

# MineHeritage newsletter, 3/4 (2019)

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Q 3/4 2019  
Newsletter

# MINEHERITAGE



Last update: 31.12.2019

## MineHeritage's First year!

The first anniversary of the EIT Raw Materials MineHeritage project is approaching and many objectives have been met by the consortium of 13 partners from 11 European countries. The strong cultural interchange between the work group resulted in a broad overview of a very relevant set of historical mining sites. The historical approach to mining gave the opportunity to disseminate the use of raw materials. The participation in Open Days, Congresses, activities for high school students, the European Researcher's Night, and the European Minerals Day promoted important networking with local partners in each country, raising awareness to EIT Raw Materials but also to mining, exploration, culture, history, and the common European background that led to the socio-economic development and wellbeing that Europeans today enjoy.

We invite you to discover the second MineHeritage newsletter and distribute it in your network, with all the project highlights, news, activities, meetings, participation in congresses, wider society activities, development of popular educational tools for dissemination and outreach to society at large.

Please join us through our website for more information or through the social networks for a more interactive experience with the MineHeritage concept!

### Consortium:



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA



Politechnika  
Śląska



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation

## First Steering Committee Meeting 08<sup>th</sup> - 09<sup>th</sup> July 2019, Padova, Italy



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

The MineHeritage Consortium met for the first Steering Committee Meeting of the project in Padova, Italy. 17 delegates from the MineHeritage partners gathered at **University of Padova** during 8<sup>th</sup> of July to discuss the activities developed so far and the approach for a successful conclusion of the first year of the project workplan.

After the welcome address, each partner presented its Institution's contributions to the project. The social dinner at the end of the day allowed for a healthy discussion to strengthen and expand the internal network of project participants generating new ideas and concepts.



On the second day, 9<sup>th</sup> of July, Padova University organized a technical visit to Val dei Mocheni, Gruab va Hardimbl (Erdemolo Mine) and the Ecomuseu Argentario, both heritage mining sites.



Erdemolo Mine



Ecomuseu Argentario





**POLITÉCNICA**

## Second Steering Meeting 26<sup>th</sup> - 27<sup>th</sup> November 2019, Madrid, Spain

The Second Steering Committee of the MineHeritage Project took place in the **Universidad Politécnica de Madrid** (Technical University of Madrid), E.T.S. de Ingenieros de Minas y Energía (School of Mines and Energy), Spain. On the first day (26th Nov), 14 delegates from the MineHeritage partners discussed project objectives, work packages, schedules, new courses of action, ideas and dates for outreach and public engagement events in each partner institution, city or country that could be useful for the project and the excellent results of Q3 Central CLC evaluation.

During lunch break, a visit was organized to the Library and Mineral Museum of the University as a possible historical point of interest related to mining. By the end of the day, a social dinner at the University allowed for a relaxing time after a long day of work, strengthening the working group network.

On the second day, (27th Nov), UPM organized a technical visit to the **mining complex and museum of Almadén** a UNESCO world Heritage Site.







## Project review Q3/2019/Central CLC 27<sup>th</sup> August 2019 – Frankfurt

Project coordinators were called by Central CLC for the Q3 project reviews. MineHeritage was evaluated for the first time, considering the achievements attained during the first 6 months of activities. During this review evaluators learned more in detail about MineHeritage and checked the status quo (outcomes, deliverables, KPIs, budget and schedule).

We thank the very positive review and we are very happy with the comments!

