



MinLand: Mineral resources in sustainable land-use planning

A H2020 Project

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Introduction

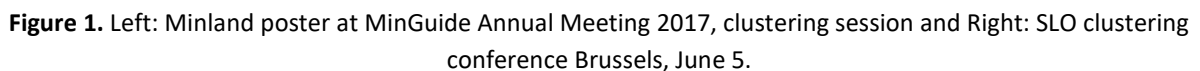
The efficient communication of European projects related to the Raw Material sector, can assist in raising awareness about the future of Europe: the public announcement of all the promising and innovative technological achievements that are the outcomes of scientific research and guarantee technical efficiency along with environmental protection, could serve as a positive declaration of the Raw Material Sector potential. Therefore, one of the most prominent cornerstones of the MinLand project is to facilitate a consensus on mineral policy making which can only be achieved, through the communication of the project results. Such an approach can be empowered only if the projects coordinate and work together through clustering activities, thus avoiding not only the duplication of work, but also to maximizing the outreach to society. Additional targets for the clustering activities of the MinLand project are:

- i) to provide a forum for discussion, problem solving and planning policy making activities and gaps in Europe;
- ii) to allow the projects to report on success and allow for an assessment of the impact achieved;
- iii) to identify cross cutting issues and to share best practices among the different projects

Therefore, within the frame of WP7, a research for relevant past, ongoing and future Horizon 2020, EIT Raw Materials and other EU policy projects took place, and lists of suitable projects were drafted. Once the lists of relevant projects was drafted, a series of clustering activities were launched, the most prominent of which are:

- Clustering session of Min-Guide Annual Meeting 2017, December 13, 2017. Poster.
- Clustering session, MIREU Kick-Off,, Esbo, Finland, January 9, 2018. Presentation.
- Clustering session at the MinLand kick-off meeting. MIREU and Min-Guide were invited
- FAME, Clustering WS, participant, April 19, 2018.
- Cluster event for ongoing Horizon 2020 funded projects that have activities connected with ensuring a Social License to Operate (SLO) for mining and processing undertakings – EASME, Brussels, Belgium, 5 June, 2018, poster.
- The participation at the clustering session of the 1st SLO workshop that took place at Rovaniemi, 9 May 2018
- The clustering session of 7th Peer Review meeting of the REMIX project, 16 October 2018
- Clustering at the SCRREEN event during RMW 2018, 12 November 2018 (participation with a poster)
- MinLand Clustering meeting in Brussels, 27th of November 2018
- Participation at the EIT event “3rd Greek Raw Materials Dialogue” that took place in Athens, on 5th of December 2018
- Participation at the clustering event of MIREU during the high-level meeting that took place in Leon, Spain the 15th of January 2019.

The MinLand project was introduced into the H2020 projects with the participation in the MinGuide Annual Conference, December 12, 2017, Brussels, meeting with a poster and a short pitch.



In the later half of this period MinLand was represented at the FAME clustering event in Brussels, April 19, 2018, and with a poster at the clustering event, “Cluster event for ongoing Horizon 2020 funded projects that have activities connected with ensuring a Social License to Operate (SLO) for mining and processing undertakings – EASME, Brussels, Belgium, 5 June, 2018” with a poster. The event was very rewarding in creating contacts across the H2020 eco system of sister projects.

7.2 Side-clustering session during the 1st SLO workshop at Rovaniemi, 9 May 2018

Since European projects can play a significant role in reaching out to society and assisting the connection of mining with metallurgy, a special thematic clustering session was included to the 1st SLO workshop organized by the MIREU project, that took place in Rovaniemi, Finland. The 1st **SLO Workshop** focused in the attempt to understand the meaning of **sustainability** – social, environmental, and economic - across Europe's mining regions and how SLO both reflects this understanding and furthers it. The aim was to explore, through a variety of conversations, story-telling and discussion topics, international SLO guidance and practices from countries such as Australia, Chile and Canada; the challenges junior mining companies are facing in Europe and whether any practical solutions exist; the investigation of whether emphasizing the link between the coming energy transition and necessity in minerals and metals production can change the negative perception of mining pervasive throughout Europe. Respecting this concept, a side clustering session took place on the 9th of May 2018 under the topic **"SLO as a driver of innovation"**.

