



Environmental risk associated to mining activity Colbu 1 and 2 tailings ponds, Baia Borsa, Romania

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INTRODUCTION

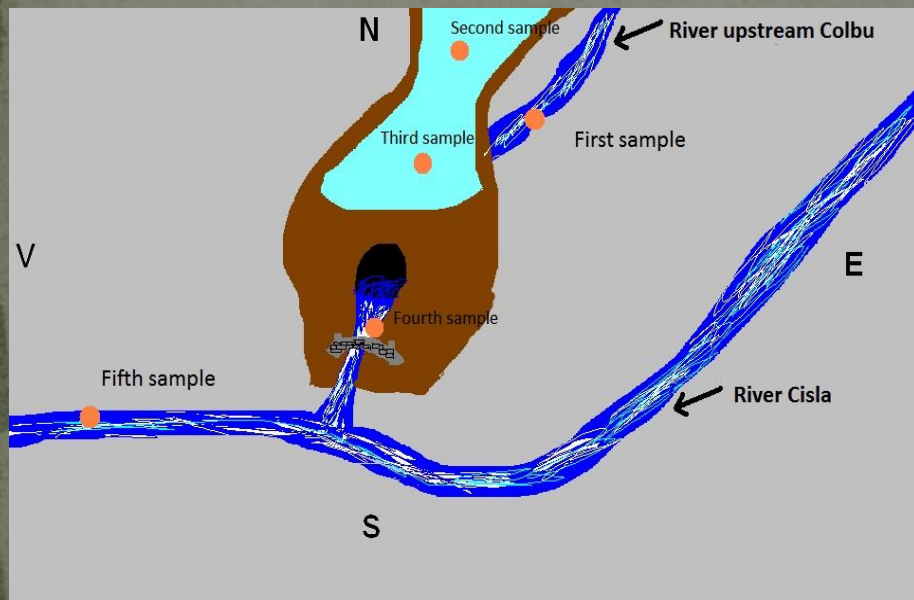


→ Colbu 1 and 2 tailings dam are valley ponds and are placed in the industrial area of town Borsa, Maramures, in the eastern part of the county.

Risk

→ Heavy metals from the surface waters, because Colbu 1 and 2 are principal ponds in the exploitation with polymetallic interest.

METHODOLGY



The method of analyze was flame atomic absorption spectrometry/ graphite furnace.



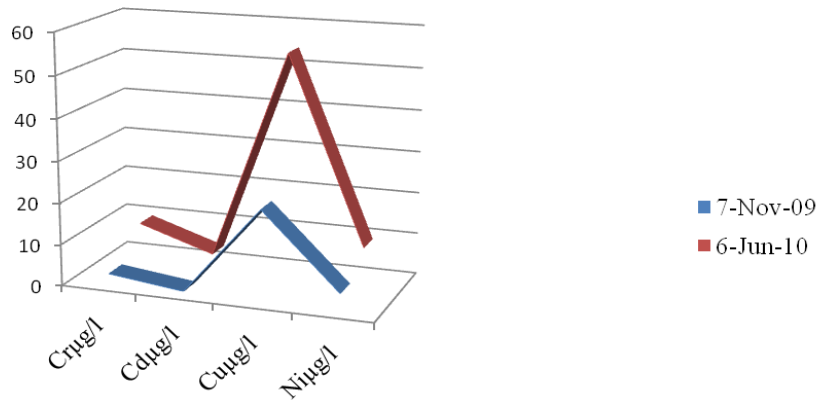
We realized a network of probation from 5 points with two dates sampling water:

- 7 November 2009
- 6 June 2010



RESULTS AND DISCUSSIONS

River Cisca



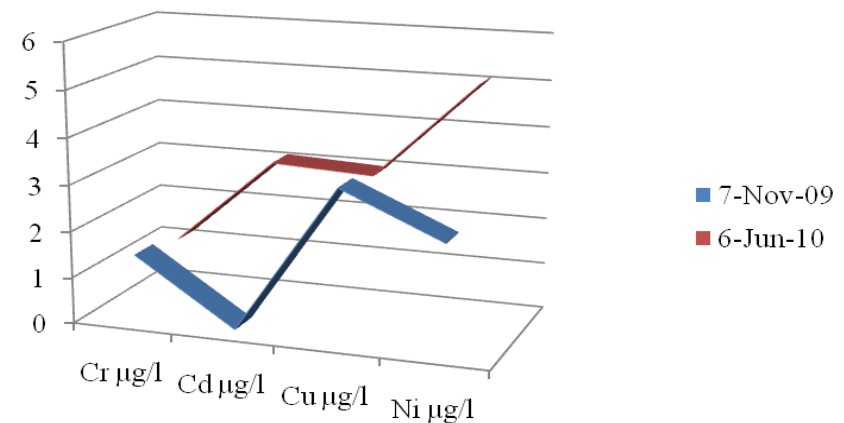
■ We can observe that on the river Cisca the analysis from 6 June 2010 are more **higher** than 7 November 2009, especially in the case of Cu.

■ Cisca river was found as leveling the **5th water quality class**.

Unfortunately at Colbu river the concentrations of Cd and Ni are very higher in 6 June 2010.

One the other hand the **pH** of Waters in **under 7**, another serious problem for tailings dam.

River Colbu



CONCLUSIONS



The big difference between 7th Nov. and 6th June are based probably from 3 causes:

- Stabilization through excavation with open channel
- Movement of tailings deposits
- Large precipitations before get the sampling.

→ Heavy metals are very dangerous for humans health because it gain into density concurrently with their accumulation in the trophic chain.