

Current UNFC Developments in Europe

6th Event on the United Nations Framework Classification for Resources and the United Nations Resource Management System:

“UNFC to support harmonizing European raw materials information for resilient supply chains”

Co-organized by
UNECE, DG GROW, EuroGeoSurveys, HE projects “Geological Service for Europe” and “FutuRam”

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Hotel Plaza, Brussels - 16 November 2023



Raw Materials Week
13-17 November 2023

UNFC Testing on EU Grounds and Ongoing UNFC- related EU Projects



UNFC Case Studies – Minerals

Several **UNFC** Case Studies have been developed and tested in Europe on different minerals, including Critical Raw Materials

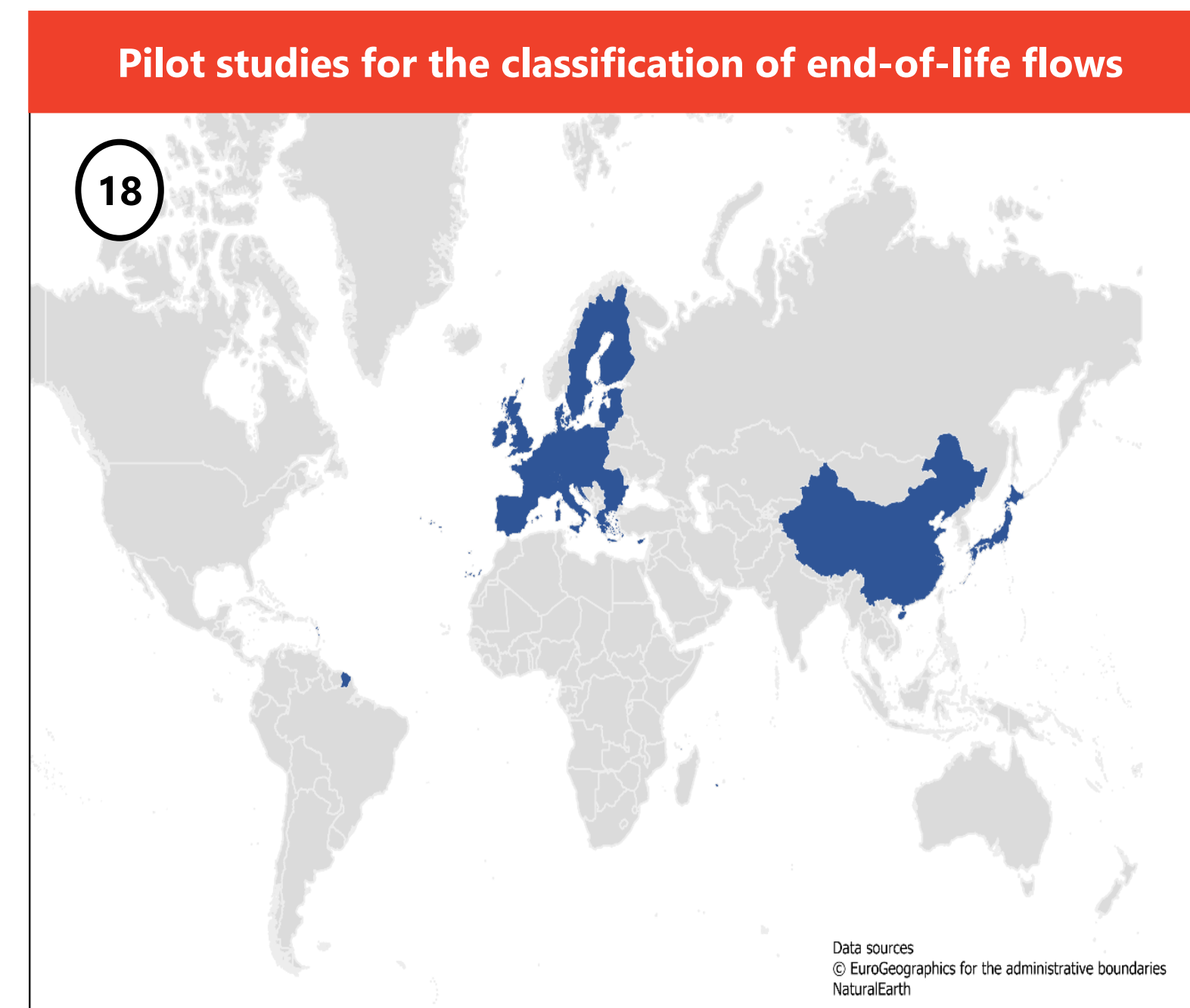
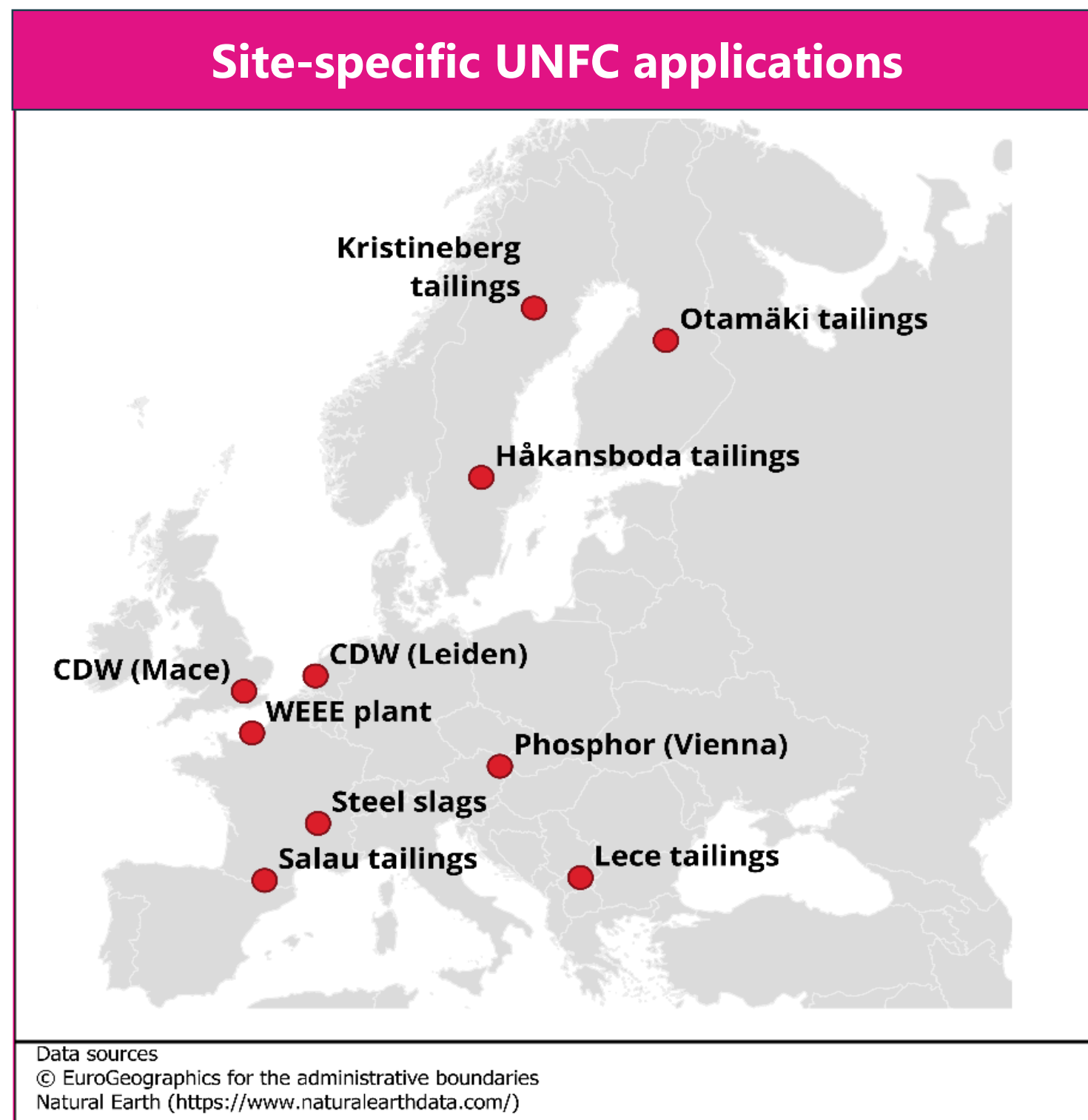
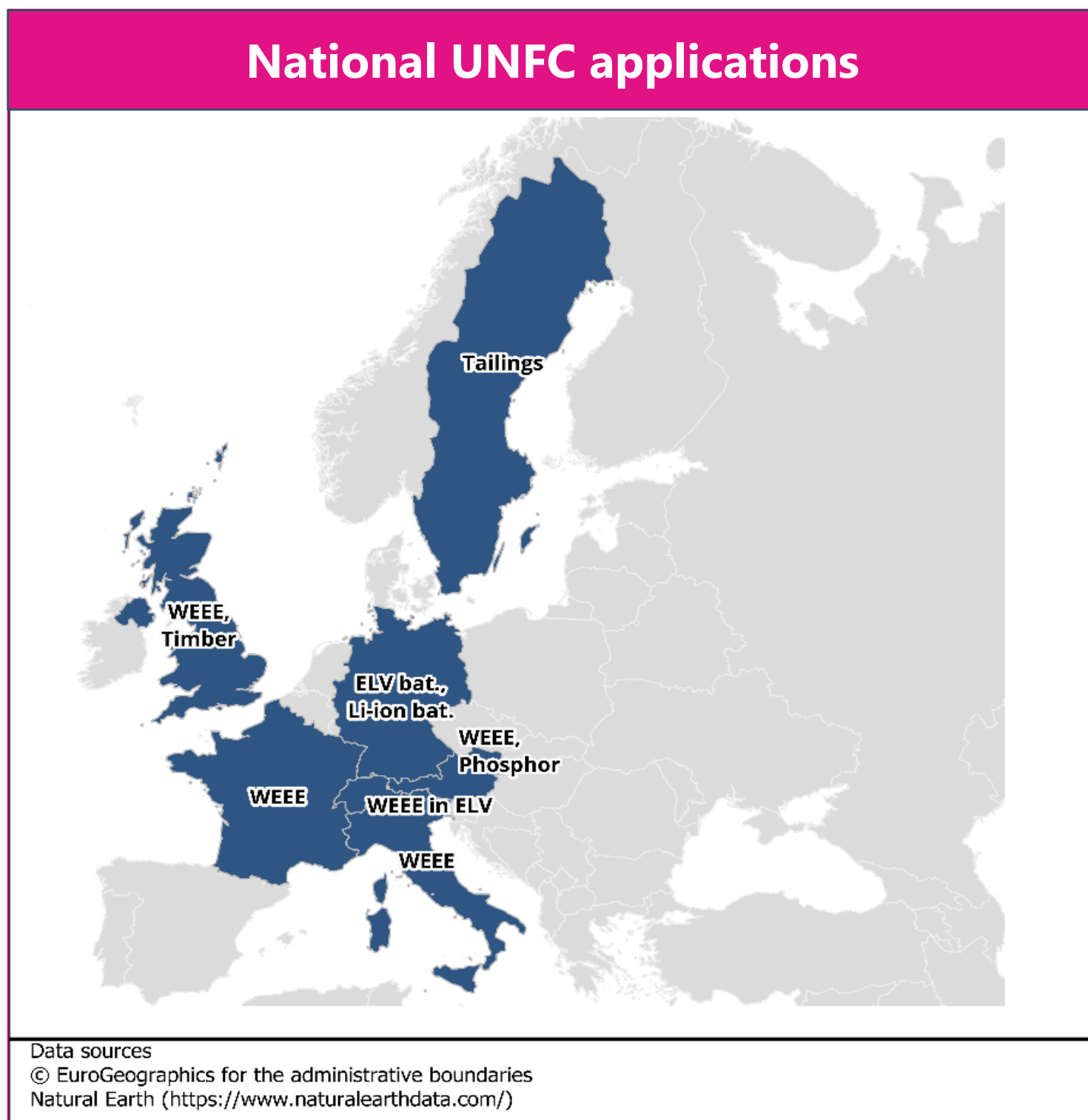
These Case studies help tailor UNFC to local requirements, and improve UNFC principles, specifications and guidelines

