FRAME
FORECASTING AND ASSESSING EUROPE'S STRATEGIC RAW MATERIALS NEEDS

DELIVERABLE 1.2

Ethical Requirements (consent procedures, protection of personal data)

WP1 Coordination

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 731166

GeoERA RAW MATERIALS

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Disclaimer

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This document examines the major concepts of data protection and privacy from the point of view of research ethics. It aims at raising awareness about these concepts in the scientific community and at assisting applicants while preparing to submit their project proposals. It does not seek to discuss these concepts in-depth but provides a general overview of their main parameters and some basic suggestions regarding their handling for the purposes of the European Commission's Ethical Review procedure.

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Purpose

This document presents the ethical requirements and protection of personal data of the consortium of the FRAME project. It serves as a guideline for the must-do's and must not-do's required to safeguard the consent procedures and personal information data.

The document is intended for both internal and external readers. Its dissemination level is Public. This document is under the responsibility of Work Package 1 (WP1). Amendments, comments and suggestions should be sent to the WP1 work package leader: Daniel de Oliveira.
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Executive Summary

The present document is a deliverable of the Forecasting and Assessing Europe's Strategic Raw Materials needs (FRAME) project, which is funded by the European Union's Horizon 2020 Programme under Grant Agreement 731166.

The document presents the ethical requirements to safeguard the consent procedures and protect of personal data of the consortium of the FRAME project partners and stakeholders.

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Deliverable report

Introduction

The project "Forecasting and Assessing Europe's Strategic Raw Materials Needs" (FRAME) will build on previously and currently developed pan-European and national databases, and expand the strategic and CRM knowledge trough a compilation of mineral potential and metallogenic areas of critical raw materials resources in Europe, focused on related metal associations on land and the marine environment. Secondary resources, in terms of historical mining wastes and potential by-products will also be considered. The mineral resources targeted will have to extend beyond the current EU CRM list and include also minerals and metals (e.g. lithium, copper, and manganese) that are strategic for the European downstream industry in the mid- and long-term perspective. This project will collect and act as a source of mineral information data that will support the continuous work going on in the DG-Grow, Raw Materials Supply Group and the Ad Hoc Working Group on Criticality of the EU commission.

The FRAME consortium is composed of Geological Surveys from 19 European Countries.

FRAME project is led by the *National Laboratory of Energy and Geology (LNEG)* and supported by 18 additional leading organizations (Federal Institute for Geosciences and Natural Resources, Bureau de Recherches Géologiques et Minières, Czech Geological Survey, Geological Survey of Estonia, Geological Survey Sweden, Geological Survey Ireland, Geological Survey of Finland, Geological Survey of Croatia, Greek Institute of Geology and Mineral Exploration, Instituto Geológico y Minero de España, Mining and Geological Survey of Hungary, Geological Survey of Norway, Polish Geological Institute, Royal Belgian Institute of Natural Sciences, State Informational Geological Fund of Ukraine, Institutul Geologic al României, Geološki Zavod Slovenije, Istituto Superiore per la Protezione e la Ricerca Ambientale).

The Project will:

- Identify and define the strategic minerals and metals that will make part of the metallogenetic map and related interpretations, focused on the current list of CRM, but considering also the strategic importance of some of those which were among the original candidates, such as phosphate rock, lithium, graphite, cobalt, niobium, tantalum, and others such as selenium, silver, copper, manganese, lead and iron ore.

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All minerals and metals collected and selected to be part of the metallogenetic map will simply go under the term CRM.

- Produce a metallogenetic map and increase the knowledge on the CRM endowments and resource potential in Europe and EU seas, based on,
    - Mineralisations and deposits on land and the marine environment in which CRM make the main commodities, e.g. REE minerals related to carbonatite, nepheline syenites, pegmatites or paleoplacers, tungsten deposits related to granites, lithium feasible pegmatites, graphite hosted by schists.
    - Mineralisations and deposits on land and the marine environment in which CRM make associated commodities, e.g. REE in bauxite deposits and manganese nodules; cobalt in nickel deposits and ferromanganese crusts; vanadium in iron-titanium deposits;, indium and tellurium in VMS and epithermal gold deposits
    - Secondary resources, in terms of historical and modern mineral-based mining wastes (waste rocks, processing tailings, metallurgical residues) and by-products, e.g. REE in apatite concentrates related to iron extraction and red mud derived from alumina refining; indium in the waste streams of lead-zinc sulphide mining.
- Better understanding of the ore genetic links between major deposit types and hosted critical mineral and metal associations. Understanding also the mineralizing processes in different environments, including current deep sea, and using this understanding to predict and develop new mineral deposits or deposit types. This research also involves the characterization of ores, rocks, primary and secondary deposits etc. for significant elements and minerals, whose importance has increased and/or which represent cases where the occurrence is poorly understood or constrained. This objective and target will be interlinked and interactive with the tasks undertaken and the achievements resulted from GeoERA RM3 Metallogeny that will address the main deposit types and commodities.
- Be able to identify conditions and processes involved in the formation of the STR and CRM-potential deposits and develop conceptual models for their formation.
- Predictive targeting based on GIS exploration tools, of high potential mineral provinces and mining districts.
- Provide potential CRM resource estimates based on the UNECE classification system in close cooperation with RM 1/WP 5 on UNCF system.

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- Display and distribute the map and description on the Information platform.
- Highlight mineral resources criticality to high-tech economy and downstream sectors.

This project will collect and act as a source of mineral information data that will support the continuous work going on in the DG-Grow, Raw Materials Supply Group and the Ad Hoc Working Group on Criticality of the EU commission.

Ethical Requirements

For all activities funded by the European Union, ethics is an integral part of research from beginning to end, and ethical compliance is seen as pivotal to achieve real research excellence. There is clear need to make a thorough ethical evaluation from the conceptual stage of the proposal not only to respect the legal framework but also to enhance the quality of the research. Ethical research conduct implies the application of fundamental ethical principles and legislation to scientific research in all possible domains of research.

The European Commission is very clear on what it considers as best practice for the protection of personal data. For the purpose of this deliverable report, the document listed in the link: http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/ethics_en.htm is used.

FRAME Ethics

The initial Project Proposal submitted clearly undertook a look at the ethics and security aspects of the project. As such, the following aspects were reviewed in line with the guidelines set out by the EU Commission:

Does your research involve Human Embryonic Stem Cells (hESCs)?	NO
Does your research involve human participants?	NO
Does your research involve human cells or tissues	NO
Does your research involve personal data collection and/or processing?	NO
Does your research involve animals?	NO
In case non-EU countries are involved, do the research related activities undertaken in these countries raise potential ethics issues?	NO

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Does your research involve the use of elements that may cause harm to the environment, to animals or plants?	NO
Does your research involve the use of elements that may cause harm to humans, including research staff?	NO
Does this research involve dual-use items in the sense of Regulation 428/2009, or other items for which an authorisation is required?	NO
Could your research raise concerns regarding the exclusive focus on civil applications?	NO
Does your research have a potential for misuse of research results?	NO
any other ethics issues that should be taken into consideration	NO

Additionally, FRAME will not involve any activities or results raising security issues and will not use 'EU-classified information' as background or results.

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