

Tracing and Assessment of Heavy Metals in Gorganrud Sediments

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Abstract

Geochemical studies of sediments, water bodies like rivers, estuaries and the sea bed can be an effective step to find the sources and distribution model assessment environmental pollutants in a region. Sediments where the accumulation of heavy metals in aqueous environments, but under special conditions can act itself as a source of water pollution. Entrance of heavy metals in different ways, causing many risks such as cancer, poisoning and etc in organisms. To study heavy metals in the Gorganrud in 10 stations, a core and surface samples were taken. Fine-grain sediments were used to determine heavy metals (Al, Cr, Ni, Cu, Fe, Co, Mn) concentration, using the method of inductivity couple plasma. Comparison of metal concentration in surface sediments to the deep sediments of the study area was done by enriched factor. The average of total concentration were determined, respectively, Al > Cr > Co > Fe > Ni > Mn > Cu. The results showed that values are close to 1 which is the effect of natural factors and watershed drainage basin on heavy metal enrichment. Coefficients of low-enriched heavy metals are resulted mainly from erosion of natural resources (watershed) which human activity is negligible. However, higher values were observed in station 1 representing the effect of human factors in this region. Therefore, it should be noted that it still needs attention to consider environmental management.

Keywords: *Sediment, Heavy metals, Gorganrud*
