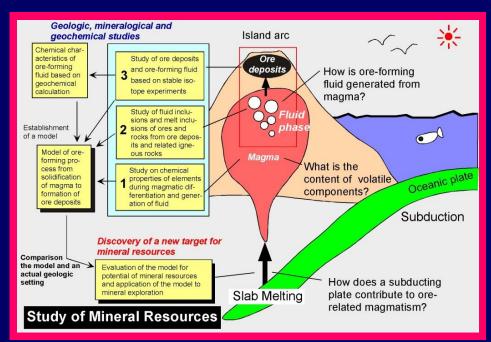
## Outline of study conducted by the laboratory for mineral resources and environments - Study of modes of occurrence and properties of rare metals in a natural environment -

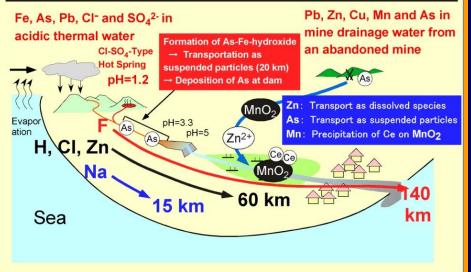
Our research group is carrying out a study to develop a method for exploration of mineral resources, including rare metals, on the basis of geological and geochemical approaches such as examinations of modes of occurrence and mobility of rare metals in a natural environment. Rare metals and heavy metals in thermal water from an acidic hot spring and mine drainage water from an abandoned mine are also being investigated to understand the transportation and precipitation mechanisms of the metals. The results are used to establish methods for reducing effects on the environment. (ishiyama@galena.mine.akita-u.ac.jp)





Schematic diagram the showing scheme of study on heavy metals including rare metals based on geologic, mineralogical and geochemical studies. Models for accumulation of the metals are applied to mineral exploration.

## Effects on river water of metals in strongly acidic thermal water and in mine drainage water





Cartoon showing effects on river water of metals in acidic thermal water of a hot spring and in mine drainage water. Results are used for evaluation of environments and formulation of water utilization plans.