

Iceland

Iceland launches its first open Digital Elevation Model

High resolution, high accuracy height data is now able free of charge thanks to a collaboration involving the National Land Survey.

Working with the Icelandic Meteorological Office and the Polar Geospatial Center, University of Minnesota, it has used new techniques to integrate high resolution and open Digital Elevation Models (DEMs) from the ArcticDEM, into new National Data, as well as combining it with existing lidar data, mainly from glacial areas. The methods developed are highly automatised and use adjustments of the individual DEMs, as well as robust mosaicking of the ArcticDEM, to take advantage of the multi-temporal data available. As a result, Iceland has now launched its first free of charge, high resolution (2x2m), high accuracy (>1 m accuracy in elevation) DEM.

The resulting country-wide DEM mosaic has numerous applications, from geology to hydrology and land management. The coloured image below shows an application involving comparisons between DEMs, resulting in maps of elevation differences. The result shows the disappearance of the Ok glacier in 2014, by comparing the ArcticDEM with a DEM based on aerial photographs from 1978. The glacier was defined as 'extinct' in 2014.

Find out more at atlas.lmi.is/dem.

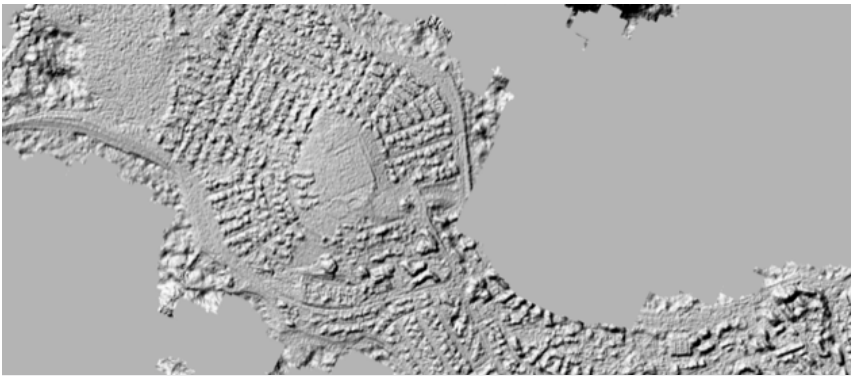


Figure 1 Original ArcticDEM strip on the Reykjavik area



Figure 2 Mosaic, using a median value of all possible DEMs at each cell location

