

Green Roofs. A Case Study

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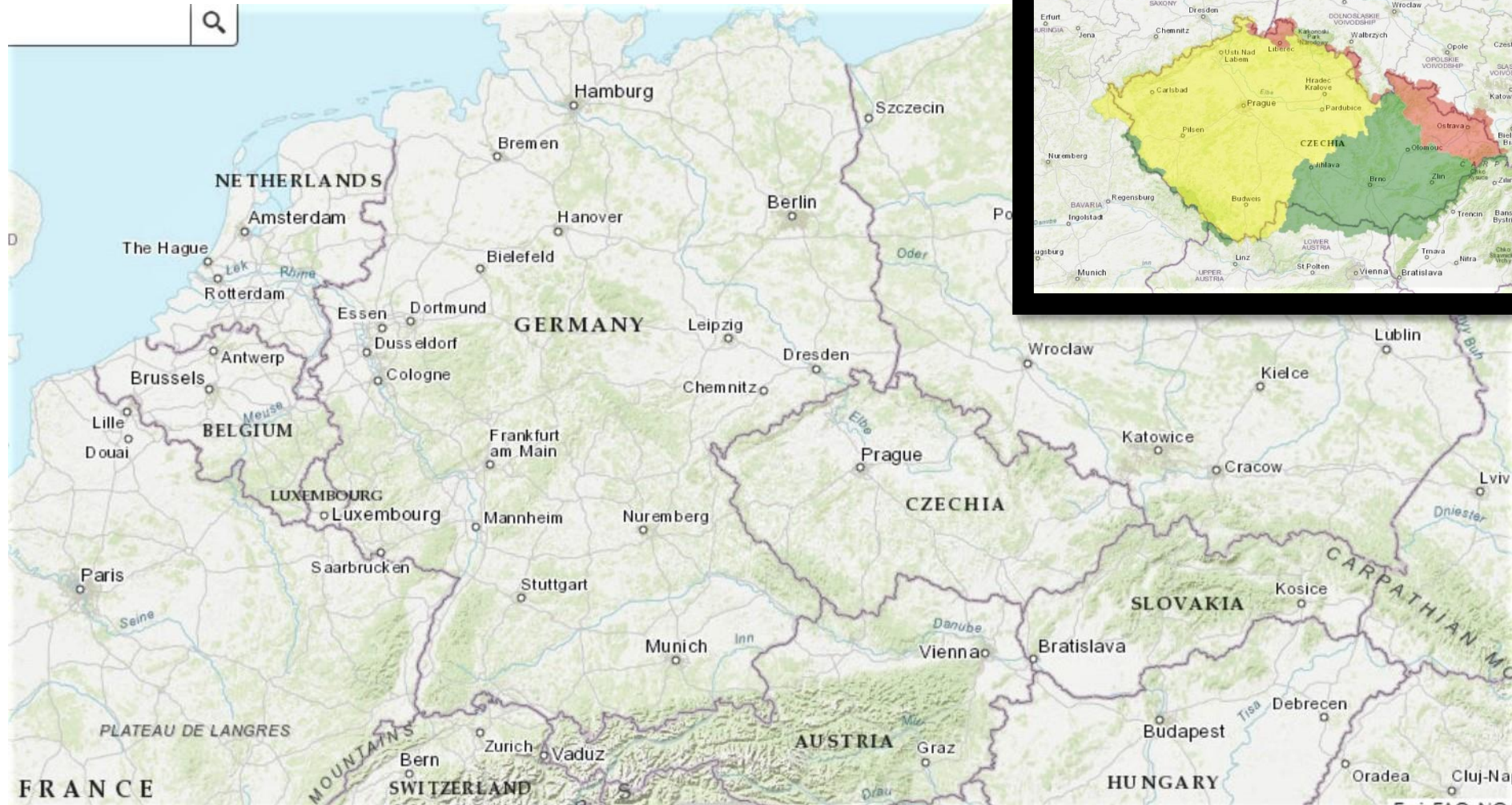
