



PROGRAMUL DE COOPERARE ELVEȚIANO-ROMÂN
SWISS-ROMANIAN COOPERATION PROGRAMME

Mercury threat in industrially impacted surface water bodies in Romania – integrated approach (MERCURO)

Starting Date 01.01.2013

Duration 36 Months

Discipline Environmental Sciences

Main Goals

Mercury (Hg) is a persistent contaminant presenting a substantial risk to the environment and an important threat to the human health. Past and present Hg contaminations of surface waters are thus of major concern due to the potential of Hg to accumulate in biota and to magnify in the food chain. The present project aims to assess the Hg threat in the River Olt basin in Romania, impacted by the effluents of a large chlor-alkali plant, an important point source of Hg.

Specific goals include: (i) performance of Hg and methylmercury (MeHg) survey and estimation of the contamination extent in water and sediments; (ii) determination of the transport and dispersion of Hg and MeHg in the water column and sediments; (iii) improvement of the understanding on the behaviour of Hg species associated to colloids, inorganic particles and organic matter; (iv) assessment of the bioaccumulation and effect of Hg and MeHg to different organisms with emphasis on the primary producers, in particular microalgae, periphyton communities and macrophytes.

Activities

Four field sampling campaigns, experimentation in the field and in the laboratory, multiple visits of Romanian scientists to the University of Geneva, regular videoconferences and meetings, organization of a final conference in Romania.

Expected results

The project is expected to largely contribute to the understanding of mercury fate and impact in a contaminated water bodies. Strengthening the capacity, knowledge transfer and improving the integration of scientists in the international network as well as developing “best practices” for impact assessment of pollutants such as Hg are among the major project outcomes.

Swiss Coordinator

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