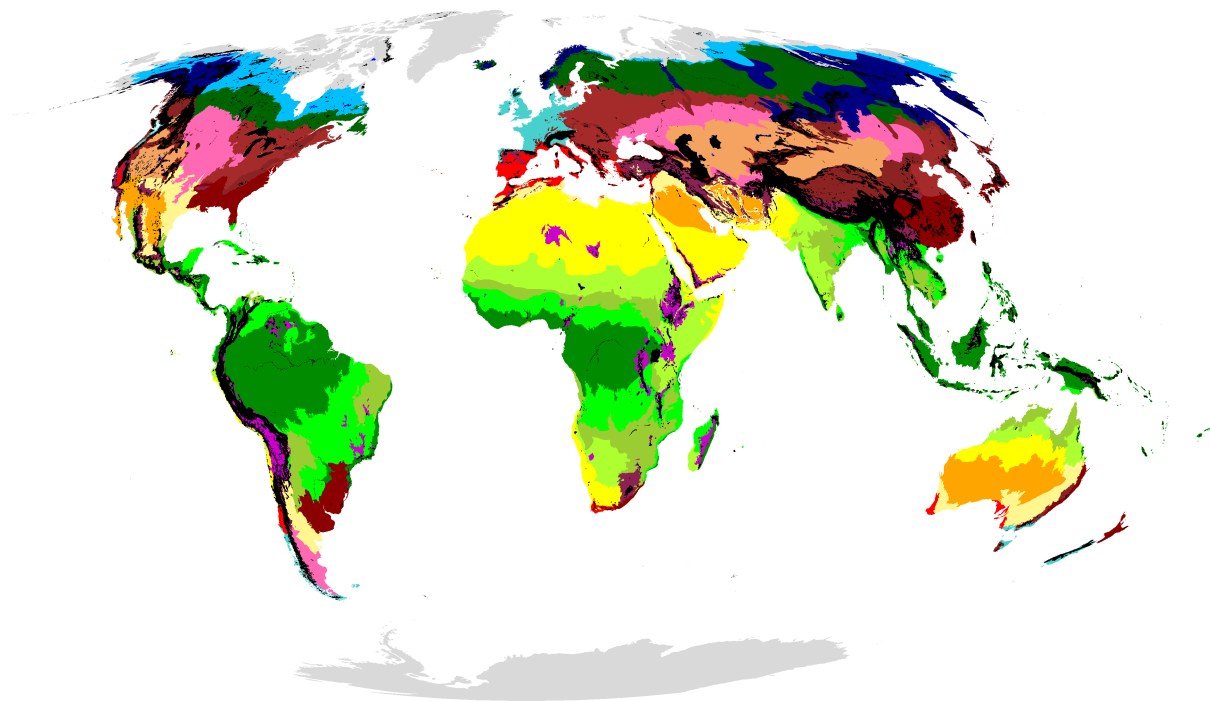
- | | | |
|-------|-------|--------|
| ■ Af | ■ Dsa | ■ Mask |
| ■ Am | ■ Dsb | |
| ■ Aw | ■ Dsc | |
| ■ BWh | ■ Dsd | |
| ■ BWk | ■ Dwa | |
| ■ BSh | ■ Dwb | |
| ■ BSk | ■ Dwc | |
| ■ Csa | ■ Dwd | |
| ■ Csb | ■ Dfa | |
| ■ Cwa | ■ Dfb | |
| ■ Cwb | ■ Dfc | |
| ■ Cwc | ■ Dfd | |
| ■ Cfa | ■ ET | |
| ■ Cfb | ■ ETH | |
| ■ Cfc | ■ EF | |