MinLand was one of the participating projects along with REMIX, MINGUIDE, SCREEN and SCALE.

It must be highlighted that this clustering session was focused on the interaction with the audience and the discussion around the main theme. Some of the highlights of the discussions that took place during this clustering session are:

- An **answer** to the question of whether the designation of raw materials as critical raw materials by the EU helps or hinders as well as an interesting way to make people realize that certain raw materials are needed in our lives giving at the same time politicians a direction about how to proceed with mining policy, could be **the comparison of lists of the different Critical Raw materials for the EU and for other countries like USA and Japan**: critical raw materials designation gives indication for the entire economy. Europe will never have all the raw materials while USA, Japan have their own strategic material lists.
- The EU has decided to address the core problem that the majority of materials is imported and that the dependency on imports is about 80%. So the issue arising is: Import from resource rich countries or Mining in our backyard? This approach gives rise also to an ethical question: Since Europe has technology and sustainability standards for mining isn't it responsibility to lead by example? The EC has rightly put a focus on responsible sourcing and capacity building if raw materials are imported.
- On zero waste, there is less smelter diversity in Europe!

7.3 The clustering session of 7th Peer Review meeting of the REMIX project, 16 October 2018

During the first day of the peer Review meeting of REMIX, that took place on the 16th of October at Delphi, the agenda was divided into four sections :

- **Section 1** : National RIS3, Circular Economy and EIT Education Initiatives as means of Regional and National Development

- **Section 2** : Innovation and Environmental protection as drivers for the development for Greek mining industries
- **Section 3** : Networking potential of Regions
- **Section 4** : **Clustering Session- « European projects : innovation in the service of civil society»**

The 4th section of the meeting was dedicated to clustering between the projects, having as main idea not only to promote the collaboration between the projects, but also to take advantage of the presence of audience and interact with them, showcasing the importance of innovation for the societal, industrial and environmental development. The projects that participated and were represented in this clustering session were :

- **Regional Center Greece/ EIT Raw materials**
- **MIREU**
- **MinLand**
- **Cicerone**
- **Removal, Scale, Enexal, EuRare**
- **MinGuide**
- **Veram**

One of the most interesting outcomes of the clustering session, is that since all the projects related to raw materials, either policy related or research and innovation deal with common issues, therefore there is the pressing need to combine forces and commonly promote the results of all projects. Therefore it was suggested that MIREU could host at their web site links and information for all projects (a « **clustering page** ») including updates or announcements of upcoming events etc. In this way it is possible to increase the visibility of all projects while at the same time optimising the potential for synergies between the projects. **Figure 2** presents one of the outcomes of the clustering session at Delphi.