- A Guidance for the Application of the UNFC-2009 for Mineral Resources in Finland, Norway, and Sweden – 2017
- UNFC Case Studies from Finland/Estland, Sweden and Norway – Nordkalk limestone and Forsand sand and gravel mines – 2020
- UNFC Case Study from Austria - Sand and Gravel Resources in Greenfield Areas – 2022
- UNFC Case Study: Rare Earth Elements, Exploration Prospects and Secondary Resources in Sweden – 2022
- UNFC – A Case Study on Graphite – 2022
- UNFC Case Study: Titanium deposit, the Piampaludo exploration project in Italy -2023

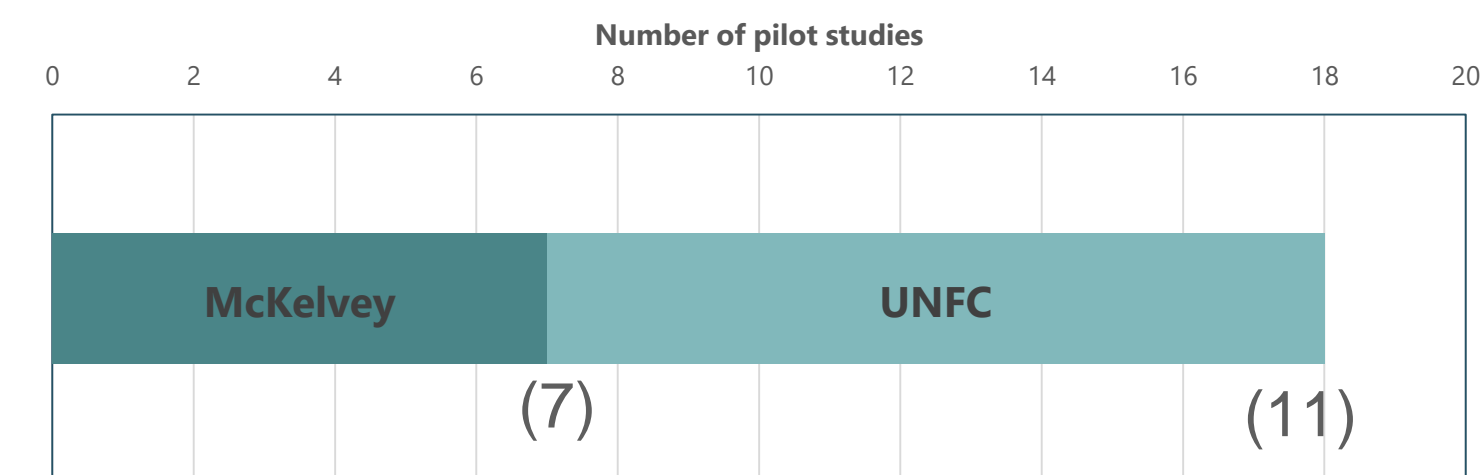


UNFC Case Studies on mineral resources in EU

UNFC Case Studies – Anthropogenic Resources



Recycling: End-of-Life flows



Modified from: Kral, U., & Solar, S. (2023, June 28). United Nations Framework Classification for Resources including case studies on anthropogenic resources and its provisions on the Critical Raw Materials Act proposal. e-waste expo, Frankfurt, Germany. Zenodo. <https://doi.org/10.5281/zenodo.8378577>