TNC 2009

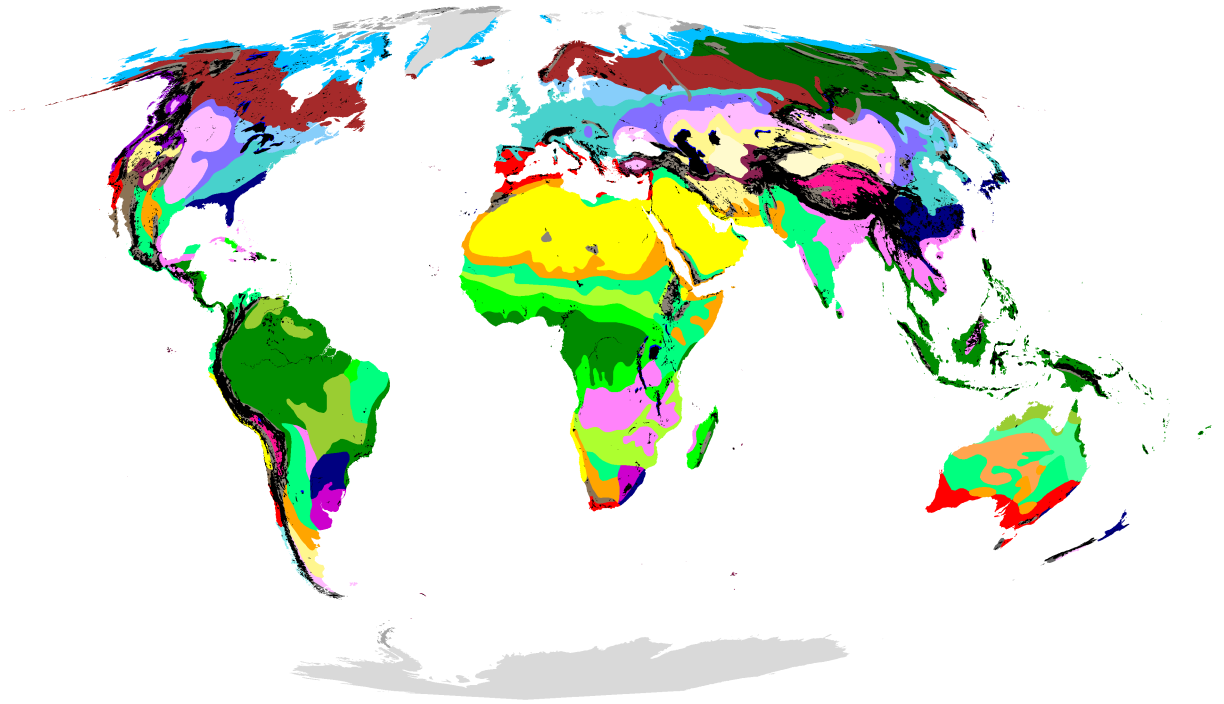


- | | | |
|--|-------------------------------|--------------------------|
| ■ Tropical-subtropical moist forest | ■ Montane grassland | ■ Mountain and lake mask |
| ■ Tropical-subtropical savanna | ■ Temperate mixed forest | |
| ■ Tropical-subtropical coniferous forest | ■ Temperate grassland | |
| ■ Tropical-subtropical dry forest | ■ Temperate coniferous forest | |
| ■ Desert & xeric shrubland | ■ Boreal forest | |
| ■ Flooded grassland | ■ Tundra | |
| ■ Mangrove | ■ Rock & ice | |
| ■ Mediterranean woodland | ■ Inland water | |