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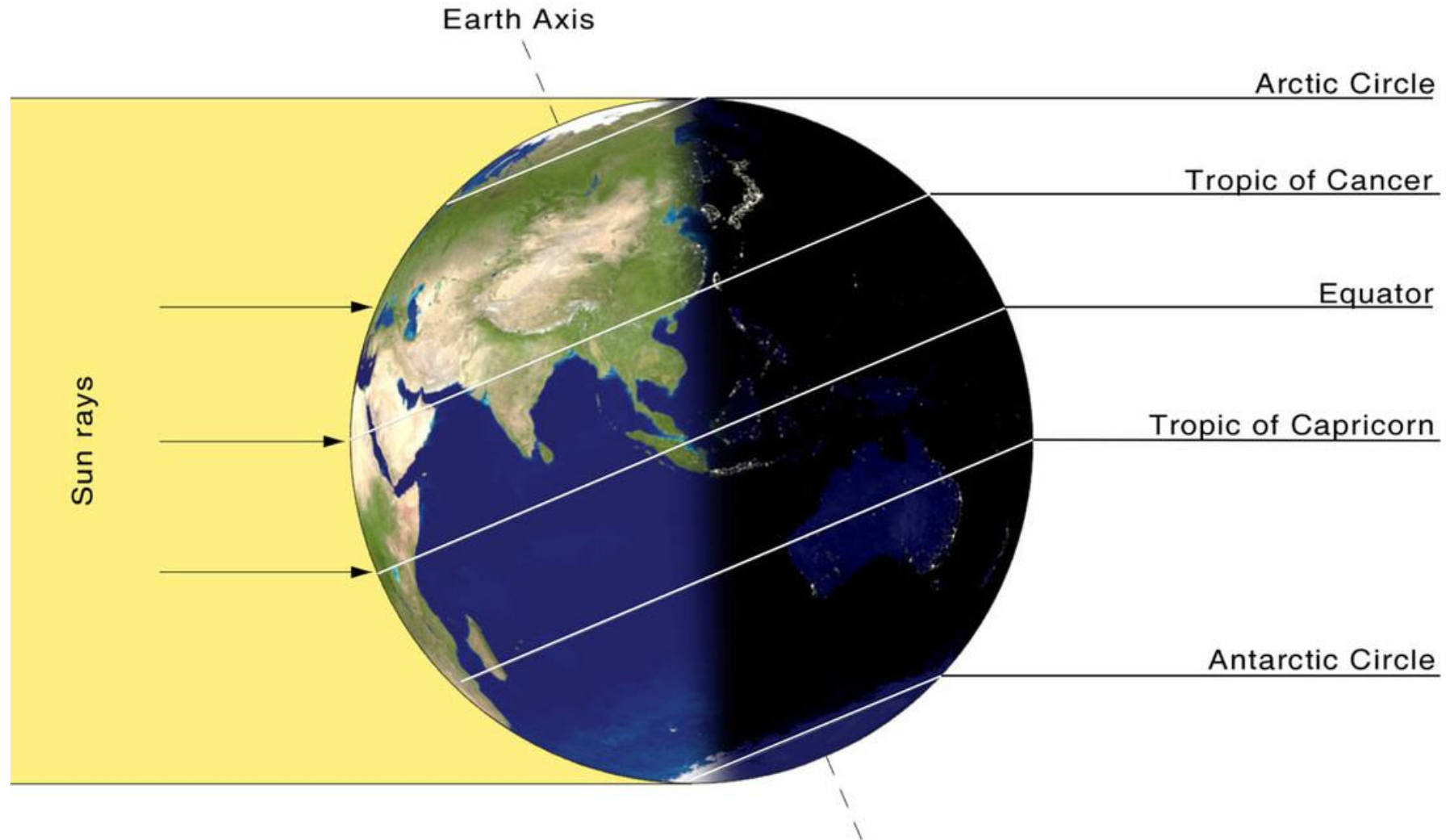