Harmonized UNFC implementation

Reporting standard including UNFC

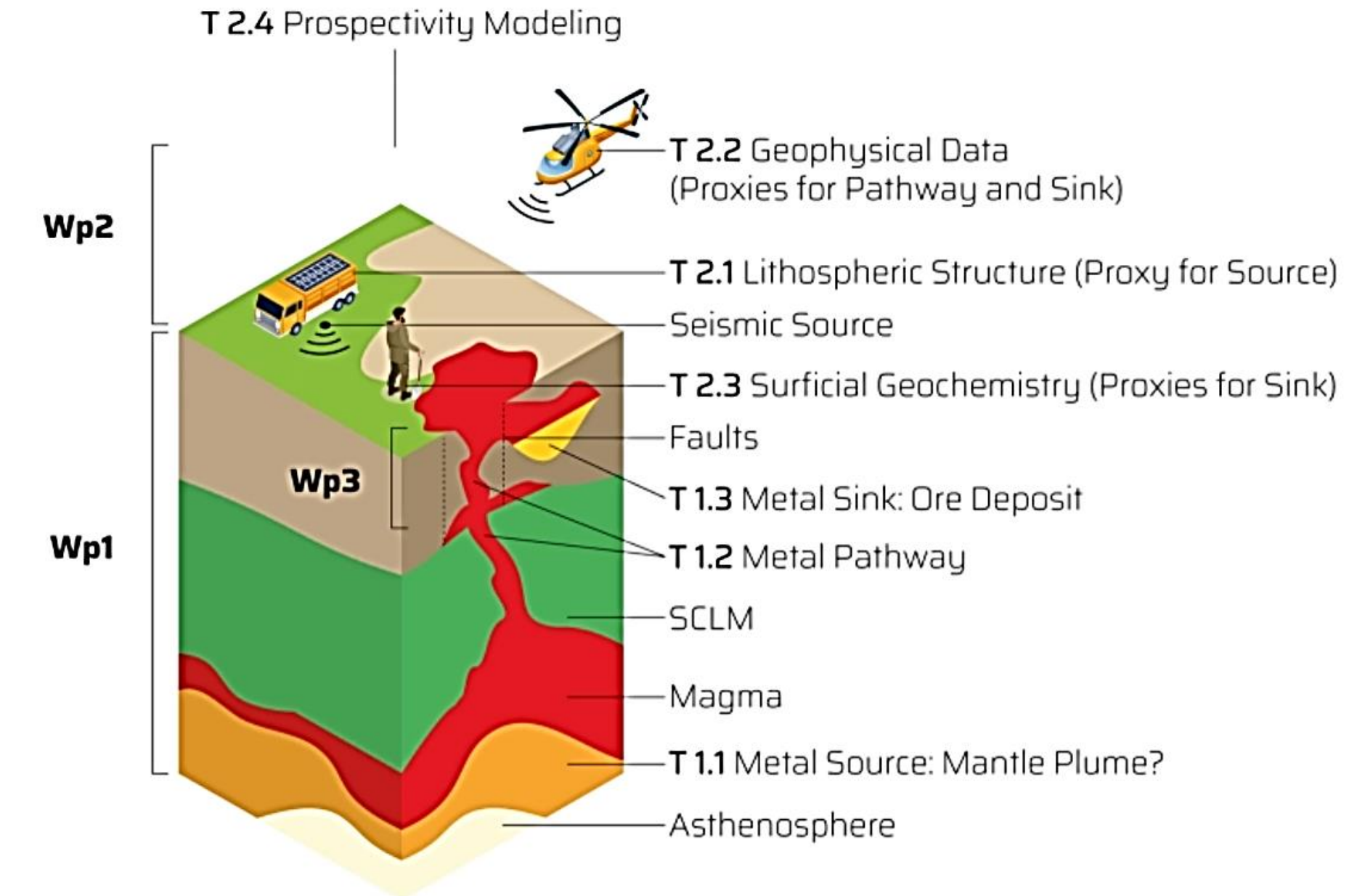
EU PROJECT, 2022-2026, www.futuram.eu

This project aims at developing socially and environmentally sustainable means of finding (=exploration) orthomagmatic Critical Raw Materials applying the Mineral Systems Approach to guide exploration and deliver our main goals:

- 1 Improved formation models for orthomagmatic mineral deposits.
- 2 Develop new exploration methods to identify areas of higher potential, from regional to local scale.
- 3 Promoting social awareness on the importance of responsible exploration and mining through collaboration between geosciences and social sciences.

Mineral Systems Approach

Translating the Mineral Systems Approach to large scale regional (or green field) exploration.

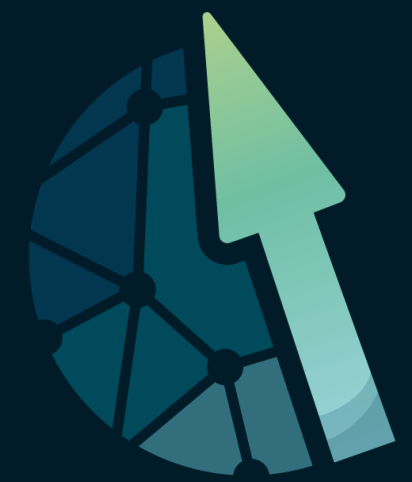


WP5 - Mineral resource mapping (CGS)

This WP aims to collect actual data in line with the UNFC code and UNRMS system to assess the exploration and production potential of key metals hosted by orthomagmatic ore deposits (Ni, PGE, V, Ti, Cr, Cu) in the EU.



VECTOR Project



Overall Project Aim. To assess the complex social, environmental and technical challenges to the development of a responsible and sustainable domestic supply of critical raw materials within Europe.

UNFC Link. Social, environmental and technical challenges to the resourcing of critical raw materials are assessed by UNFC.

Ongoing UNFC Work. We are assessing the availability of open-source data and the feasibility of UNFC implementation through these data sets.

