

**DEM-based fluvial terrace extraction and evaluation of their tectonic deformation**

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Semi-automatic approach of land surface recognition is important for objective and efficient evaluation of tectonic deformation and landscape development.

In this study, we tried to extract fluvial terrace surfaces and their deformation in Hidaka and Tokachi district, Hokkaido.

River longitudinal profiles are derived from 2m LiDAR-DEM. And then fitting model surfaces are calculated with approximate formula in whole drainage basin using The Fundamental Geospatial Data DEM 10m mesh.

Terrace surface was recognized by relative height from model surface. Difference between actual elevation and ideal original terrace surface model implies to be tectonic deformation. Results are visualised in 3D view.