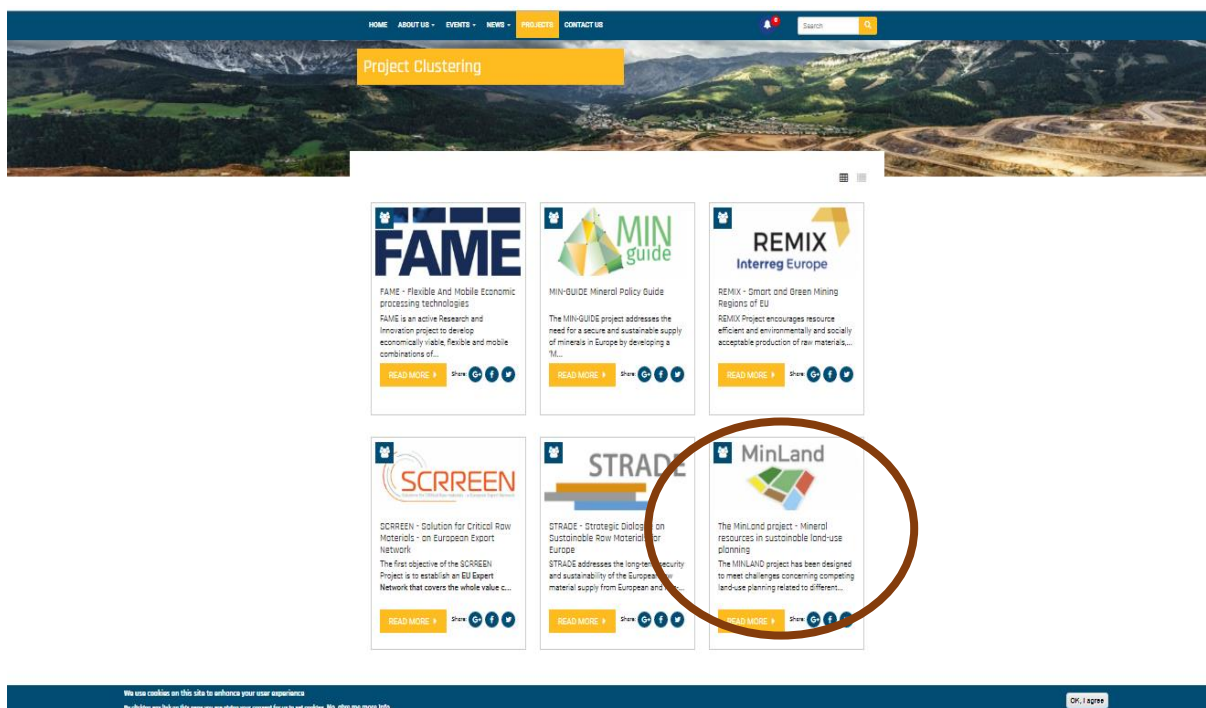


Figure 2. MinLand presented in the website of MIREU

7.4 Clustering at the SCRREEN event during RMW 2018, 12 November 2018 (participation with a poster)

MinLand participated in one of the most important events for the Raw Material Sector: Raw Materials Week. This year, Raw Materials Week 2018 took place in Brussels 12-16 November 2018, and MinLand was one of the most active projects, participating in many clustering activities throughout the whole week.

On the 12th of November, starting date of Raw Materials Week, the event was dedicated to Critical Raw Materials and it was organised by the SCRREEN project. MinLand participated in this event with a poster.



Figure 3. MinLand related activities during RMW

Figure 3 and Figure 5 present photos of activities that took place during RMW by the coordinator and members of the consortium, while Figure 4 shows the poster that was presented during the SCRREEN event. Within the frame of dissemination and communication activities a MinLand brochure was disseminated during the whole RMW2018 and is presented in Figure 6.



Figure 4. The MinLand poster, presented during the RMW2019



Figure 5. MinLand during the poster session of the SCREEN event



Figure 6. Cover page of the MinLand leaflet that was disseminated during RMW 2018

7.5 MinLand Clustering Meeting, Brussels, 27th of November 2017

It is well known that Land use planning practices within the EU, have limited cross-cuts with the Raw Material policies, nevertheless they consist an important factor that can either assist or inhibit the development of Raw Materials Sector. Furthermore, one of the most important reasons for opposition by local society is the competing land uses, especially if they are not included in the Land Use Planning processes. MinLand project deals with the reasons for opposition related to land use planning issues as well as the opportunities that may arise for the development of Raw Materials Sector, therefore a clustering event was organised by MinLand project having as subject the ***“Connection of European project with Social License to Operate”***.

The other participating projects were MinGuide, Intermin and Remix. During the session it was mentioned that MIREU thoroughly investigates the causes of opposition to mining and metallurgical activities through a dedicated workpackage, the final result of which will be a toolbox with guidelines for reaching Social License to Operate., Therefore, it seems that there is plenty of room for synergies between these two projects and

one of the ideas that mentioned during the session was the organization of a common event during Raw Materials Week 2019.



