



June 10th 2026

The Global Ensemble Digital Terrain Model (GEDTM30) is a global 1-arc-second (~30m) Digital Terrain Model (DTM) built using a machine-learning-based data fusion approach. Copernicus DEM, ALOS World3D, and object height models were combined to generate a globally consistent DEM. A global-to-local random forest model was then trained on ICESat-2 and GEDI data, leveraging almost 30 billion of the highest-quality elevation points. The global model was initially fitted using ICESat-2 and GEDI, followed by locally optimized models per tile, ensuring both global consistency and local accuracy.

OpenTopography is providing access to the following version 1.2 dataset:

https://s3.opengeohub.org/global/dtm/v1.2/gedtm_rf_m_30m_s_20060101_20151231_g_o_epsg.4326.3855_v1.2.tif

Dataset parameters:

- Type: Raster Digital Terrain Model
- Raster Type: Float32
- Units: meters
- Horizontal Coordinate System: WGS84 [EPSG: 4326]
- Vertical Coordinate System: WGS84 Ellipsoid/EGM2008 Geoid [EPSG: 3855]

Disclaimer: This data product was generated using machine learning methods. Users are advised to exercise caution and independently verify results before using this product for critical applications, engineering design, or decision-making purposes.

For more details on this project that produced this dataset, see the following resources:

- [GEDTM30 Zenodo Repository](#)
- [GEDTM30 Codeberg Repository](#)
- [GEDTM30 paper](#)