

Geochemical mapping using surface water and stream sediments of the mineralized Lom Basin, East Cameroon.

*MUMBFU ERNESTINE MIMBA^{1,2}, Takeshi Ohba¹, Festus Tongwa Aka², Salomon Cesar Fils Nguemhe²

1.Dept. of Chem, Sch. of Sc, Tokai Univ., 2.I.R.G.M.

The Lom Basin is heavily mineralized especially in gold owing to its regional geological setting. Consequently, most research in this region have reported either the rock type, age, and the formation history or the reconnaissance gold investigations. However, the geochemical database of the area is scanty and no regional geochemical mapping has been performed. Although this area has a long artisanal mining history and is a major target for industrialized mining, pollution studies have received limited attention. The present study seeks to i) conduct a systematic stream water and bottom sediment sampling in the area based on the International Geological Correlation Programme (IGCP, 1995) recommendations; ii) determine trace element levels in the sediments and natural water systems and iii) develop geochemical/risk maps of the study area. We target to sample 50 surface water and sediments of streams and major rivers draining the catchment. The geochemical background shall be determined by analysing surface water samples for cations by AAS and anions by Ion Chromatography (IC); and sediments for trace metals using ICP-MS. It is expected that the geochemical baselines and toxic levels of both sampling media shall be established for the construction of a geochemical/risk map of the area. This is important in environmental monitoring. Preliminary results shall be presented in this talk.

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