Figure 7. Discussion between projects during the MinLand Clustering meeting

The InterMin project, on the other hand, is an international project dealing with educational issues related to mining and metallurgy. The international dimension of this project is very important since the finding of these project can be very beneficial for MinLand objectives , as well as for all issues related to education. Regarding the MinGuide project, even though during that time it was going to finish soon, it was discussed that it could be beneficial for MinLand project and utilize some of the very good results of this project.

During the discussions between the projects, a roadmap for common activities was decided to be initiated, including:

- Common workshops
- Involvement of project officers in the clustering activities.
- There should be open exchange of results (whenever it is possible) in order to avoid duplication of work. In this aspect, results regarding the same issue should be complimentary and not repetitory.
- A process to inform and update clustering projects about project developments should be established.

The different projects should initiate a discussion regarding the interactions they may have in WPs and Tasks.

7.6 EIT event “3rd Greek Raw Materials Dialogue” , Athens, 5th of December 2018

MinLand actively participated in the 3rd Greek Raw Materials Community Dialogue organized by the EIT RawMaterials HUB – Regional Center Greece, which took place in Athens on 4-5 December 2018.

The main target of the event was to engage and stimulate the Greek Raw Materials Community in order to resolve issues and strengthen the overall position of the sector in Greece as well as internationally. The aspiration was to bring together the industry (large and SME), the governance (national and regional), academia and research institutes of Greece along with executive European organizations of the Raw Materials sector to discuss over the current state in the Greek and EU raw materials sector.

The first day of the event was dedicated to the **“Challenges – Opportunities – Solutions”** for the Greek Raw Materials Sector, with invited speakers from the Greek Authorities, Industry, Academia, as well as the EIT Community. The second day was dedicated to a productive dialogue among with panel discussions on three key topics: **“Education and Training”**, **“Innovation”** and **“Raw Materials & Environment: SLO/Land Use Planning”**. MinLand participated in the round table discussions under the third thematic (raw materials and environment: SLO/ land use planning) bringing the european perspective as well as the outcomes of the MinLand cases and local workshops into the scenery.



3rd Greek Raw Materials Community Dialogue

4-5 December 2018
Athens, Greece



EIT RawMaterials is supported by the EIT,
a body of the European Union

09:30 – 10:45	Discussion I: Education and Training	Chair: D. Kaliampakos
	I.Gomboto, ECLC Education Officer, <i>EIT RawMaterials</i>	
	K. Adam, Professor, <i>Sch. Of Mining and Metallurgical Engineering, NTUA</i>	
	G. Gaidajis, Professor, <i>Dep. of Production and Management Engineering, DUTH</i>	
	K. Christanis, President of <i>IGME</i> , Professor, <i>Dep. of Geology, University of Patras</i>	
	S. Yiatros, Professor, <i>Dept of Civil Engineering & Geomatics, Cyprus University of Technology</i> , Education Lead, <i>EIT RIS/Climate-KIC Cyprus</i>	
	P. Papaioannou, Deputy Director of Training & H.R. Development Division, <i>EYDAP</i>	
10:45 – 11:00	Coffee break and networking	
11:00 – 12:30	Discussion II: Innovation	Chair: -D. Panias
	K. Kubacki, ECLC General Manager, <i>EIT RawMaterials</i> , M. Klein, ECLC Business Developer, <i>EIT RawMaterials</i>	
	A. Karalis, S&T Manager, Bentonite Bauxite & Perlite, <i>Imerys Industrial Minerals Greece S.A.</i>	
	E. Balomenos, Residue-valorisation engineer, <i>Metallurgy Business Unit, Alumina and Aluminium plant, Mytilineos Holdings</i>	
	A. Xenidis, Professor, <i>Sch. Of Mining and Metallurgical Engineering, NTUA</i>	
	I. Yakoumis, Founder and CEO, <i>Monolithos Catalysts & Recycling Ltd</i> , President, <i>"INNOVATION GREECE"</i>	
	G. Drosos, Head of Business Innovation Policy Support Department, National Representative to the EU for Digitising Industry, <i>Ministry of Economy and Development</i>	
	V. Kilikoglou, Director, <i>Institute of Nanoscience & Nanotechnology, NCSR Demokritos</i>	
12:30 – 13:15	Lunch	
13:15 – 14:45	Discussion III: Raw Materials & Environment: SLO/Land Use Planning	Chair: G.Stanley
	A. Politis, ECLC Business Developer, <i>EIT RawMaterials</i>	
	Ch. Panagiotopoulou, Senior Researcher, <i>Sch. Of Mining and Metallurgical Engineering, NTUA</i>	
	E. Gazea, Environmental Manager, <i>Hellenic Gold SA/ Eldorado Gold Corporation</i>	
	K. Assimakopoulos, Raw materials & Mining Manager, <i>Heracles Cement, LafargeHolcim</i>	
	A. Koulidis, Head of Unit C, Directorate of Environmental Licensing, <i>Ministry of Environment and Energy</i>	
	K. Hatzilazaridou, Geologist, Department of Economic Geology, <i>IGME</i>	
	Ch. Hadjigeorgiou, 1 st Geological Officer, <i>Geological Survey Department of Cyprus</i>	
14:45 – 15:00	Event Closure	

