

VIIa Giornata Nazionale sulle Miniere  
7th National Day on Mines  
Monteponi (Iglesias) 30-31th May 2015

International workshop on

## Past mine activity: heritage, environmental issues and tools for remediation

### Programme

#### 30th May

From 8:30 onwards: registration.

9:00-9:50 Opening of the workshop, introduction by the Commissioner of the Geomining Park of Sardinia, Prof Gian Luigi Pillola; the coordinator the "Piano Sulcis", Ing Salvatore Cherchi; the President of AUSI and Mayor of Iglesias, Dr Emilio Agostino Gariazzo; the Councillor of the Environment Department of the Sardinian Region, Dr Donatella Spano; the Rector of the Cagliari University, Prof Maria Del Zompo, the President of "Ordine dei Geologi della Sardegna", Dr. Davide Boneddu and the Commissioner of IGEA S.p.A., Dr Michele Caria.

#### Morning session: Generalities on policy decision, research and environmental remediation Chair Prof Rosa Cidu

9:50-10:10. Richard Wanty (USGS): How USGS research informs policy decisions about environmental effects and remediation.

10:10-10:30. Alessandro Murgia (RAS): Stato di attuazione delle bonifiche in Sardegna: cantieri

10:30-10:50. Giovanni De Giudici (University of Cagliari): Survey and characterization in some mine sites in Sardinia: landscape processes and priorities for remediation

10:50-11:10. Anna Rosa Sprocati (ENEA). Bio-remediation tools and research applied to environment at ENEA

11:10-11:30 Guido Satta (CRS4): Integrating physically based modeling tools and ICT for data processing and analysis for the hydro-geophysical sector

11:30-12:30 Discussion

12:30-13:30 lunch

#### Afternoon session:

**Tools for understanding heavy metals dispersion, heavy metal target attainment and priority for remediation. Chair Giovanni De Giudici**

13:30 Briant Kimball (USGS): Weighing alternatives: How we compare metal mass-loading from different sources

14:00 Laurie Balistreri (USGS): The cycling of Cu and Zn in a river affected by acid rock drainage: Isotopic fractionation, chemical speciation, and toxicity.

14:30 Richard Wanty (USGS): Using metal isotopes in mining-environmental applications.

15:00 Daniela Varrica: Exposure to trace elements by hair mineral analysis. Mining, volcanic and urban areas.

15:30- 16:00 coffee break

#### Tools for (bio) remediation. Chair Elena Tamburini

16:00 Karen Hudson-Edwards (London University): Arsenic and antimony in mine wastes: nano- and micro-mineralogy, bacteria and rivers.

16:30 Katarzyna Turnau (Krakow University): Mycorrhizal and endophytic fungi in phytoremediation of metal rich areas.

17:00 Chiara Alisi (ENEA): Coupling endemic plants and native bacteria in a field trial at the Ingurtosu mine

17:30 Anna Rosa Sprocati (ENEA): Design and evolution of a toolbox for microbially assisted phytoremediation strategies at mining sites.

Discussion and conclusions

#### 31th May - Fieldtrip

9:00 The Rio San Giorgio (Iglesias) and the Montevecchio- Ingurtosu area. The Montevecchio- Ingurtosu Pb-Zn-Ag district (Arbus-Guspini), located in a wonderful landscape, hosts a field trial experiment of assisted mine dump re-vegetation.

The workshop allows to acquire credits for the "Ordine dei Geologi".

#### Info & inscription (required!):

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