



## Deliverable 1.3

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## **GENERAL INTRODUCTION**

The European Union has identified security of supply, improvement in environmental management and resource efficiency as key challenges for the raw materials sector. Data regarding the location and spatial distribution of primary and secondary raw materials, with respect to exploration, exploitation, production and trade activities, underpin decision making in government and industry. Given the dynamic character of such data, regular updates of comprehensive, reliable and harmonized information across borders are required. The overall aim Mintell4EU is to improve the European Knowledge Base on raw materials as there are several sources of non-harmonized data with different coverages developed for different purposes during national and international projects during the last decades.

Tasks on this includes updating the electronic Minerals Yearbook produced in the Minerals4EU project as well as extending the spatial coverage and quality of data currently in the Minerals Inventory. Furthermore, Mintell4EU aim to increase the degree of harmonization, communication and interaction between existing data platforms, with the ambition of reaching a fully operational and reliable data knowledge management system, fulfilling the European needs and taking into account the Raw Materials Information System (RMIS) of the European Union. Finally, the applicability of the UNFC classification system for obtaining more accurate Pan-European mineral inventories are tested through a large number of pilots on different commodity types across Europe. This is built on the back of ORAMA outputs, and in cooperation with the FRAME, EuroLithos and MINDeSEA projects as well as other UNFC activities initiated by the EC.

Mintell4EU has 27 partners representing each a national or regional geological survey organisation from 25 European countries.

## **EXECUTIVE REPORT SUMMARY**

This report is an internal project progress report describing the results achieved in the project in the period month 1 until month 18 (from the 1<sup>st</sup> of July 2018 until the 31<sup>st</sup> of December 2019).

In general, all work packages are well in progress.



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## 1 PROJECT PROGRESS

The overall aim of Mintell4EU is to improve the European Knowledge Base on raw materials by updating the electronic Minerals Yearbook produced in the Minerals4EU project and to extend the spatial coverage and quality of data currently in the Minerals Inventory. Furthermore, the project aims to increase the degree of harmonization, communication and interaction between existing data platforms, with the ambition of reaching a fully operational and reliable data knowledge management system, fulfilling the European needs and taking into account the Raw Materials Information System (RMIS) of the European Union. Importantly, the project will also integrate the electronic Minerals Yearbook into the Minerals4EU database, ensuring future sustainability as part of the EuroGeoSurveys-governed European Geological Data Infrastructure (EGDI). All results will be integrated in EGDI that will, by end of the project, disseminate European raw materials intelligence in a uniform way to end users through a common web portal interface. Finally, the applicability of the UNFC classification system for obtaining more accurate Pan-European mineral inventories is being tested.

Below the progress in Mintell4EU is described per work package. Overviews of meetings and deliverables in the reporting period can be found in tables 1 and 2.

### 1.1 WP1: Management, communication, dissemination, and sustainability (M1-36)

This work package is concerned with the overall financial, administrative and operational management of the project as well as coordinating activities across work packages.

In early November 2018 most of the WP leads met in Ljubljana for an inception workshop to outline a Project Management Report (D1.2) to ensure detailed description of activities and cooperation. This was agreed late in the proposal phase which was quite hectic as a project lead organization was only identified two weeks before submission.

The work in the projects is coordinated through monthly Project Board Meetings (teleconferences, 14 in the first 18 months). All WP leaders are expected to be present but other partners are encouraged to also join the meetings and usually a few do. Besides, the Raw Materials Theme Coordinator, Antje Wittemberg (BGR) attend as often as possible. In addition, partners met at the GeoERA kick-off event in July 2018, where Mintell4EU also had a kick-off meeting (Project Assembly no. 1). Besides, a face-to-face Project Assembly (no. 2) and a Project Board meetings were organised back-to-back in Copenhagen, Denmark, mid-October 2019. A similar event, back-to-back with a WP4 organized workshop is already agreed in September 2020 in Orléans, France. The Project Lead has encouraged the WP leads to also arrange specific WP teleconferences on a monthly basis, but this has, so far, only been implemented to a limited degree.