Water in the Czech Republic





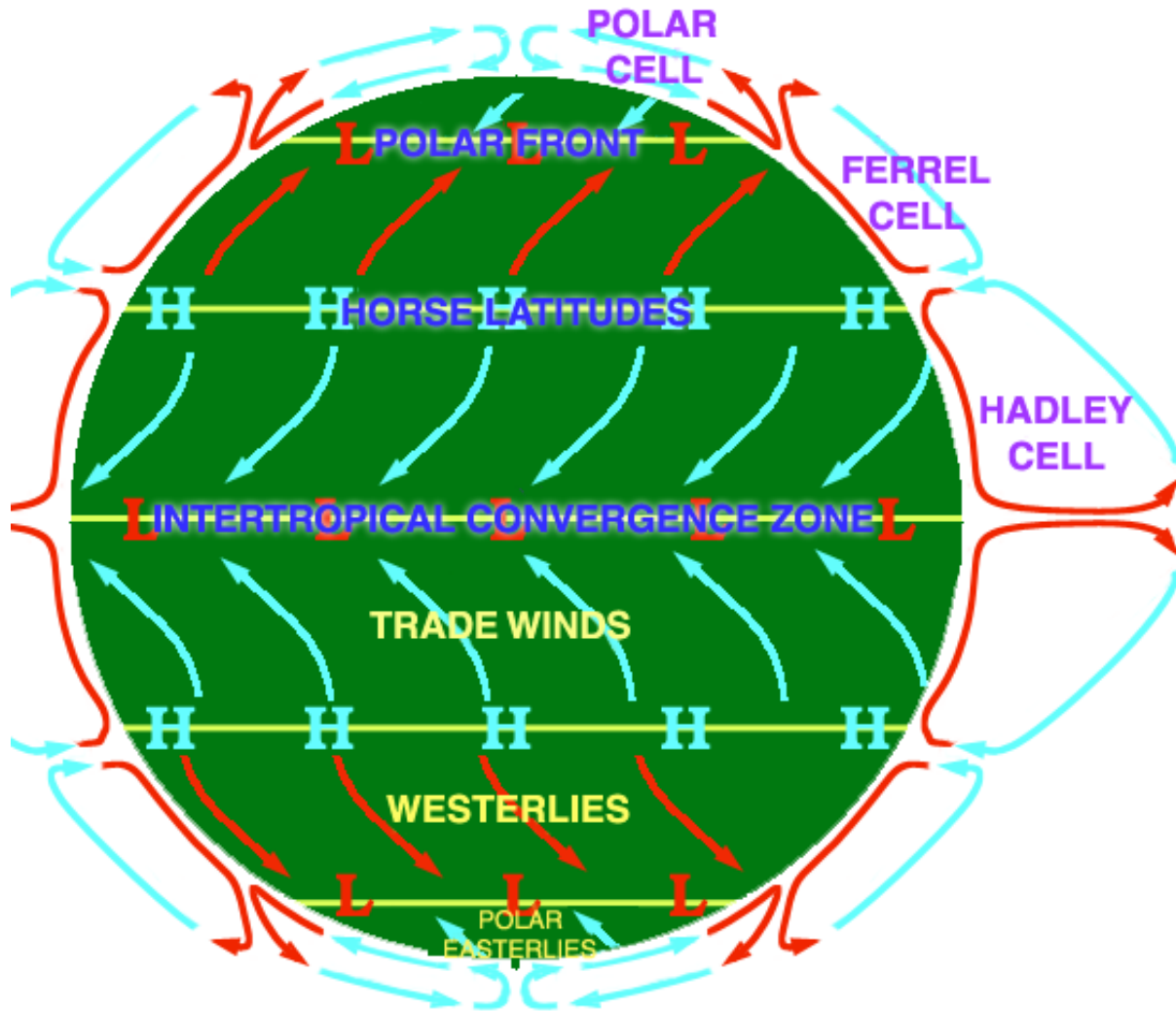
Global View



Global View

- Total **solar radiation**, measured by satellite, is about **1.4 kW/m²**
- About 75% reaches the earth's surface, as even with a cloudless sky it is partially reflected and absorbed by the atmosphere. Thus the solar energy arriving **at the surface** with the sun directly overhead can vary from **0.5 kW/m²** with clouds to **1.0 kW/m²** with a clear sky.

