

## **INVESTIGATING IMPACTS ON THE ENVIRONMENT AND WATER RESOURCES IN GEOTHERMAL AREAS THROUGH ISOTOPIC AND GEOCHEMICAL METHODOLOGIES**

### **Achievements of RAS/8/075**

- Established network among geothermal workers in Asia and Latin America which accelerated technology transfer in geothermal development
- Integrated isotopic tools in geothermal hydrology
- Investigated 10 areas resulting to new calibration of geothermometer for low-medium enthalpy systems
- Upgraded isotope laboratories through expert assistance and intercomparison exercises
- Assured quality of chemical results through interlaboratory comparisons
- Initiated development of regional database for chemistry and isotope data of surface thermal manifestations
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### **Activities**

1. Application of chemical and isotopic techniques, including tracers such as  $^{131}\text{I}$  and  $^{125}\text{I}$
2. Interlaboratory comparison
3. Geochemical database management
4. Scientific personnel exchange
5. Group review and coordination meetings

### **Expected Impact**

- Further development of scientific expertise in the geothermal industry in the region
- Exchange and dissemination of information
- Applications of isotope techniques to practical hydrological and geochemical problems in geothermal development
- Acceleration of the use of indigenous geothermal resources for electrical and non-electrical applications
- Maintenance of balance between geothermal development and environmental protection