

Study of volatile flux from magma of Aso volcano through shallow groundwater layer

*Masaaki Takahashi¹, Kohei Kazahaya¹, Tsutomu Sato¹, Hiroshi A Takahashi¹, Yuki Tosaki¹, Yasuo Tomishima¹, Noritoshi Morikawa¹, Akinobu Miyakoshi¹, Akihiko Inamura¹, Jun Daimaru¹, Hinako Shimizu¹, Hiroko Handa¹, Atsuko Nakama¹

1. The National Institute of Advanced Industrial Science and Technology

In order to investigate the volatile flux from magma of Aso Volcano through shallow groundwater system, we are conducting river surveys in and around the Aso caldera area. According to the last year's survey, it was deduced that fluxes of S and Cl from magma of Aso Volcano through shallow groundwater system are 66 ton S/day (160kg/day/km²) and 30 ton Cl/day (70kg/day/km²). Calculated S and Cl fluxes are similar scale with those released by volcanic gases from the Aso volcano, 215 ton S/day and 16 ton Cl/day.

In this year, a river survey was conducted around the Aso caldera area (Midori, Kikuchi, Chikugo, Ono and Gokase Rivers). It is resulted that flow rate of S and Cl of those rivers are 3-11kg/day/km² and 4-40kg/day/km².

This study was supported by the Secretariat of the Nuclear Regulation Authority, Japan.

Keywords: Aso, volatile flux from magma, river survey