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Updating Knowledge on European Countries' Regulatory Framework of Minerals

*Proceedings of the Session
"Updating Knowledge on Member States'
Governance of Exploration and Mining"
of the
Third International Workshop on the European
Union Raw Materials Information System*

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Foreword

The Raw Materials Information System (RMIS) is the Commission's reference web-based knowledge platform on non-fuel, non-agriculture raw materials. The first version of the RMIS was released in 2015 as a permanent website under the JRC Science Hub. The markedly upgraded RMIS 2.0 was presented in details in the 2017 "RMIS Roadmap & Progress Report" and launched at a dedicated session of the 2017 "Raw Materials week" event in Brussels.

Policy and legislation, and good governance in a broader sense, have been major functional elements of RMIS since its launch, as well as presentation and discussion topics at the series of the annual RMIS workshops (2017, 2018, 2019), and at the "Raw Materials Knowledge Base Events" in frame of the annual EU Raw Materials Week(s).

This report is an attempt to start filling the gap in the printed documentation of the above events, and to provide a review of the state-of-art and a short summary on how progressive national regulatory solutions can be integrated into national and Community level information systems in order to serve the widest possible spectrum of end-user stakeholders and interested public. In addition, this report contributes to the efforts of DG GROW in support of the Second (Domestic) Pillar of the EU Raw Materials Initiative (RMI) by promoting the annual updates on the EU Member States regulatory profiles based on the MINLEX report (2017)¹.

The primary objective of the workshop session and of the authors is to share practices and experience on the framework conditions' information and knowledge management. This report does not target at any comparison or benchmarking of the individual solutions in Member States. In this respect, the conclusions drawn are summaries in nature, the lessons learnt address mainly proposals with regard to the future development of the Raw Materials Information System.

¹ European Commission, 2017: Legal framework for mineral extraction permitting procedures for exploration and exploitation in the EU. „The MINLEX study“ <https://publications.europa.eu/en/publication-detail/-/publication/18c19395-6dbf-11e7-b2f2-01aa75ed71a1/language-en/format-PDF;http://www.minlex.eu/index.html>

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1 Introduction

1.1 Objectives & structure of this report

This report presents and summarizes the achievements of the Session “Updating Knowledge on Member States’ Governance of Exploration and Mining” of the Third International Workshop on the European Union Raw Materials Information System, held at JRC-Ispra on the 11th and 12th of June, 2019. The Session had a special focus on:

- How European Union Member States national policy and legislation making, and regulatory permitting practices face the challenge of ensuring at least a part of the sustainable supply of non-fuel primary raw materials (minerals) of their economies from domestic sources, in compliance with the objective of the Second Pillar of the EU Raw Materials Initiative.
- How these legal framework conditions are accessible for interested stakeholders in information systems on national scale, and how this information shall be integrated into RMIS serving a wider stakeholder spectrum as a one-stop gateway to the core of that knowledge.

In meeting the above objectives, the structure of the report follows a disciplinary approach by providing:

- an introduction to the broader context of good governance, definitions, the knowledge management principles at JRC, and the relevant current functionalities of RMIS;
- an academic review on how sectorial policies and implementing legislation can be harmonized;
- a series of country specific summaries on the recent progress of the national legislation and related information management;
- a summary on the selection of progressive regulatory solutions and their related knowledge management that may be of interest for a wider stakeholder audience beyond the participants attending the workshop;
- for the due documentation, the agenda of the workshop and the slides of the presentations are annexed to the report.

The above structure, in essence, follows the agenda of the workshop session.

The title of this volume is extended to “European countries” as compared to the original title of the Session because of the presentation from Norway, the member of the European Economic Area.

1.2 Background & context

The European Commission's (EC) Raw Materials Initiative (RMI) emphasizes that raw materials are essential for the sound and sustainable functioning of Europe's industries and, in a broader context, of Europe's economy and society. The EC is committed to promote the competitiveness of industries related to raw materials. These industries play an important role in many downstream sectors in the European Union (EU) such as construction, chemicals, automotive, aerospace, machinery, pharmacy, equipment, renewable energy devices, and defense. These sectors have a combined added value of around EUR 1,000 billion and provide employment for some 30 million people.

Securing an undistorted supply of raw materials and, in particular, Critical Raw Materials (CRMs) is thus crucial and requires a sound and continuously developed knowledge base, namely the European Union Raw Materials Knowledge Base (EURMKB), as highlighted in the Strategic Implementation Plan (SIP) of the European Innovation Partnership (EIP) on Raw Materials.