Global View



Polar Front

High Air Pressure

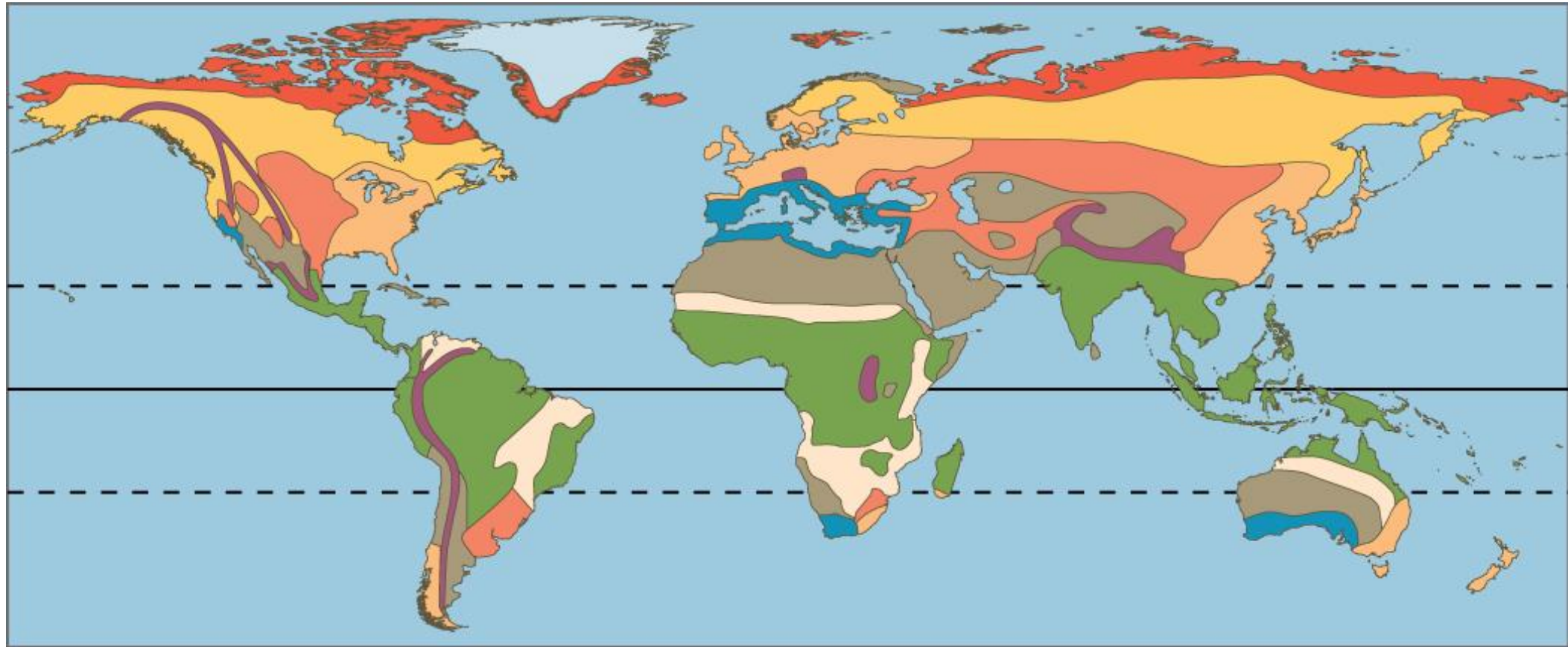
Intertropical Convergence Zone
Low Air Pressure

Hydrology

- The major source of this energy for PE is from the Sun. The amount of energy received from the Sun accounts for 80% of the variation in **potential evapotranspiration**.
- Wind is the second most important factor influencing potential evapotranspiration. Wind enables water molecules to be removed from the ground surface.
- The rate of evapotranspiration is associated to the gradient of vapor pressure between the ground surface and the layer of atmosphere receiving the evaporated water.



Global View



Tropical forest

Savanna

Desert

Chaparral

Temperate forest

Boreal forest

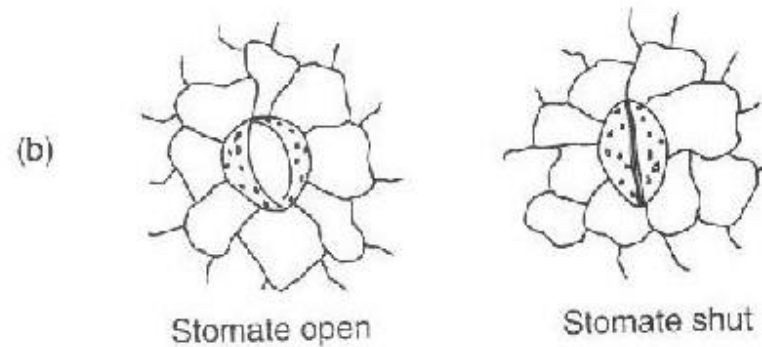
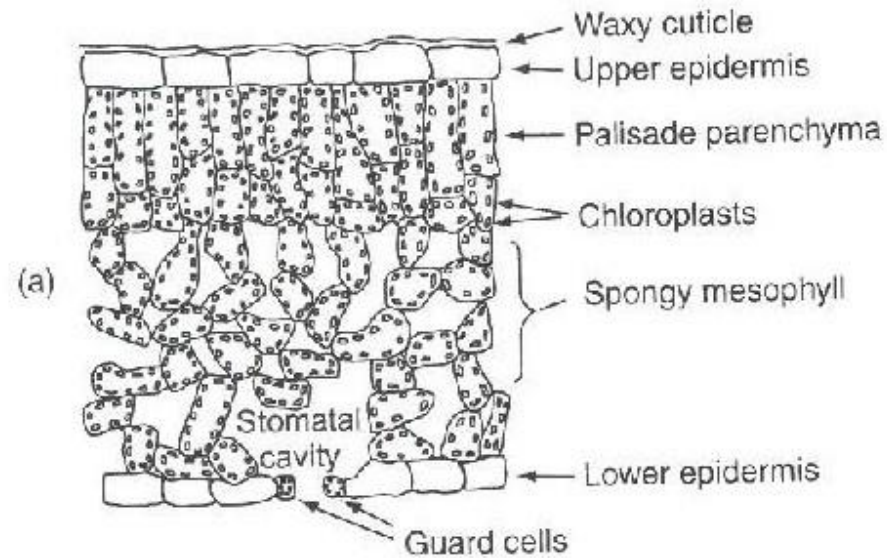
Tundra

