

Preliminary report on the international Kuril expedition of earth sciences

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Extensive expedition and research for seismic and volcanic activity had been carried out in Kuril islands until early 1970' by USSR (Gorshkov, 1970). However, organized research on the islands have not been reported since then. We had tried to make expeditions on the islands after the preliminary research on the Tyatya volcano in southern Kuril islands. The first systematic, international (Japan, Russia and US) research project of earth science for Kuril islands started in 2005. The project is supported by JSPS and NSF funds. We appreciate these institutions and strong cooperation of the Russian Academy of Science, Far Eastern Branch. We carried out six expeditions in whole area of Kuril islands in 2007, as follows. 1) Volcanological, tsunami and archeological expedition on the central Kuril islands (30 days), 2) Volcanological research on Chikurachiki and Fuss volcanoes in Paramushir island (7 days), 3) Geochemical and geophysical research on Ebeko volcano in Paramushir island (7 days), 4) Workshop and geological excursion on Kunashir island (7 days). In addition to these expeditions, we also made short field survey on Itrup and Shikotan islands, where we focused on tsunami and volcanic eruptions.

In 2007, we focused on volcanological research. We evaluated frequency and mode of volcanic eruptions in each island using tephrochronological methods. We also collected many lava and pyroclastic samples for future petrological and chronological research. In addition, we found ultramafic xenoliths from the island in the back-arc side. This is the first finding in Kuril islands. As for research of tsunami, we tried to find paleo-tsunami deposits along the coast of each island. Geochemical team observed geothermal areas of Ebeko volcano, and collected water samples. However, we have not installed any geophysical facilities in the islands. We have to continue to negotiate with the Russian side to develop geophysical monitoring network. In Kunashir island, we organized the first workshop for earth science of Kuril islands to develop the communication between Japanese and Russian young scientists. In addition, we had the public lecture on geohazard to residents of the island.

Although 2008 is the last year for our funds, we will carry out several expeditions on the Kuril islands. After then, we will also develop volcanological, tsunami and geochemical research to publish several papers. In addition, we try to start geophysical monitoring in the islands.