FAO 2010

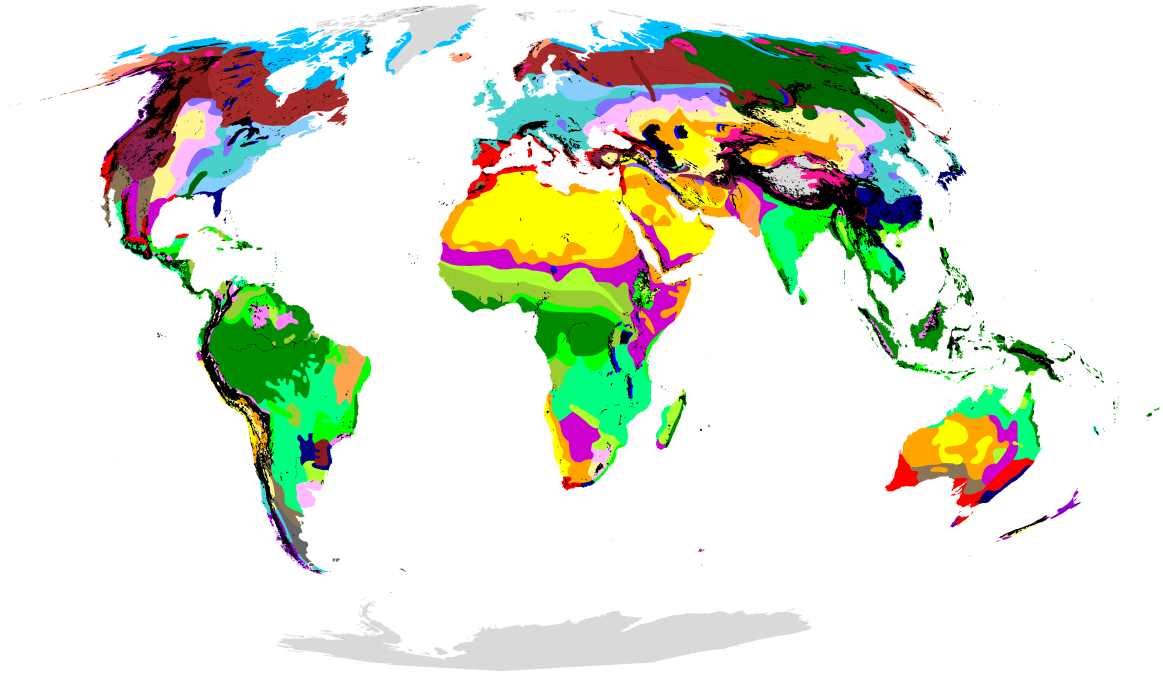


- | | |
|-------------------------------|--------------------------------|
| ■ Tropical rainforest | ■ Temperate oceanic forest |
| ■ Tropical moist forest | ■ Temperate desert |
| ■ Tropical dry forest | ■ Temperate steppe |
| ■ Tropical shrubland | ■ Temperate continental forest |
| ■ Tropical desert | ■ Temperate mountain system |
| ■ Tropical mountain system | ■ Boreal conifer forest |
| ■ Subtropical desert | ■ Boreal tundra woodland |
| ■ Subtropical steppe | ■ Boreal mountain system |
| ■ Subtropical dry forest | ■ Polar |
| ■ Subtropical humid forest | ■ Inland water |
| ■ Subtropical mountain system | ■ Mountain and lake mask |

