

Report on Mining Waste Management – Iglesias 3-4 February 2020

The first day (Monday 3th of February 15:00 – 19:00) there was the meeting with experts in the matter and stakeholders from local Authorities that work on mining waste management and from Geological Survey of Sweden and Poland, for a total of 26 participants.

Principal goal of the project is to individuate guidelines and/or procedures for the recovery/reuse of mining waste as new raw materials sources by comparing the different experiences of the partners or invited participants. This topic is deeply felt in Italy, and in particular in Sardinia, due to the large quantities of extractive waste spread over the island during mining activities carried forward over the centuries. So, finding the procedures that may allow their conversion would be a great help for the extractive sector, both from an economic and environmental point of view. The meeting saw the



Fig. 1 Conference meeting

participation of: ISPRA who also spoke on behalf of Partners or experts who were unable to participate directly but who provided useful contributions (Fig. 1). Therefore, after a brief introduction of what IMPEL is (Marco Falconi), MIW project has been presented, with its progress and the phases that will follow (Monica Serra). Case studies of extractive waste management were presented: Ireland, *AVOCA Mine case* (Mauro Lucarini); Italy and other member countries, *Smart Ground project* (Maria Gabriella Andrisani and Mauro Lucarini). The University of Cagliari (UNICA) showed two interesting cases: 1) *The metallogenic potential of an old European mining district*, 2) *Recovery of critical metals from industrial waste and reclamation of mining area: a study on Su Suergiu mine*. The Swedish Geological Survey has introduced a presentation entitled *Methods to minimize negative environmental effects from mine waste* (Roger Hamberg). The Polish Geological Survey also attended the Meeting to get information about the Project, ensuring an active participation in the next stages.

The second day (Tuesday 4th Excursion 08:00 – 17:00) there was the fieldtrip, subdivided into two main stops, for the purpose of observing two storage facilities:

- The "*fine basin of Masua*", that represents what remains of a "fine" settling basin (Fig. 2, [Google maps](#)) that treated the materials extracted from various mines, among which the main ones are Masua, Nebida and Acquaresi. Before visiting the fine basin there has been the permit to go inside the galleries of Porto Flavia (Fig. 3, [Google maps](#)), from which the materials were loaded directly onto the ships;
- The "*Monteponi red mud heaps*", represent a structure consisting of mineralogical and metallurgical processes waste, with a lot of problems related to the release of pollutants and to the structural risk (Fig. 4, [Google maps](#)). In both surveys, the IGEA (a Region

Sardinia owned company) technicians, which is the company in charge of wastes' management, also supported by UNICA Professors, explained the monitoring activities, the environmental problems, the planned interventions and their content of critical raw materials and pollutants.



Fig. 2 Masua Mine fine basin (Sardinia)



Fig. 3 Porto Flavia galleries



Fig. 4 Monteponi Mine red mud (Sardinia)