

## **Impacts of Illegal Gold Panning on Surface Water Quality in Umzingwane River of Umzingwane District, Zimbabwe**

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### **Abstract**

The study assessed the impacts of illegal gold panning on surface water quality in Umzingwane River. The study adopted a mixed methods research design. In this case, questionnaires and interviews were used to gather information on poor surface water quality problems and its impacts on aquatic vegetation. Three sampling points were noted and were named 1, 2 and 3 with site 1 located before the illegal gold mining zone and site 2 was adjacent to the mining zone and site 3 after the mining zone. Samples were taken for the dry season (September) and the wet season (December). Three grab samples were taken at each sampling point to make a composite sample. Based on the results obtained illegal gold mining along Umzingwane River cutting across Umzingwane district ward 4 has led to contaminated surface water quality as all the surface water quality physicochemical parameters such as PH, COD, dissolved solids, dissolved substances, turbidity, copper and iron at some point were above the WHO and SAZ standards especially at site 2 and 3. This raises concern as the river is a major source of water for a number of human activities and hence the need to maintain its quality at desirable level. There is need for responsible authorities to find alternatives sources of water or adopt new technology of water treatment of raw water and also reduce the levels of pollution in the river