**“Partners have been very active”**

**“Very good value for money!”**

## Publication of European Geologist 48

Our partner from the **University of Zagreb** published an article, “Croatian geological heritage related to historical mining and quarrying” in a special issue of the European Geologist 48. The work published in this journal of the European Federation of geologists disseminates results of the MineHeritage project. The new issue of EFG's journal is now available at

<http://eurogeologists.eu/journal/>

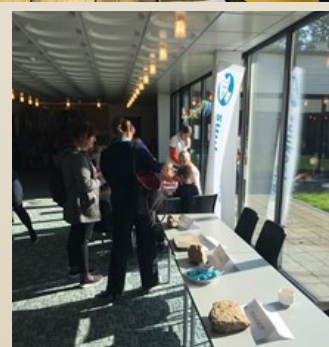


University of Zagreb  
**FACULTY OF MINING  
GEOLOGY AND  
PETROLEUM  
ENGINEERING**

## Education and technology fair @ Haapsalu



27.09.2019



# TAL TECH

## MINERALS-SUPERSTARS! From underground to home 18.10.2019



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation



# MINEHERITAGE



## MineHeritage @ Researcher Nights



The European Research's Night is an initiative financed by the European Community under the Marie Curie Actions, aiming to bring research closer to citizens. In 2019, in **Lisbon**, this activity was carried out on September 27, between 18 h and 24 h, at the **National Museum of History and Natural Science** with 3500 participants. For the dissemination of the project, two didactic and interactive games were developed by FCT NOVA.

CNR has participated in the project "BRAINCITIES" (Boosting ReseArch Inside CITIzens communitiES), associated with the event European Researcher's Night (September 27, 16h to 24h) in Campus Universitario di Via Lanera. The event took place at Matera (Italy) to popularize science to broader audiences. A European corner has been set up and MineHeritage activities have been presented in this framework.



20th of September at  
University of Liege  
(<http://rejouisciences.uliege.be/ndc/>)

### TUKE: 27.09.2019: Aupark Shopping Center in Košice.

The **Faculty of Mining, Ecology, Process Control and Geotechnology** participated in the "European Researcher's Night". It included the promotion of MineHeritage activities through the presentation of minerals, workshops and practical examples for the wider society.



### 27.09.19 at Mektory Technology School, Estonia by TalTech



### Clausthal, 27.09.19



12th of October @  
Silesian University of Technology



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation




## MineHeritage @ RawMaterials UNIVERSITY DAY 2019



FCT NOVA partner organized a "Raw Materials University Day" on **October 23, 2019**. This open day, a dissemination event about the importance of raw materials, had the participation of high school and graduate students. During the morning period, they had the opportunity to visit a

science fair where practical examples of scientific research and employment opportunities were presented, with an emphasis on substitution, recycling and the circular economy, with demonstrators of scientific programmes. Visits were also made to several laboratories. In the afternoon, university students were able to attend a set of interventions on raw materials, mineral resources, circular economy, recycling and environment, given by invited experts from LNEG, SOMINCOR (Lunding Mining) and FCT NOVA.

 **LIÈGE université** At the **University of Liège**, project members also attended the RM day. The main goal was to inform general public about the use of the raw materials in our daily life. [More](#)



Consiglio Nazionale  
delle Ricerche

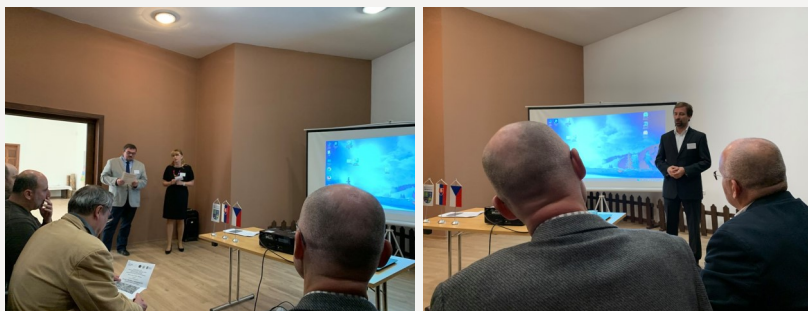
CNR participated @ Raw Materials University Day held on **October 25, 2019** in **Bologna**. The Audience of the event represented by several categories of high school (15-18 years old) and university students (1st, 2nd and 3rd cycle: 19-28 years old) directly or indirectly dealing with subsets of the RM value chain during the course of their future studies and careers. A specific communication strategy has been setup to increase as much as possible the involvement of the youngest high school. D. Peddis present a talk related to the activity of MineHeritage.



