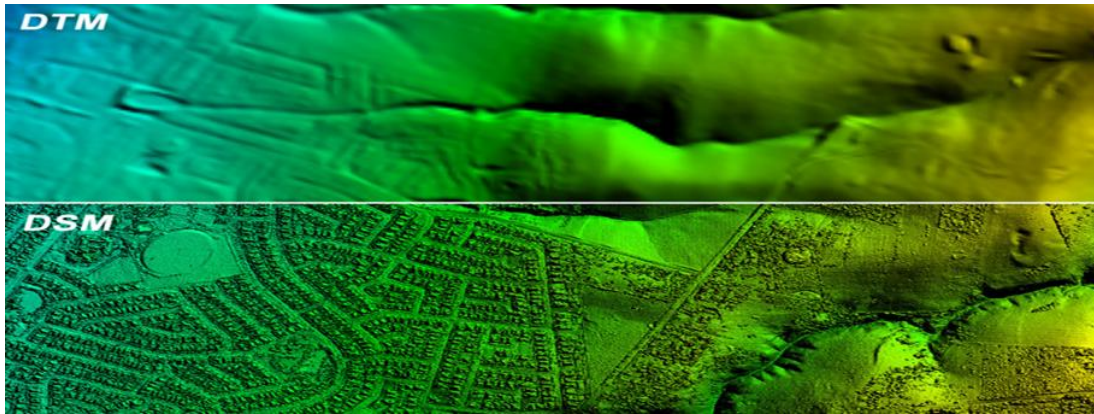


GIS – Exercise 4 – Working with raster data – Map algebra

Data (Slovak Geoportal)

Trenčín: <https://zbgis.skgeodesy.sk/mapka/sk/teren/toc?pos=48.893954,18.045433,13>

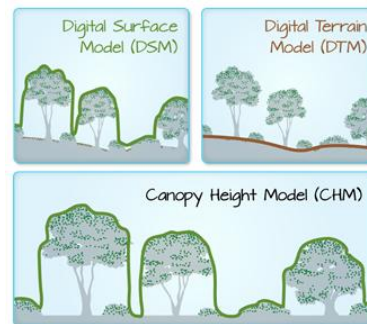
Export (DMR a DMP): <https://zbgis.skgeodesy.sk/mapka/sk/teren/export?pos=48.971044,20.692629,16>



Tasks:

1. Create Canopy height model

$$\begin{array}{rcl} \text{DSM} & \text{(Digital Surface Model)} \\ - \text{DTM} & \text{(Digital Terrain Model)} \\ \hline \text{CHM} & \text{(Canopy Height Model)} \end{array}$$



2. Based on the derived CHM data, determine the area covered by trees (in m²).
3. Evaluate the erosion risk of the area based on slope steepness.
4. Identify agricultural areas located on slopes with a gradient of 7–12° (severe erosion) and areas with a gradient above 12° (extreme erosion).