Factors Affecting the Quality of Groundwater Resources and Its Effects in Turkey

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Many civilizations have been located along the water basins throughout history. Civilizations have enabled the survival and growth by these water resources in world. For natural wealth, the need of water is increase. Therefore, investigation of the water potential, available of protection, efficient and planned use has begun to supply vital.

Groundwater has been used widespread for drinking and domestic use in Turkey where hydrogeological structure is very complex. Generally groundwater resources have been affected by natural and anthropogenic in Turkey. Majority of drinking water include natural contamination which may affect human health. High arsenic, manganese, iron and aluminum can be seen in wells which have been drilled in altered volcanic rocks and tectonic zones (Example: Biga Peninsula and north Aegean Region). In addition geothermal fluids have been effected cold groundwater in geothermal region such as Simav and Gediz Graben where high fluoride and boron concentration can be seen.

High arsenic concentration up to 2000 ppb was measured in western Anatolia where high boron concentration in cold (12 ppm) and hot groundwater (69 ppm) were measured. These values exceed drinking water limits. Therefore this water can affect human health.

Keywords: *Heavy metals, Arsenic, Boron, Fluoride, Groundwater*