



July 2024

In July 2024, OpenTopography updated its Copernicus dataset to use the GLO-30 and GLO-90 DGED 2023_1 version directly from [ESA](#). This will replace the previous version of Copernicus data that was hosted by OpenTopography, which used the [public AWS S3 bucket established by Sinergise](#).

This updated version of the data from ESA has several advantages:

- Infilling with high resolution DEM over Norway and Spanish Pyrenees
- Release of the previously restricted countries: Armenia, Azerbaijan and Moldova
- Improvement of infilling algorithm
- Addition of 5 geocells containing missing small islands
- Editing of source raw data
- Correction of minor data/auxiliary files inconsistencies
- Correction of implausible values

The original gridded data from ESA is in geographic coordinates, and has variable longitude grid spacing based on latitude. Tiles within 50 degrees South and 50 degrees North have pixel dimensions of 1 Arc-second (GLO-30) or 3 Arc-seconds (GLO-90) in the latitude and longitude directions. However, tiles north of 50N or south of 50S have increasing grid spacing in the longitude direction. For more details see the Grid Spacing section of the [Copernicus DEM handbook](#).

In order to keep the pixel dimensions uniform, OpenTopography resamples data north of 50N and south of 50S in order to provide a consistent 1 Arc-second or 3 Arc-second product for data accessed through the web-interface or API. Users who need data north of 50N or south of 50S that is not resampled can download cloud optimized geotiff (COG) versions of the original tiles from our bulk download interface, or download the original data directly from ESA.

In addition, it was discovered that the previous version of the Copernicus DSMs hosted by OpenTopography had a half-pixel shift in longitude. This shift has been corrected in the latest version. Output from OpenTopography's portal or API jobs between 50 degrees South and 50 degrees North will align with any original Copernicus tiles in this region. However, OpenTopography jobs in regions north of 50N or south of 50S are being resampled, and as a result will have a half-pixel east-west shift due to the resampling required to output grids with equal pixel dimensions.