Mountains

Polar ice

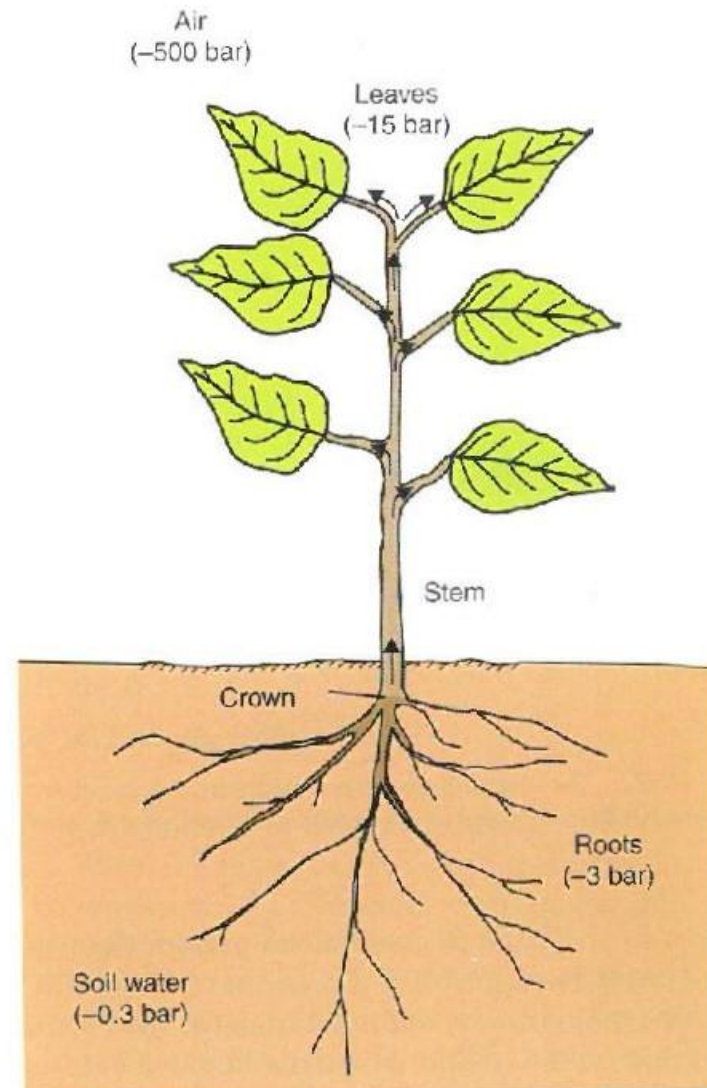
Temperate grassland

Plant Physiology in Hydrology