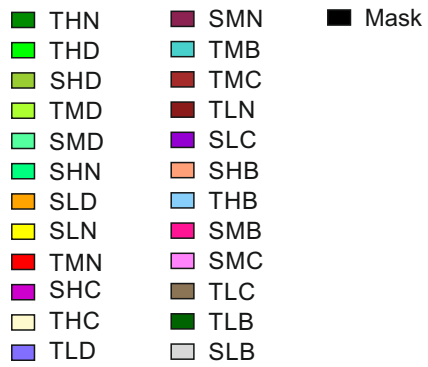
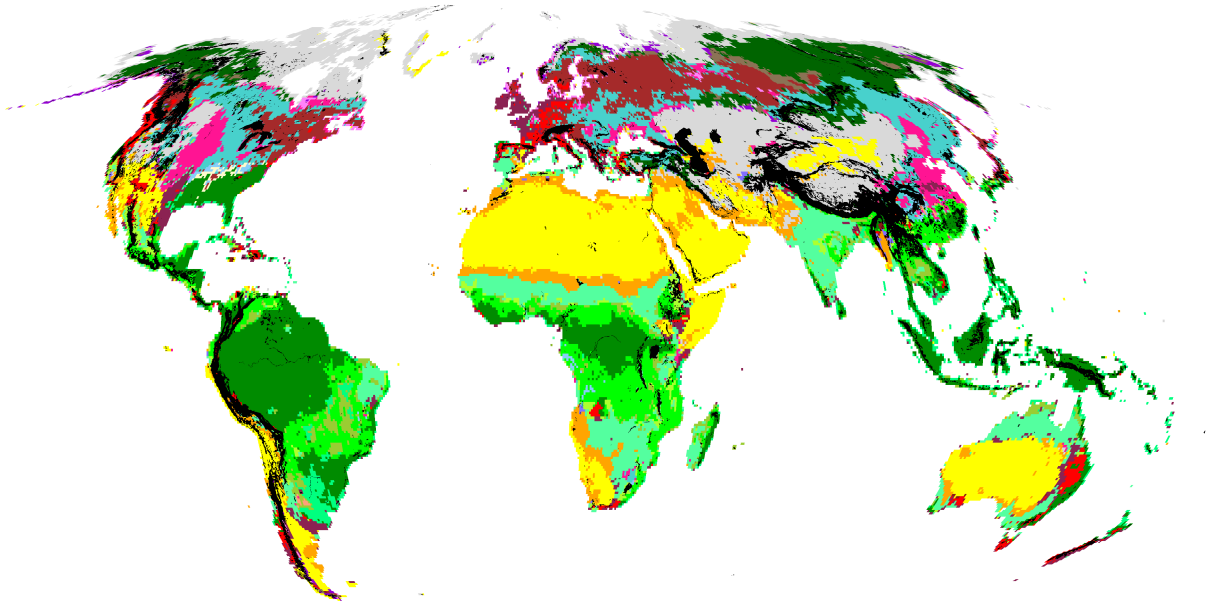