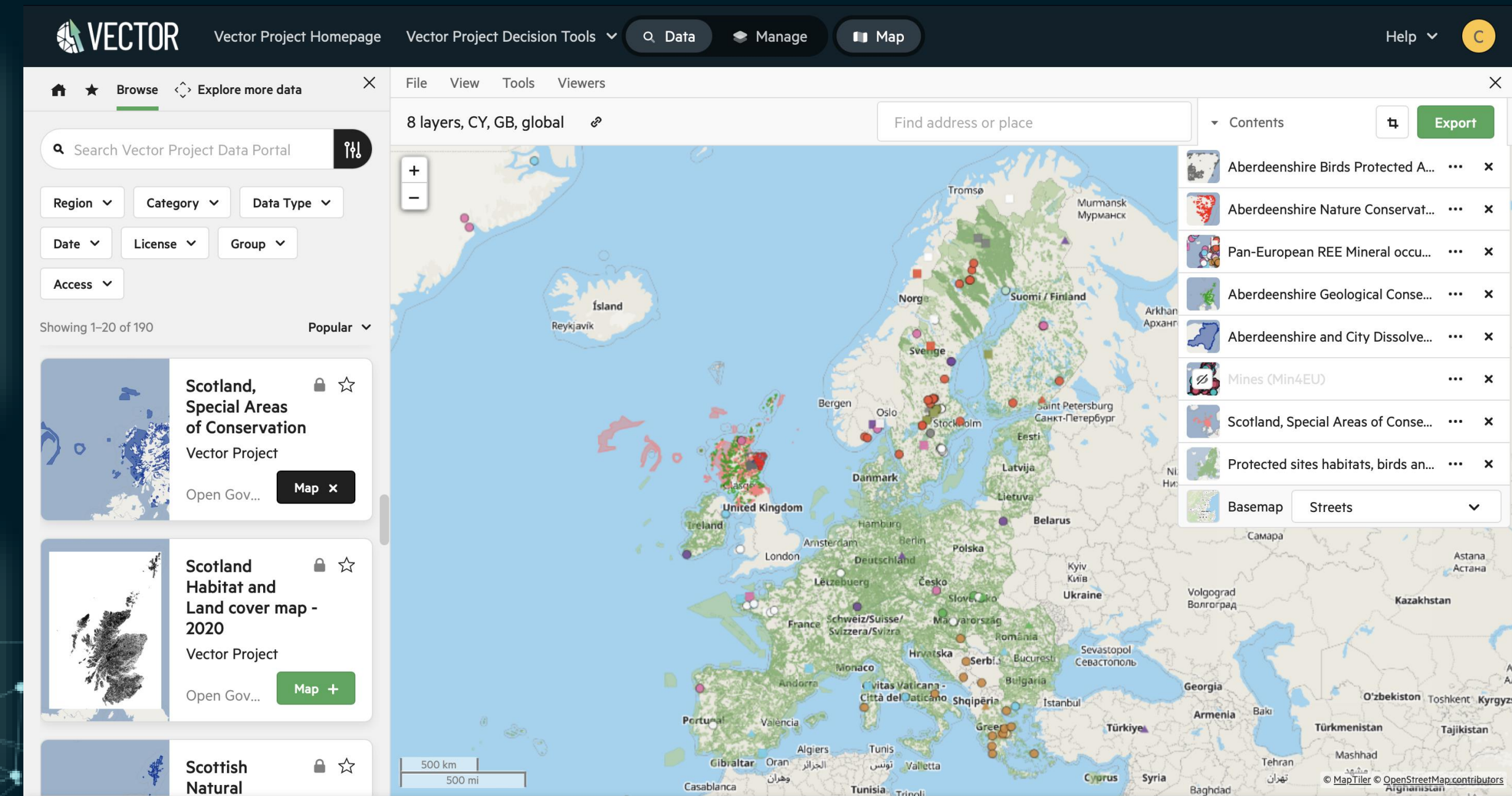


Figure. VECTOR Data Portal (data.vectorproject.eu). All of the open-source data inclusive of case study areas currently being worked on.

