

## New GIS Database of Geoscience for studying NE Honshu Arc

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GIS Database has been developed to integrate, visualize, and analyze geologic, geochemical, geochronologic data sets with many natural hazard maps including informations on construction and civil engineering in the NE Honshu arc.

This project carried out on a need for preparing a platform for compiling many complicated data of earth sciences and environmental engineering.

Recent geologic studies clarified the complex history of the NE Honshu arc, and the detail studies of this arc offer many clues for understanding for supra-subduction process including tectonic evolution of arc-trench system including back-arc opening, magmatism including mantle processes associated with modern convergent plate margins. Large integrated geological, geochemical and geochronological database of the NE Honshu Arc allow us for better understanding of the evolution of one of the typical arc-trench system.

This new GIS database of NE Honshu Arc combines the most detailed digital geologic map, sample-based geochemical, geochronologic, and petrological data, and data for seismic epicenters and volcanic hazard maps of many active volcanoes, and information for landslides and others.

The database system is integrated with ArcGIS and AutoCAD Map systems, and the each data described on EXCEL format. We are currently working on expanding our database and on adding additional tools for data visualization and analysis.

The part of our GIS Database was published as a book titled Geology of NE Honshu for construction engineers together with CD/DVD media.

