

## Effects of Mining on the Local Environment

**CHAIRS:** Marnix Vangheluwe



Tuesday 13<sup>th</sup> May 2014, 17:20 – 18:30 (Poster Corner), room: Exhibition Hall

There is a long history of mining in Europe and around the world. This has resulted in numerous instances of releases of acid rock drainage and metals to the environment. Across Europe and North America there are more than 5000 abandoned mine sites where there are no current owners and remediation has not occurred. Most metal releases result in local impacts on the environment, either land or water. There is evidence of mining impacts lasting from decades to centuries. Likewise there are many examples of both natural and man-assisted ecosystem recovery/restorations. Research associated with mine site recovery has been influential in identifying those organisms which are both the most sensitive and tolerant to metals. It is commonly recognized, based on field studies, that EPT (ephemeroptera, plecoptera and tricoptera) taxa are sensitive to several metals. Laboratory studies do not support this conclusion to the same extent and often indicate aquatic insects to be fairly insensitive. Lab-to-field comparisons have been very insightful in terms of understanding metal impacts in natural systems. Contaminants that are frequently associated with mining discharges include aluminium, cadmium, copper, iron, lead, manganese, nickel and zinc. The purpose of the proposed SETAC session is designed to look at mine sites that have impacted the environment and for which specific risks have been identified. Additionally papers are sought which focus on environmental monitoring and discuss situations where corrective actions have been taken to reduce environmental impacts and ecosystem recovery has been demonstrated.

Possible themes include:

- Ecological impacts of mining releases on aquatic and/or terrestrial ecosystems
- Examples of best practice in mining remediation resulting in risk reduction
- Ecological recovery following remedial activities at mine sites
- Examples of species lost and/or recovery following mine releases
- Lab-to-field comparison of effects on organisms associated with mine releases of metals.
- Novel monitoring/biomonitoring as a means to assessing metal bioavailability and potential impact at mine sites

**SESSION TYPE:** Poster Corner