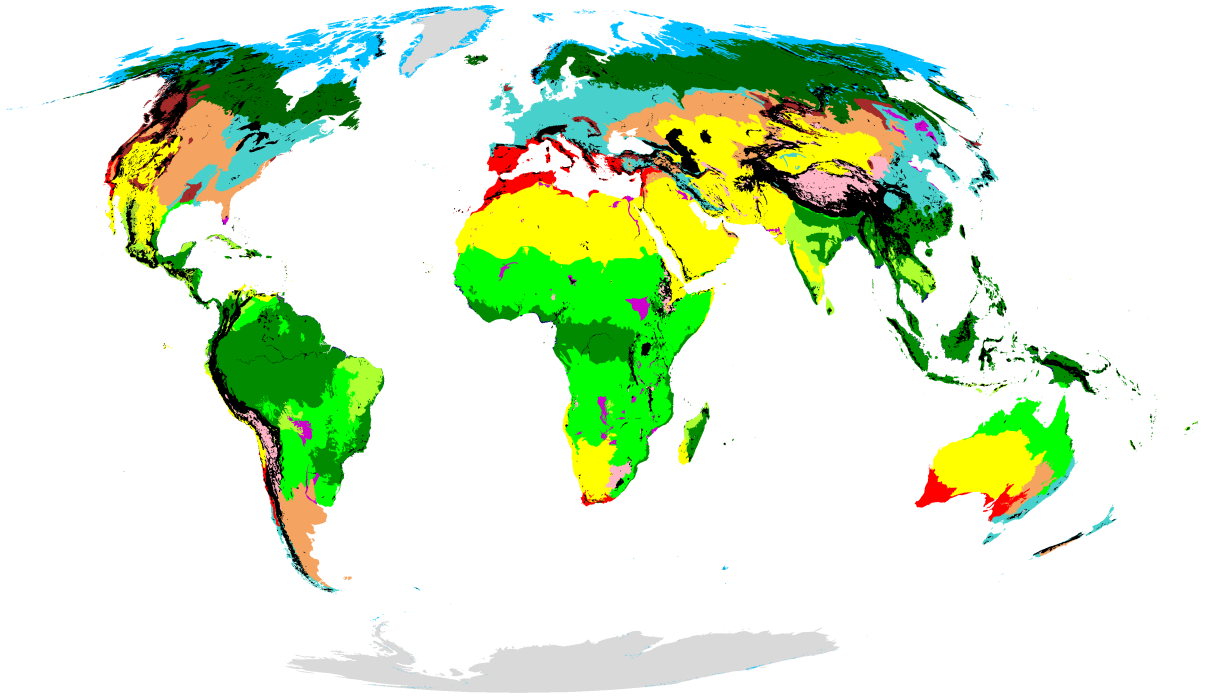
- | | |
|--|---|
| ■ Evergreen seasonal tropical rainforest | ■ Mixed long-grass steppe |
| ■ Rain green moist savanna | ■ Ever green tall-grass steppe |
| ■ Ever green moist savanna | ■ Summer green nemoral deciduous forest |
| ■ Rain green dry savanna | ■ Heiboral mixed forest |
| ■ Ever green dry savanna | ■ High mountain steppe |
| ■ Tropical/subtropical dry forest | ■ Ever green nemoral coniferous forest |
| ■ Semi ever green deciduous forest | ■ Ever green nemoral laurel forest |
| ■ Tropical/subtropical semi desert | ■ Ever green nemoral <i>Nothofagus</i> forest |
| ■ Subtropical grassland | ■ Ever green boreal coniferous forest |
| ■ Tropical/subtropical gras semi desert | ■ Summer green boreal deciduous forest |
| ■ Tropical/subtropical desert | ■ Summer green boreal coniferous forest |
| ■ Tropical/subtropical succulent semi desert | ■ Polar tundra |
| ■ Subtropical sclerophyllous forest | ■ Polar semi desert |
| ■ Ever green subtropical laurel forest | ■ Polar desert |
| ■ Nemoral dry forest | ■ Oceanic islands |
| ■ Nemoral desert | ■ Inland water |
| ■ Nemoral dwarf semi desert | ■ Mountains |
| | ■ Mountain and lake mask |