## MineHeritage @ Conferences

### International Scientific Conference – The Man and the landscape (Environmental History of Landscape)

**Faculty of Mining, Ecology, Process Control and Geotechnology, TUKE**, organised during 19th - 20th November international scientific conference called: The Man and the landscape (Environmental History of Landscape). The conference took place in Čadca, Kysuce. In the conference participated members of mining associations, mining specialists, ethnologists, environmentalists, museum specialists, university teachers and general public (around 40 participants). The purpose of the conference was to raise awareness about anthropogenic impacts on the environment and landscape.



### Conferences at University of Grenoble

At the **University of Grenoble** two conferences were organized by project members:

Christophe Roncato and Susanne Berthier, co-organized an international conference on "Energy transitions: environmental and social stakes" (**10./11.10.19**)

Philippe Greciano and Susanne Berthier, co-organized a conference on **Europe and climate change** (*L'Europe face au changement climatique*) (**29.11.19**)

### 4GEO | resources, materials, technologies & environment 1st Conference 2019



The School of Engineering|ISEP and the Order of Technical Engineers (OET) promoted the first Conference on Georesources,

Geomaterials, Geotechnologies and Geoenvironment, that took place in Porto (Portugal) on 7-8 November. Ana Pires and Paulo Rodrigues, researchers of **CRAS|INESC TEC**, had the chance to present the preliminary results of the first field campaign of the Tibães Mine (Braga, Portugal), the first MineHeritage site. The conference was a great place to create a space for reflection on the proposed themes, which are highly relevant and pertinent, and brought together geoprofessionals, researchers, teachers and students, thus constituted a forum for the dissemination of theoretical and applied knowledge in these fields.

### CNR@ the fourth symposium 'Mining Activities in the Mediterranean Region'

**CNR** participated @ The Sardinian Mining Association organizing the fourth symposium 'Mining Activities in the Mediterranean Region'. The symposium has gradually expanded over the years its international audience, being recently included among the events listed in the Society of Economic Geology and the



Australian Institute of Mining and Metallurgy (AusIMM). This event, held on October 26 2019 in Iglesias, aims to put in contact all those subjects that have interests or operate in the area. Creating a networking opportunity in the legacy of the Iglesiente area (Italy), a mining region that was active for millennia until the gos of the 20th century. D. Peddis gave a talk illustrating the MineHeritage activity.

**Website:** <http://www.associazioneminerariasarda.it/>





## ROSM (Robotic Oil Spill Mitigation) Final Demo of the Project

INESC TEC has participated in the Robotics Exercise 2019 (REX), promoted by the Portuguese Navy (Centre for Naval Research), with the ROSM project - Robotic Oil Spill Mitigation. The event took place at Alfeite Naval Base (Portugal), July 2-4, to conduct tests and demonstrations of innovative systems being developed by the academic community and its research centers, industries and the Navy itself. This was a great opportunity to validate the technology and perform tests with the robotic systems.



### Universcience Partenaires

18th October 2019, FCT NOVA

[Universcience Partenaires Association](#), a French laboratory of ideas between public research institutions, science centers, companies and museums, aiming to promote and disseminate scientific and technological culture and innovation, visited CENIMAT, a research center of FCT NOVA. The scientific work carried out by the Materials Science Department and CENIMAT in the area of Cultural Heritage was shown to 35 delegates from this association, including the concept of MineHeritage.



