

Geomorphological analysis on Japan using digital elevation model data

Tomokazu Kurihara[1]

[1] The University of The Air

This study aims to depict characteristics of the topography of Japan islands by geomorphological analysis of the 50m-mesh Digital Elevation Model (DEM) provided by Geographical Survey Institute of Japan.

Calculated factors are slope and laplacian. The areas with the same slope or laplacian are plotted as a function of elevation for the topography of various parts of the Japan islands. Investigated are relationship between 1) the elevation and the area, 2) the normalized

elevation and the area, 3) the slope and the area, 4) the normalized slope and the area, 5) the laplacian and the area, 6) the elevation and

the average of the slope and 7) the elevation and the average of the laplacian.