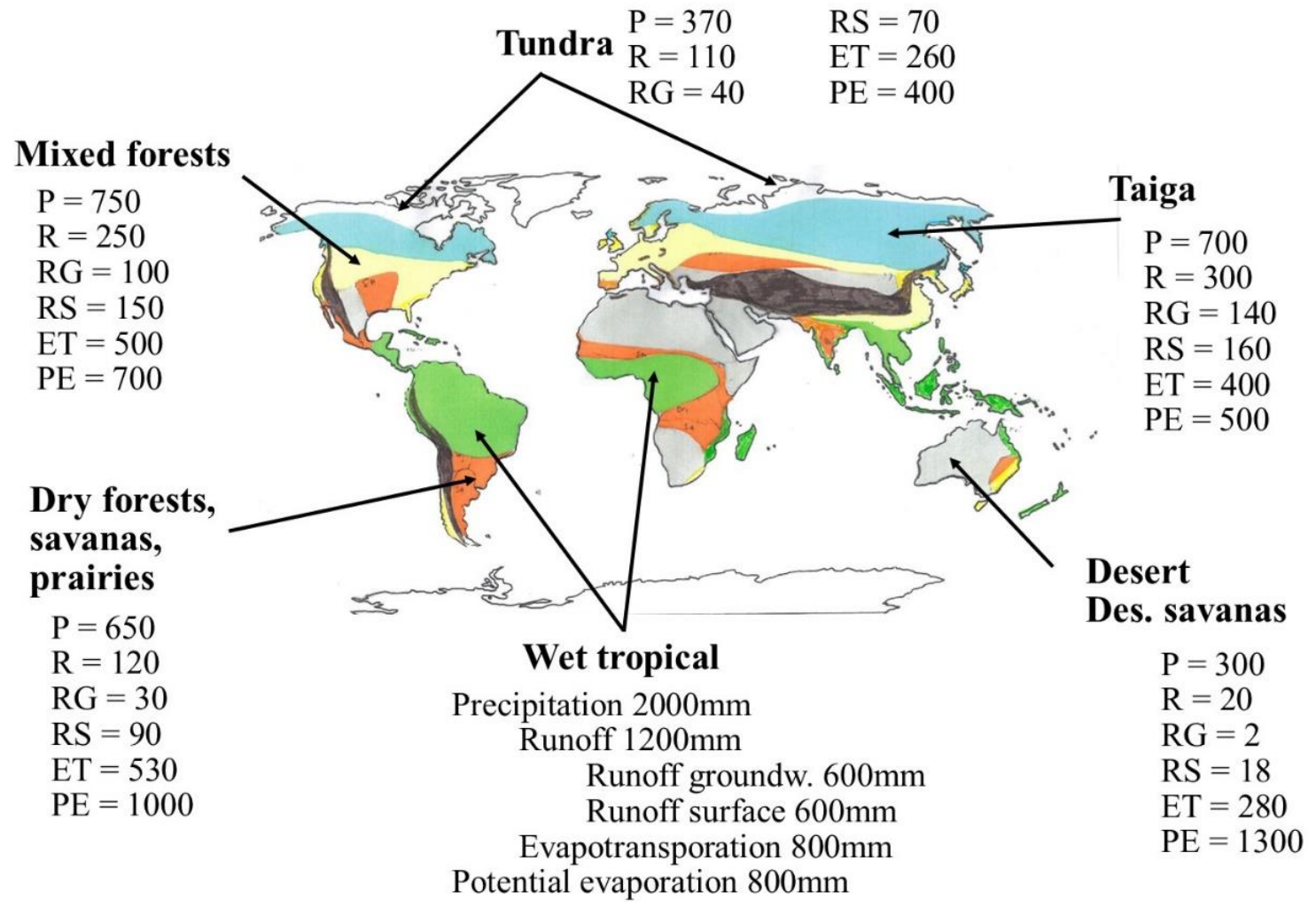


Plant Physiology in Hydrology



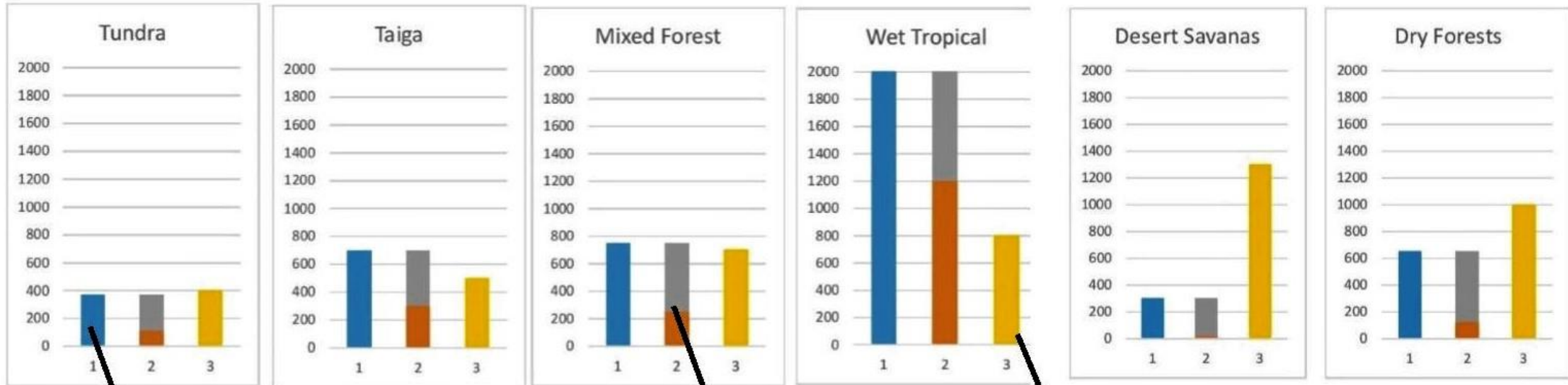


Hydrology





