Multi-Isoscape approach to environmental studies

*Ichiro Tayasu¹, Ki-Cheol Shin¹, Takanori Nakano¹

1. Research Institute for Humanity and Nature

Environmental traceability method that is comprised of multi-element and multi-isotope information, which indicate water cycling and material cycling, is applicable to the studies on the movement of living organisms and food web structure. The method is thus applicable to study various environmental issue because human beings live under the cycles. It is both important to perform basic researches on elemental cycling and to make spatio-temporal mapping.

"Environmental Isotope Study", which the Research Institute for Humanity and Nature (RIHN) is operating, proposes co-operative research of the environmental traceability methodology using multi-elemental analysis and multi-isotope analysis. It is possible to understand relationship between local ecosystems if we can show local environmental characteristics using multi-isoscapes. It is only recently considered that research collaboration with local people, local government, and local education is important to solve environmental issue. We propose the importance of research collaboration between universities or institutes.

Keywords: Stable isotopes, Environmental traceability