SCHULTZ 2016



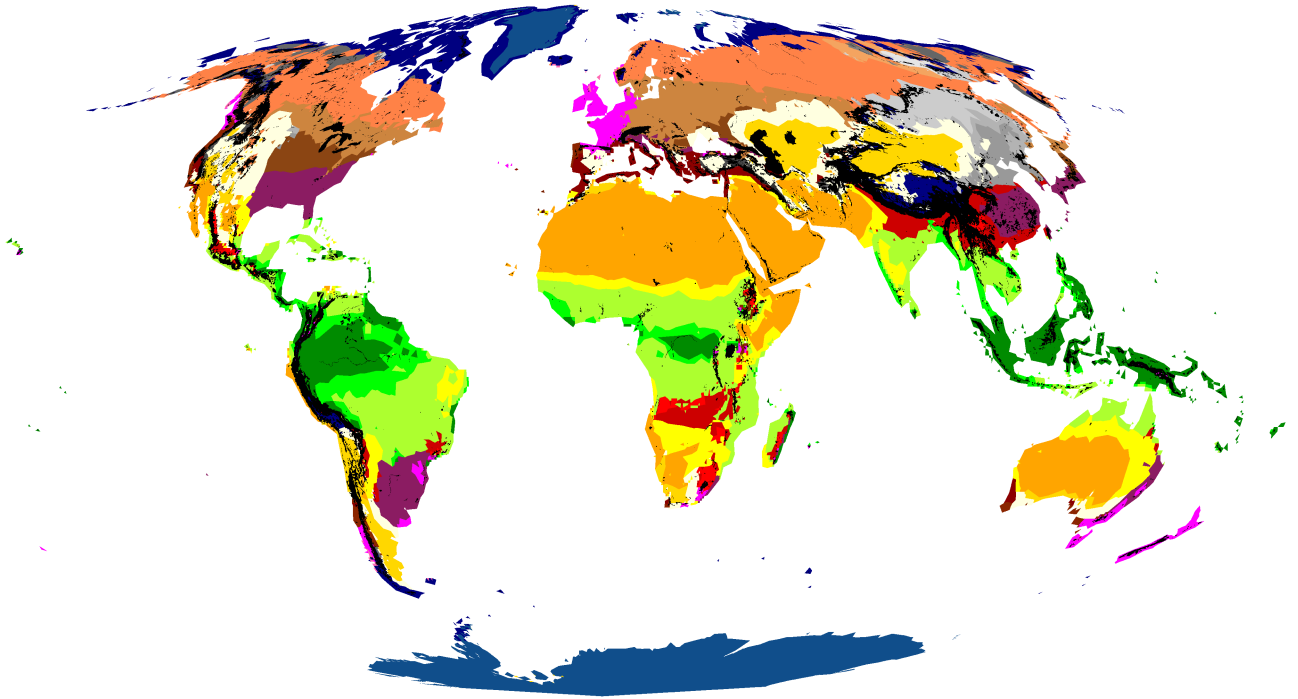
- | | | |
|------------------------------------|-----------------------|--------------------------|
| ■ Continuous moist tropics | ■ Moist mid latitudes | ■ Mountain and lake mask |
| ■ Moist savanna | ■ Temperate desert | |
| ■ Dry savanna | ■ Temperate steppe | |
| ■ Summer moist xeric shrubland | ■ Boreal zone | |
| ■ Tropical subtropical desert | ■ Tundra | |
| ■ Winter moist steppe | ■ Ice | |
| ■ Winter moist subtropics | ■ Oceanic islands | |
| ■ Tropical/subtropical semi desert | ■ Inland water | |





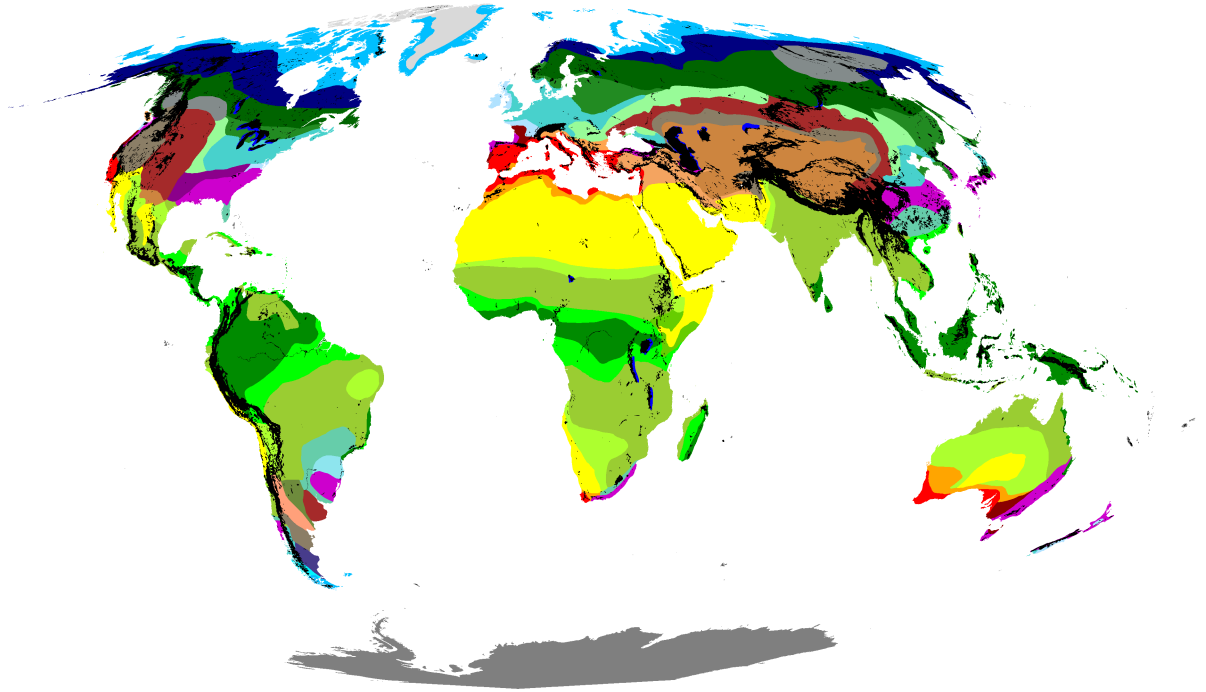
- | | |
|--|-------------------------------|
| ■ Tropical-subtropical moist forest | ■ Montane grassland |
| ■ Tropical-subtropical savanna | ■ Temperate mixed forest |
| ■ Tropical-subtropical coniferous forest | ■ Temperate grassland |
| ■ Tropical-subtropical dry forest | ■ Temperate coniferous forest |
| ■ Desert & xeric shrubland | ■ Boreal forest |
| ■ Flooded grassland | ■ Tundra |
| ■ Mangrove | ■ Rock & ice |
| ■ Mediterranean woodland | ■ Mountain and lake mask |