Hydrology



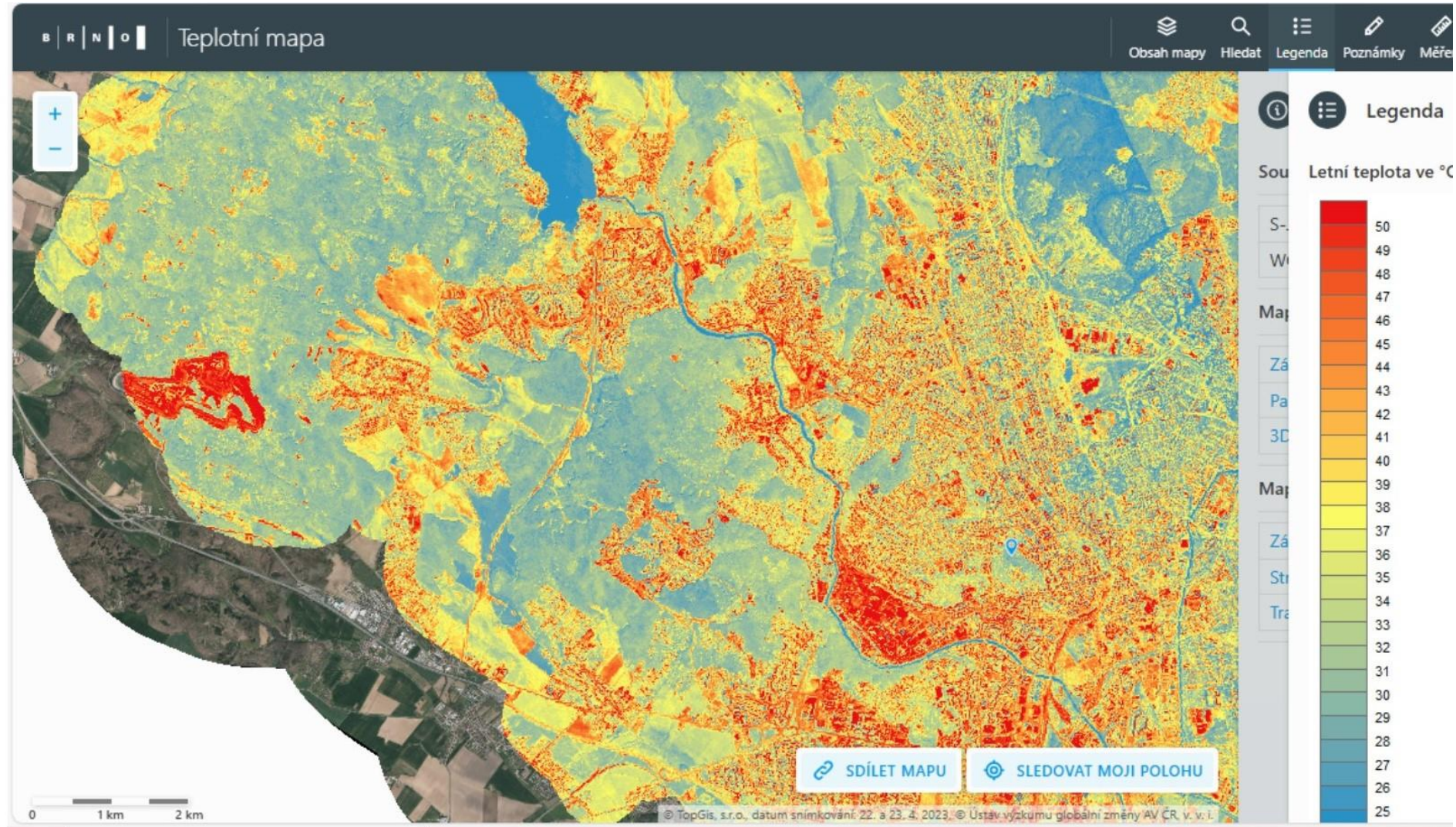
Precipitation mm

Evapotranspiration mm
(grey)
Runoff mm (red)

