The results of chemical and isotopic analyses of waters of a Transboundary river Zeravshan, the Vakhsh River and its tributaries are presented. As an impact indicator of the mining enterprise wastewater in the basin of the Zeravshan river on the quality of water a differential method of changing the chemical composition of water before and after the tailings dams' wastewater is applied. The lack of excess levels of heavy metals (Zn, Cd, and Hg, As, Pb) above the maximum permissible concentration of the corresponding elements in the Zeravshan River is observed. Detected change (heavier) isotopic composition ($\delta^{2}H$, $\delta^{18}O$) of the Zeravshan River and its tributaries from upstream to the downstream of the river is associated with the evaporation process. Ensuring individuality of the Vakhsh River each tributary the sampling carried out in points to the confluence of the respective tributary with the main river or another tributary. To respect the individuality of each tributary of the Vakhsh River sampling carried out up to the confluence of the respective tributary to the main river or another tributary. The exchanges of groundwater and surface waters in Muksu river basin was observed. The groundwater reservoirs of the Muksu River Basin (a tributary of the Vakhsh River) in dry periods nourishes the river Muksu. It is established that the chemical composition of the Zeravshan and Vakhsh Rivers formed in the leaching process of rocks.