### Practical course "Mineral resources and Engineering" and visit to Estonian Mining Museum

(3 students from Bosnia and Herzegovina & 7 students from Estonia @ TalTech)





## MineHeritage, Children and Youth



During 12th July TUKE organised activity aimed at education of children (Primary school) in raw materials, mining, geotourism and geosites. The event held place in Geoscience exposition, Technical University Košice and it consisted of lectures, presentations, games, workshops like e.g. gold panning or jewelry making and other practical examples. 60 kids were divided in 3 groups during this activity.

### Lecture for highschool girls on Mining and MineHeritage@ Clausthal



### MINERAL COLLECTION OPEN DAY

22<sup>nd</sup> of November 2019 - University of Zagreb opened the mineral collection for school visits, attracting young students.



### School Visit, 19th November 2019 FCT NOVA

The Materials Science Department and the associated research center CENIMAT receives visits from high school students regularly. Along with laboratory visits, scientific research carried out in this unit is shown to the students. This gives the opportunity to present MineHeritage activities directly, using demonstrators. In this semester, two groups of 25 students were welcomed during November 2019 (5<sup>th</sup> and 19<sup>th</sup>).





## MineHeritage@

## European Minerals Day

### Minerals day @ University of Zagreb

On the 23<sup>rd</sup> of September 2019, the Croatian MineHeritage team gave several presentations and workshops for primary and secondary school children about MineHeritage sites in Croatia and presented the faculty mineral collection.



### TalTech @ Nordkalk Limestone Factory in Rakke



### Minerals day@ Silesian University of Technology



### University Open Days @ TUKE

More than 250 participants mainly from high schools attended the University Open Day on 15th October organized by TUKE. Promotional activities of the MineHeritage project in this event included lectures, presentations, quizzes, mineral seeking and practical examples, raising awareness for raw materials, historical mining and society development.

## Raw Materials Week 2019

The fourth edition of the EU "Raw Materials Week", organized by the European Commission, took place in Brussels (Belgium), 18-22 November. The event addressed the latest news on raw materials in the EU, and it was a unique opportunity for the raw materials community to discuss and exchange on all relevant issues: policy, technology, international cooperation, framework conditions, knowledge base etc. Ana Pires, researcher at CRAS|INESC TEC, had the chance to attend the meeting and participate with a poster showing INESC TEC's different expertise and fields of action. MineHeritage was also highlighted showing the technologies developed for the project.

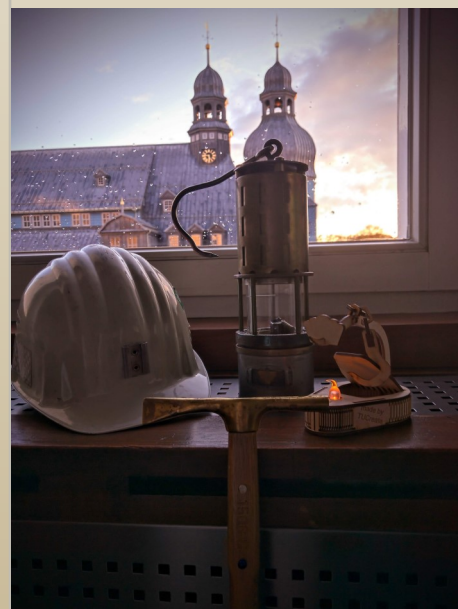



## TU Clausthal

Welcoming new students in Clausthal while presenting MineHeritage physically and with words:



Glückauf! der Steiger kommt...



University of Zagreb  
FACULTY OF MINING  
GEOLOGY AND  
PETROLEUM  
ENGINEERING

## EIT RM Info day

In the frame of EIT Raw Materials info day held on 10<sup>th</sup> of December 2019, Marta Mileusnić gave a talk about the MineHeritage project. There were 26 participants from different institutions (academia, research institutes, ministries and agencies), as well as several companies.





## MineHeritage Field Tests

In the scope of the MineHeritage Project, researchers from **CRAS - INESC TEC**, mapped the Tibães mine, Braga (Portugal) throughout 3 missions between July and September.