A Data Management Plan (1.3) and a Communication Plan (D1.4) were prepared in the first half year of the project. The project and the expected outputs and impacts have been presented at more events, e.g. at Raw Materials Week (incl. Copernicus event) in Brussels in November 2018 and in November 2019, and at more ORAMA events. A Mintell4EU flyer was produced in November 2019 and disseminated at Raw Materials Week. Besides, Mintell4EU has been invited and participated (as well as the three other GeoERA RM projects) in three MREG meetings (Nov. 2018 in Rome, Italy; May 2019 in Trondheim, Norway; Nov. 2019 in Madrid, Spain) where common data issues have been presented and discussed. An agreement has been reached that MREG members



support Mintell4EU in their role as raw material experts and will contribute with e.g. quality check of data. Finally, Mintell4EU participated in a FRAME workshop in September 2019 in Lisbon, Portugal

An economic overview was compiled after summer 2019 comparing budgets per partner with resources used in the first 14 months. In January 2020 a new compilation was made showing that partners have used between 6 and almost 80% of their individual budgets. WP leading partners have used between 33 and 47%. Challenges related to either a high or very low percentage of used resources compared to budget are in most cases related to partners with quite small budgets. However, this will be followed closely and discussed at the next Project Assembly in September 2020.

## **1.2 WP2: Update to Electronic Minerals Yearbook (M1-36)**

Production data for 2014-2016 was made ready for electronic transfer, and similar data for 2017 was been finalised, checked through BGS's internal quality control procedures and finally made ready for the electronic transfer.

Trade data for 2014 were made available for the electronic transfer to the Yearbook and import and export data for 2015 and 2016 were purchased, quality checked and prepared for electronic transfer.

After mapping and correspondence between BGS, BRGM and GEUS, the electronic transfer of data happened in month 14, and the new and revised data were visible in the Yearbook early in month 16. A considerable number of lessons were learned during this process which will lead to improvements in the process for the next time.

Production data for 2018 is compiled and is presently under quality check, expected to be ready for electronic transfer around month 24. Trade data for 2017 and 2018 have been purchased and are under elaboration; the data is expected to be ready for electronic transfer around month 24.

Production data for 2019 will begin to be collected around month 24.

## **1.3 WP3: Minerals Inventory (M1-36)**

The spatial coverage of the Minerals Inventory has been extended with data from Western Balkan countries in cooperation with the RESEERVE project, and with data from one German State (Freiburg). Besides, new or modified data from existing data providers are available. A Mintell4EU Quality Control Application (QCA) has been developed enabling data providers to visually check their latest reported data.

Related to the tasks mentioned above, a harvesting system for collecting and validating mineral resources data is being created and improved access to raw materials data technical routines intervening during the harvesting phase are being implemented to ensure a rigorous control of the data quality. Two deliverables describe the above mentioned progress in WP3. Besides from a number of RESEERVE workshop, a Mintell4EU workshop will be held in Ljubljana in May 2020, drawing on experiences from RESEERVE and from guidelines developed by the ORAMA project.

WP3 also includes a task focused on historical mine sites with a touristic component. An excel database for input has been created and is under elaboration regarding parameters for input. The possibilities for presenting some of the mines in a 'Coffee table book' is being investigated.



#### **1.4 WP4: UNFC pilot (M1-36)**

Partners have selected commodities for their planned case studies on UNFC. This will be performed on metals, industrial minerals, on- and offshore aggregates, natural stone, energy minerals and secondary resources. There has been close cooperation with the ORAMA project. Mintell4EU WP4 will use documents from this project as a basis and continue the work to make good templates and guidelines for application of UNFC. Partners are now working with the case study pilots, this work is ongoing and will be finalized in M28. A guideline on how to perform UNFC has been prepared and will be distributed together with examples of relevant UNFC cases and templates and guidelines from the finalized ORAMA project. A workshop where partners meet to discuss their case studies and challenges is planned for September 2020.

#### **1.5 WP5: Improvement of KDPs' applications and interaction with the RMIS and the GeoERA Information Platform (M1-36)**

This WP has produced a number of deliverables describing how the work should proceed in the coming months. One deliverable (Comparative analysis of KDPs resources versus RMIS 2.0 needs) describes how Knowledge Data Platforms (KDPs) can and should deliver information to the RMIS, and includes an examination of how data on primary and secondary raw materials can be utilised by the RMIS. Secondly, the needs of the RMIS are considered in terms of the pre-computed views for the electronic mineral yearbook (e-MYB) and ProSUM e-stat module. The final component of the report describes how the RMIS could carry out thematic searches within non-structured knowledge. The report recommends that dedicated APIs are developed to provide a link between the different platforms and the RMIS.