BECK et al. 2018 (Köppen-Geiger)



- | | |
|-------|--------|
| ■ Af | ■ Dsa |
| ■ Am | ■ Dsb |
| ■ Aw | ■ Dsc |
| ■ BWh | ■ Dsd |
| ■ BWk | ■ Dwa |
| ■ BSh | ■ Dwb |
| ■ BSk | ■ Dwc |
| ■ Csa | ■ Dwd |
| ■ Csb | ■ Dfa |
| ■ Cwa | ■ Dfb |
| ■ Cwb | ■ Dfc |
| ■ Cfa | ■ Dfd |
| ■ Cfb | ■ ET |
| ■ Cfc | ■ EF |
| | ■ Mask |

RAFIQPOOR and BRECKLE 2019



- | | |
|---|--|
| ■ Tropical rainforest | ■ Winter cold steppe |
| ■ ET Tropical rainforest - Tropical/subtropical seasonal rainforest | ■ ET Laurel forest - Winter cold steppe |
| ■ Tropical/subtropical seasonal rainforest | ■ ET Nemoral - Winter cold steppe |
| ■ ET Desert & Semidesert - Tropical/subtropical seasonal rainforest | ■ ET Laurel forest - Nemoral |
| ■ ET Tropical rainforest - Desert & Semidesert | ■ Nemoral |
| ■ ET Laurel forest - Tropical seasonal rainforest | ■ ET Desert & Semidesert - Winter cold semidesert |
| ■ Desert & Semidesert | ■ ET Winter cold steppe - Tropical/subtropical seasonal rainforest |
| ■ ET Laurel forest - Tropical rainforest | ■ ET Nemoral - Boreal |
| ■ ET Mediterranean - Desert & Semidesert | ■ Boreal |
| ■ Mediterranean | ■ ET Winter cold steppe - Boreal |
| ■ ET Laurel forest - Mediterranean | ■ ET Winter cold steppe - Polar |
| ■ ET Mediterranean - Nemoral | ■ ET Nemoral - Polar |
| ■ ET Laurel forest - Desert & Semidesert | ■ ET Boreal - Polar |
| ■ Laurel forest | ■ Polar |
| ■ ET Mediterranean - Winter cold steppe | ■ Ice |
| ■ Winter cold desert | ■ Inland water |
| ■ Winter cold semidesert | ■ Undefined |
| | ■ Mountain and lake mask |