Figure 8. Agenda of the 3rd Greek Raw Material Dialogue with special focus on the event MinLand participated (“Raw Materials and Environment: SLO/ Land Use Planning”)

7.7 MIREU High-level meeting, Leon, 15th of January 2019

MinLand participated in the clustering session of the first high-level policy workshops, which was focused on the future of mining and metallurgy sectors in European regions. The aim of this event was to provide a platform for the exchange of best practices between high-level representatives of EU regions, with the aim of exploring ways for a common mining approach to raw materials in Europe and fostering discussions on sustainable mining strategies. During the clustering session, this event aspired to explore links with existing EU initiatives on raw materials, mining and metallurgy at regional level, so synergies, and common objectives between the participating projects and initiatives were discussed.








All MIREU regions involved, highlighting representatives from:

- Cornwall (United Kingdom) - **Ms Frances Wall**, Head of Cornwall's Camborne School of Mines, University of Exeter
- Aragón region (Spain). **Mr. Alfonso Gómez Gámez**, General Director of Energy and Mines.
- Maramures (Romania) - **Ms Corina Galca**, *Executive Manager of CONVERSMIN S.A.*
- Ireland – **Mr. Paul McDermott**, *Senior Geologist at Exploration & Mining Division of DCCA*

15:45 – 16:45 EU initiatives and EU projects in raw materials, mining and metallurgy – Roundtable brainstorming

- *S3P Industrial Modernisation platforms:*
 - Advanced Materials for Batteries for Electro-mobility and Stationary Energy Storage
 - Mining industry and global value chains
- **"Mineral Resources in Sustainable Land-Use Planning" (MINLAND). Luis Jordá Bordehore**, Geological Survey of Spain (IGME)
- *"Integrated Modular Plant and Containerised Tools for Selective, Low-impact Mining of Small High-grade Deposits" (IMP@CT) Guillaume Bertrand*. Bureau de Recherches Géologiques et Minières (BRGM)
- *"Smart and Green Mining Regions of EU" (REMIX). Ilari Havukainen*, Regional Council of Lapland
- *"The Regional Co-operation Networks for Industrial Modernisation Initiative" (ReConfirm). Nuria Fornés Sayas*, Project Officer, EURADA

16:45 – 17:15 Wrap up and Discussion

19:00 Reception at the City Council of Leon by local authorities

20:00 Networking Dinner

Registration:

Figure 9. Detail of the agenda of the High Level meeting in Leon, indicating the clustering session in which MinLand participate