Agile Exploration and Geo-modelling for European Critical Raw Materials



- Geological and geophysical surveys to unlock the CRM potential in Europe
- Improving the genetic mineral system models of the CRM deposit types using the collected data
- Survey citizens in the partner countries, CRM educational package targeting schools and universities
- Introduce the UNFC application guidance through stakeholders, courses and public events
- University courses on CRMs: Promote the utilisation of UNFC and UNRMS as reporting standards

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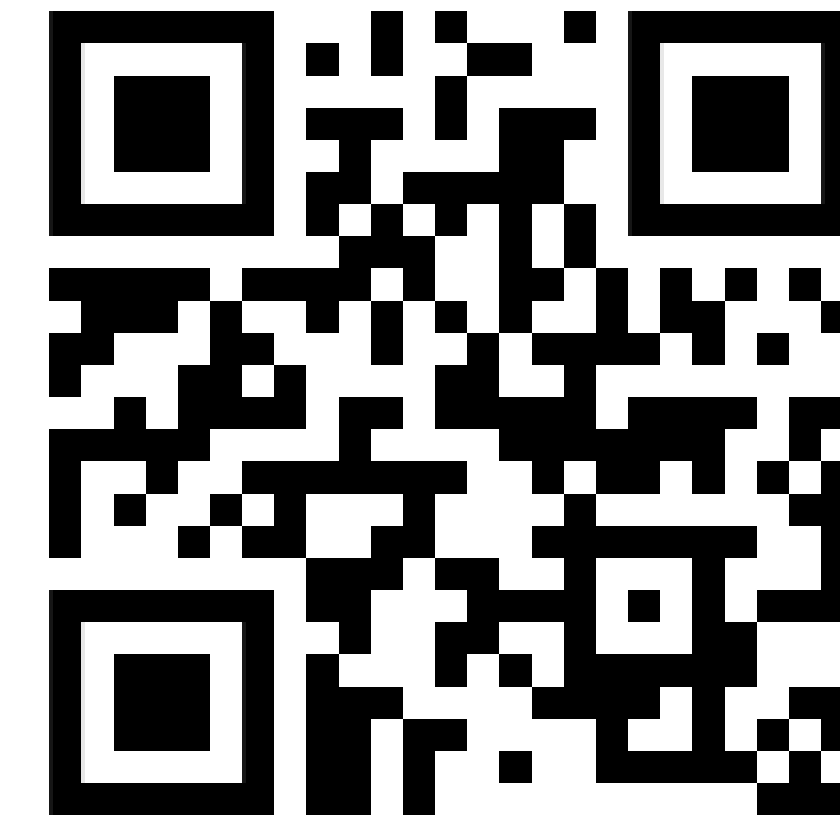
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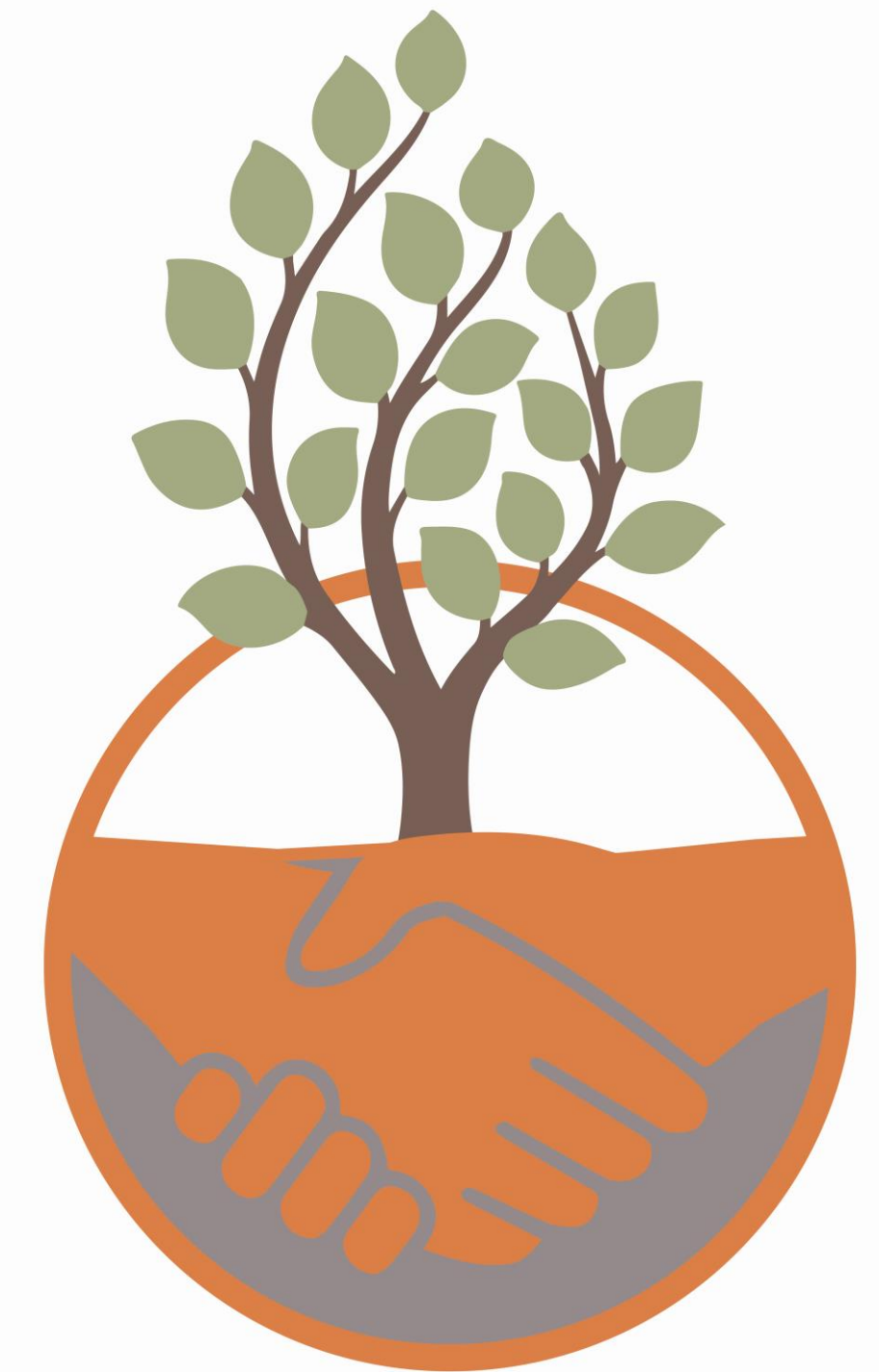
Critical RAW Materials extraction in eNvironmentally protected areas

