

Sediment in Historical and Recent Mining Areas

Sediments and soils remain contaminated from mining activities even if these activities have been stopped since long. They act as a potential source of heavy metals.

In the session: Upper Silesian mining area - Wisla/Odra catchments – Baltic sea

Immobilization of contaminants – ES of sediments (!?)

But: This service is not irreversible (“not final”) at least to a certain extent. The availability of contaminants depends on the environmental conditions and on human intervention. The accumulated metals pose a (potential) risk to humans and environment.

Management decisions should be based on biotic response under real environmental conditions rather than on non-specific quality standards. We need:

- Generally, studies on the (bio)availability of the metals (binding forms, fractionation, erodibility, routes of uptake, food web magnification vs. water concentration ...)
- Studies relating sediment contamination to the response of organisms In the field.

In the session: Study from England/Wales linking geochemical data to biological responses of freshwater organisms.

- Multiple lines of evidence studies to evaluate transport (small watercourses/episodic character of transport!) and fate of contaminated sediments considering both impacts on ecosystem and human health.

In the session: Mercury problem in a Californian Watershed (Superfund site).