
IS33. SOURCES AND DISTRIBUTION OF ARSENIC IN GROUNDWATER RESOURCES IN TURKEY

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High concentration of Arsenic in groundwater has become the most important environmental issue facing people worldwide. The most common sources of arsenic in groundwater are both natural and anthropogenic. *Arsenic* has been caused serious *effects* on human health in different districts of the world both on a local as well as a regional scale. Considering these serious effects on human health, arsenic in groundwater resources used in drinking water supply field has been an active research topic for a long time throughout the world. Some studies on arsenic in groundwater of Turkey have been carried out over the last decades and a high concentration of this element has been identified in different parts of Turkey having complex geology of widespread volcanic succession with active tectonics and geothermal fluids.

This natural setting serves as a suitable environment for the presence of high levels of arsenic in groundwater resources. In this regard, high arsenic concentrations in groundwater have been detected in many provinces of Turkey including but not limited to western Turkey, northwestern and southeast of Turkey with values ranging from 10 to 9300 ppb in groundwater. These values exceed the national and international drinking water quality criteria of 10 ppb and are several orders of magnitude larger than these standard values. These high arsenic concentrations greatly raise health risk for people consuming these waters.

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