This first field campaign had the support of the Laboratory of Cartography and Applied Geology (LABCARGA), Department of Geotechnical Engineering, School of Engineering of Porto (ISEP) and the Board of Directors of Monastery of St. Martin of Tibães and Aveleiras Mine.

The outdoor mapping was performed using a FARO LiDAR and an UAV (STORK) equipped with cameras and a LiDAR VLP16 (Velodyne 16P). As for the interior of the mine, the researchers used the Faro LiDAR and a terrestrial vehicle equipped with cameras and sensors which are part of the GeoTec innovative system (TRL5) developed under the framework of MineHeritage Project.



## Lectures for St. Barbara celebration in Radoboj

In the framework of St. Barbara celebration in Radoboj, on **3<sup>rd</sup> of December** in the afternoon, the Croatian MineHeritage team had successful series of lectures:

- Mileusnić: Importance of mineral resources
- Maričić: Croatian natural stone
- Hruškova Hasan: Sulphur from Radoboj

There were 30 participants who came from Radoboj and surrounding, in age range from children to retired persons.




Radoboj

zadovoljstvo nam je uoči blagdana Svete Barbare, zaštitnice rudara, pozvati Vas na predavanje na temu:

### RUDARSKA BAŠTINA

predavačice:

prof.dr.sc. Marta Mileusnić  
"VAŽNOST SIROVINA KROZ POVIJEST"

doc.dr.sc. Ana Maričić  
"KAMEN HRVATSKE"

dr.sc. Michaela Hruškova Hasan  
"SUMPOR IZ RADOBOJA"

\*predavanja su pripremljena u sklopu projekta MineHeritage

predavanje će se održati u utorak, 3. prosinca 2019. u 18:00 sati u Centru za prirodu Zagorje, Radoboj, Radoboj 34a.

Radujemo se Vašem dolasku!



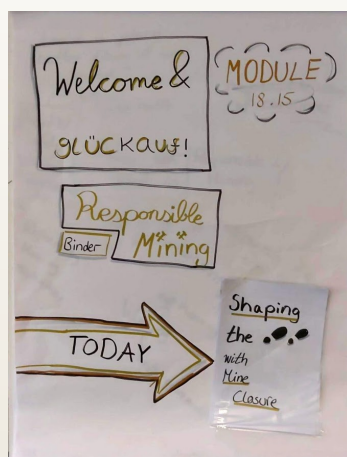
## Travel Seminars organised in The Geoscience exhibition



Travel Seminars are organised every Wednesday (until now they have been organised during 13th, 20th and 27th November) in **TUKE** Geoscience exhibition. These seminars are dedicated to different countries all around the world. TUKE connects basic travel advice for tourists with information about raw materials and mining., one of the main purposes of MineHeritage. It is a new way to increase interest of the general public in mining and geology. The event is attended by young adults and adults.



## Lecture on Mines as Ambassadors for the Mining Culture



During the lecture “Responsible Mining”, which is an elective in the Master Program “Mining Engineering” at **Clausthal University of Technology**, one lecture focused on the topic of responsible closure and wisely shaping the footprint of a mine. Besides the basics of closure planning, the students learnt in practice how to improve the ambassador function of mine sites and exhibits by working on the improvement of the heritage area around the Institute. They also suggested improvements to institute representatives. The group had great suggestions and ideas. The target audience is international with 100 % international students from seven nations and three continents, giving the opportunity to disseminate the approach used in the MineHeritage Project.

## Upcoming project event

When	Where	What
03.-.04.06.2020	Grenoble	Midterm Meeting

Check out more sites and information



[www](http://www)



[Twitter](https://twitter.com)



[Facebook](https://facebook.com)



[LinkedIn](https://linkedin.com)



[YouTube](https://youtube.com)

or send an E-Mail to the Coordinator [jpv@fct.unl.pt](mailto:jpv@fct.unl.pt)