Aim

CIRAN is identifying processes that enable **balancing economic stability** and **CRMs supply security** with **social well-being** and **environmental conservation** priorities across the EU

Links to UNFC and UNRMS

CIRAN recommendations for streamlined resource management seek the **equilibrium of benefit** to environment, society, and economy, embedded in the UNFC and the UNRMS.



EU Current Situation and Critical Raw Materials Act Proposal



EU Raw Materials Classification

- **EU has currently no unified** classification system for mineral resources neither aggregated commodity figures with the same classification system
- **EU Member States** have adopted **different** mineral resources classification and reporting systems
- The most common ones are UNFC-Based National Classification Systems, Soviet-Based, and CRIRSCO International Reporting Template
- **Data collection** across EU Member States can be divided into 5 groups:
 - **Central collation of information** based on **national reporting system** (GKZ based)
 - **Central collation of information** based on **international reporting systems** (CRIRSCO Template)
 - **Central collation of information** based on **national system** (UNFC-based)
 - **Central collation of information** based on **own national system**
 - **Incoherent data collection** based on **national system or without system specification**

EU CRM-Act – UNFC Provisions

UNFC Provisions

UNFC Post-Enactment

Strategic Projects

Article 5: Criteria for recognition of Strategic Projects

UNFC is key in the recognition of Strategic Projects – **Project promoters** are required to classify their projects in **UNFC** for the **Strategic Project Application to the Commission**.

National Exploration Projects

Article 18: National exploration programmes

Member States will have to intensify their National Exploration Programs – **Exploration results are required to be reported in UNFC**

Risk Monitoring

Article 20: Information obligations for monitoring

New and existing projects are to be reported by the Member States to the Commission – **UNFC is obligatory for monitoring new projects**.

Extractive Wastes

Article 26: Recovery of critical raw materials from extractive waste

As part of National measures on circularity, CRM recovery from extractive wastes is encouraged – **UNFC is required when reporting on extractive waste facilities**.

EU CRM-Act & UNFC – Action Plan

1. UNFC Thematic Template with Strategic, Exploration, Monitoring, and Recycling modules

Coordination: DG GROW, UNECE, GSEU and FutuRaM

2. Workshops and Trainings – Capacity Building

3. National Guidance / Recommendations

- Consistent use across Europe
 - UNFC Guidance on national level based on UNFC Guidance Europe
 - National level Guidance
 - Comparable between primary and secondary raw materials
 - Simple procedures / evidence-based classification

- Countries
 - With national reporting - bridging
 - Without national reporting – template/form



UNECE is Coordinating the UNFC activities on behalf of DG GROW



THANK YOU



Raw Materials Week
13-17 November 2023

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