## Spring-Water As An Alternative Resource After Earthquake For Villagers, Kota Belud Sabah

## ABSTRACT

The earthquake natural disaster at Kundasang Ranau, Sabah in Jun 2015 has strongly impacted the source of water supply in Kota Belud district. Kota Belud is located downstream from Mount Kinabalu, where the source of water for the district once came from before the natural disaster occurred. The earthquake forced the local communities to source for alternative water supply for survival i.e spring-water, also known as gravity water by local communities. The locals depend on the alternative resource to survive even though the water is untreated both physically and chemically. This study aims to determine the concentration of heavy metals (Pb, Cu, Cr, and Cd) and water quality (pH value, turbidity, temperature, biological oxygen demand, total dissolved solids and total suspended solids) in spring-water from two selected villages; Bukit Bendera and Tamalang, Kota Belud. The samples were collected from two different sources; from the spring-water catchment in the upper hill and from the end user's house water pipes for domestic usages. Sampling repetition was done three times. The results show that there were significant differences (P<0.05) found for pH value, turbidity, temperature, total dissolved solids, total suspended solids and Pb for heavy metals at different areas (hill & house) throughout the sampling repetitions. In addition, the turbidity, BOD, and Cd level were found to exceed the permissible level as drinking water. The spring-water at Bukit Bendera and Tamalang village, Kota Belud are safe to use for washing but is not suitable as human consumptions, unless filtered. In conclusion, monitoring of the spring-water quality as an alternative resource after the earthquake is very important as well as precautionary actions for future natural disasters in Sabah.