Potential evaporation mm

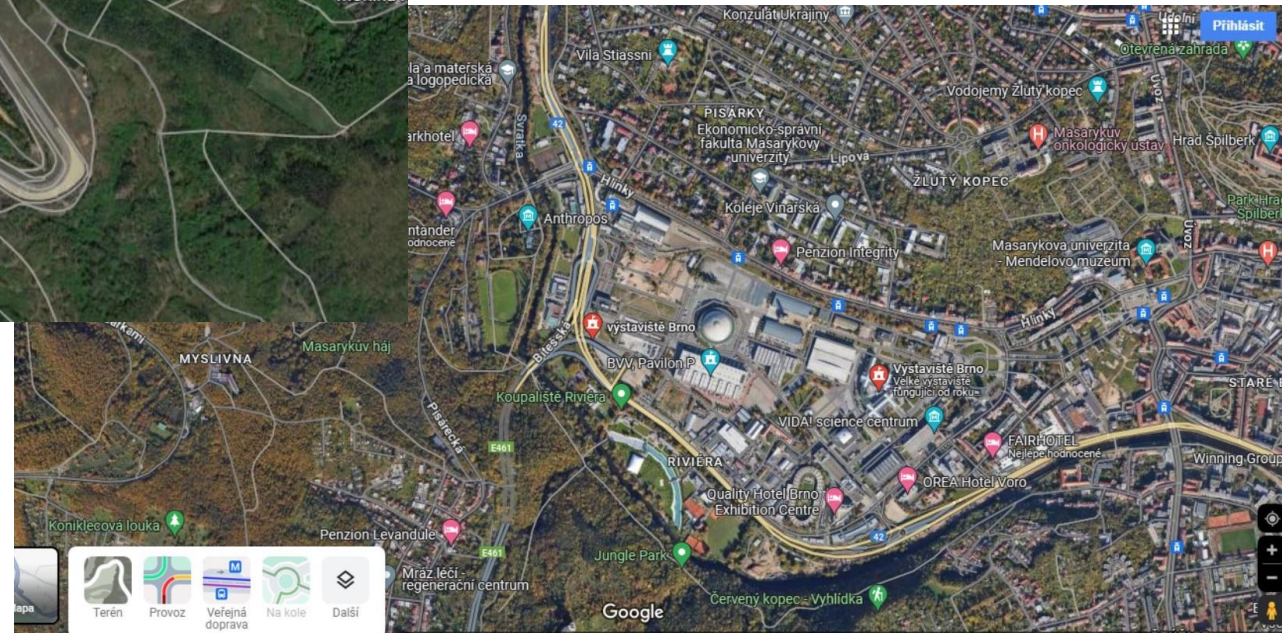
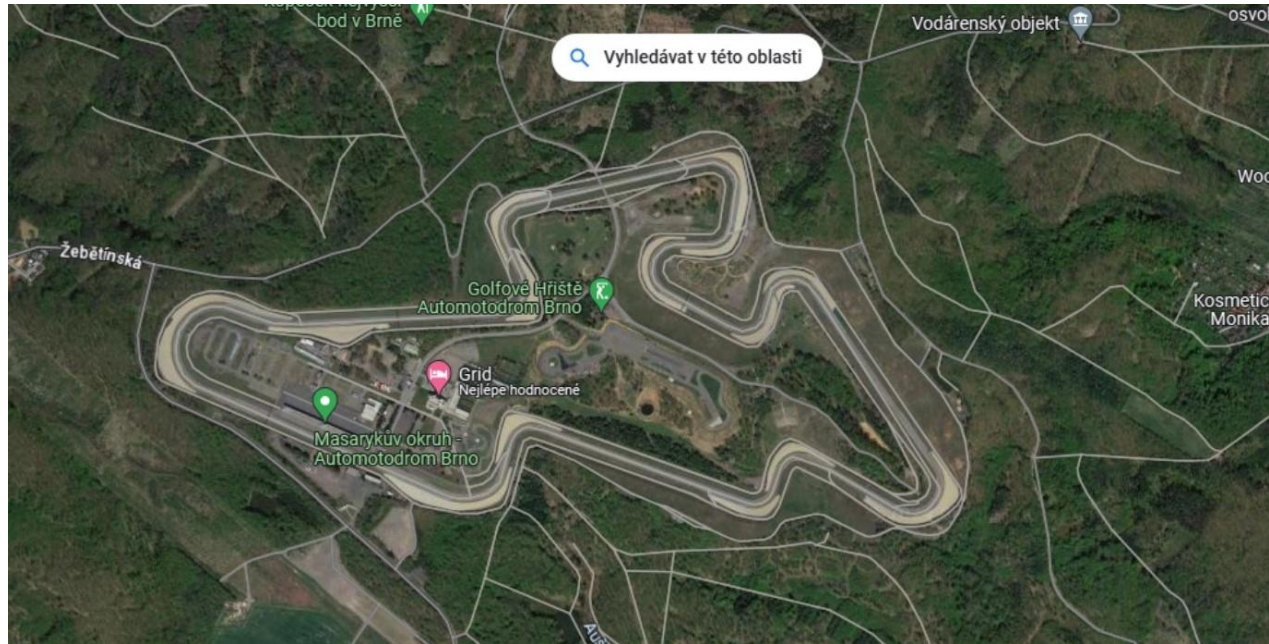


Urban climate





Urban climate





Urban climate