Another deliverable (Recommendations for integration of results into the GeoERA Information Platform) recommends that the project works closely with the developers of the GeoERA GIP-P project to ensure consistent handling of the various interfaces and that the same data search on one platform delivers the same results on the other.

A third deliverable (Specification of steps needed for the integration of the e-Minerals Yearbook in the Minerals4EU database) has also been finalised. It outlines a pathway for integration of the e-MYB into the Minerals4EU database through the creation of a new data model. Work on the data model is ongoing in collaboration with WP2.

Work on a deliverable (Description of how data and information from the project are integrated into the Information Platform and guidelines for future maintenance) is ongoing and is expected to be finished soon. The deliverable will put the minerals inventory and e-Minerals Yearbook into the context of the GeoERA Information Platform (EGDI) and outline steps required for future maintenance of the system. The deliverable will also describe how the different dissemination interfaces are implemented, including portal solutions for end users and the various APIs that are designed for integration with the RMIS.

Finally, the possibility of implementing UNFC codes into Minerals4EU is also being explored.



Table 1: Internal project meetings in the reporting period

What	Character	When	Where	Who (participants)
Kick-off/ Project Assembly #1	Face-to-face	4 July 2018	Brussels, Belgium	All partners invited, 13 participated
PB meeting #1	Telecom	4 Sept. 2018	-	All WP leads, TC, some partners
PB meeting #2	Telecom	8 Oct. 2018	-	All WP leads, TC, some partners
Inception workshop	Face-to-face/webex	6 Nov. 2018	Ljubljana, Slovenia	WP1,3 and 5, TC, representatives for EGS, DG GROW, and for FRAME, ORAMA and REESERVE projects
PB meeting #3	Telecom	9 Nov. 2018	-	All WP leads, some partners
PB meeting #4	Telecom	11 Jan. 2019	-	All WP leads, TC, some partners
PB meeting #5	Telecom	15 Febr. 2019	-	All WP leads, some partners
PB meeting #6	Telecom	8 March 2019	-	All WP leads, some partners
PB meeting #7	Telecom	5 April 2019	-	All WP leads, some partners
PB meeting #8	Telecom	6 May 2019	-	The meeting was cancelled due to illness, instead a status on all WPs were sent to all partners.
PB meeting #9	Telecom	7 June 2019	-	All WP leads, some partners
PB meeting #10	Telecom	5 July 2019	-	All WP leads, TC, some partners
PB meeting #11	Telecom	6 Sept. 2019	-	All WP leads, TC, some partners
PB meeting #12	Telecom	4 Oct. 2019	-	All WP leads, some partners
Project Assembly #2	Face-to-face	16 Oct. 2019	Copenhagen, Denmark	All partners invited, 24 participated, hereof three via webex
PB meeting #13	Telecom	8 Nov. 2019	-	All WP leads, some partners
PB meeting #14	Telecom	6 Dec. 2019	-	All WP leads, some partners



Table 2: Deliverables in the reporting period

D#	Name	Due Date	Delivery Date
1.1	Data Management Plan	31/12-2018	30/01-2019
1.2	Project Management Plan/ Inception report	31/12-2018	30/01-2019
1.3	Management Report no. 1	31/12-2019	30/01-2020
1.4	Communication and Dissemination Plan	31/12-2018	22/01-2019
3.1	Minerals Inventory Report*	30/09-2019	30/09-2019
3.2	Technical Guidelines	31/10-2019	29/11-2019
5.1	Comparative analysis of KDPs resources versus RMIS 2.0 needs	30/06-2019	19/06-2019
5.2	Recommendations for integration of results into the GeoERA Information Platform	31/12-2018	25/01-2019
5.3.1	Specification of steps needed for the integration of the e-Minerals Yearbook in the Minerals4EU database	31/12-2018	23/01-2019
5.7.1	Description of how data and information from the project are integrated into the Information Platform and guidelines for further maintenance	31/12-2019	31/01-2020

\*The deliverable was originally due in month 12 but was delayed. An amendment changing the delivery month to month 15 was accepted by the Project Assembly in October 2019 and by the GeoERA Executive Board in December 2019.