The need for a European Union Raw Materials Knowledge Base (EURMKB) is highlighted in the Action area no. II.8 of the 2013 Strategic Implementation Plan (SIP) for the European Innovation Partnership (EIP) on Raw Materials. In addition to the work initiated by DG GROW under the framework of EURMKB², and responding to a specific action of the Commission's Circular Economy Communication (EC, 2015)³, DG Joint Research Centre (JRC) is continuing to further advance the Raw Materials Information System (RMIS).

² European Union Raw Materials Knowledge Base (EURMKB), 2017, http://ec.europa.eu/growth/sectors/raw-materials/specific-interest/knowledge-base/index_en.htm

³ European Commission, 2015 Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions – Closing the loop: towards a Circular Economy for Europe, COM(2015) 614 final (https://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF)

The first version of the RMIS (hereinafter “RMIS 1.0”) was released in 2015 as a permanent website under the JRC Science Hub. The markedly upgraded second version (hereinafter “RMIS 2.0”, or simply “RMIS”) was announced in the 2017 “RMIS Roadmap & Progress Report”⁴ (Manfredi et al., 2017) and was officially launched during the 2017 “Raw Materials Week” event⁵, organized by DG GROW in Brussels. RMIS 2.0 broadened the goal and scope of RMIS 1.0, significantly expanded the network of its knowledge providers, and responded – often in quantitative terms – to the latest policy and knowledge needs on raw materials. In particular, important thematic sections such as “raw materials’ profiles”, “country profiles”, “supply chain viewer” and “raw materials knowledge gateway” were included.

1.3 The Third International Workshop on the European Union Raw Materials Information System

Following the success of the 2017 and 2018 editions, the 3rd International RMIS workshop (June 11-12, 2019, JRC Ispra site (VA), Italy) brought together key RMIS knowledge providers, targeting the most recent developments in the field of primary and secondary raw materials value chains (see its Agenda in Annex I). It provided insights on how RMIS addresses knowledge and policy needs related to e.g. social and environmental assessment of raw materials supply chains, national legislation, specific Secondary Raw Materials (SRMs) and Critical Raw Materials (CRMs), and material efficient end-of-life processes.

Figure 1. Group photo taken at the 3rd RMIS Workshop, June 2019



The 2019 RMIS workshop included discussion with participants, with a view of strengthening the networking and knowledge sharing with key stakeholders and further advancing key thematic areas in RMIS.

The sessions of this 3rd workshop focused on:

- Social challenges and responsible sourcing aspects associated with supply chains of non-energy, non-agricultural raw materials, with a view to identifying key knowledge needs, availability, and gaps that could be filled.
- How RMIS provides knowledge on raw materials related legislation at EU Community and Member States levels, with a view of identifying further needs, gaps and recent national legislation updates in the EU Member States.
- The current and potential roles of RMIS in increasing the availability of knowledge on secondary raw materials, zooming in on the knowledge on specific secondary (critical) raw materials.

Subsequent to the 3rd RMIS workshop, a joint JRC-ORAMA workshop was held (June 13th) at the EC DG JRC (Ispra). The Horizon2020 ORAMA project (Optimizing quality of information in Raw Material data collection across Europe)⁶ focuses on improving data collection for primary and secondary raw materials in the Member States of the EU, therefore it has close ties with the Joint Research Centre’s Raw Materials Information System (RMIS).

This 3rd RMIS workshop attracted 70+ participants from 20 countries, including non-EU countries such as Norway and Switzerland. The affiliation of the attendees was evenly distributed across the national government

⁴ Available on line at this address: http://publications.jrc.ec.europa.eu/repository/bitstream/JRC106005/rmis_roadmap__progress_report - final - final - online.pdf

⁵ https://ec.europa.eu/growth/content/raw-materials-week-2017_en

⁶ <https://orama-h2020eu/>

sphere, academia (incl. R&I entities and universities), and, to somewhat less extent, industry. The European Commission was represented by DG JRC, DG GROW, DG ENV, and DG DEVCO. As well, the representatives of two EU agencies took part, EASME, EEA, and the EIT Raw Materials.

2 Setting-the-scene of the Session

2.1 Framework conditions in RMIS: Current actions and future plans

2.1.1 Goal and scope of the Session

The Session “Updating Knowledge on Member States’ Governance of Exploration and Mining” was preceded by the Session “Social and environmental knowledge on raw material supply chains”, which focused on the global aspects of good governance and the social and environmental sustainability context (international mineral governance, due diligence, voluntary performance schemes in the sector, relevant aspects of specific material value chains, consumers’ attitude). The Session in subject of this report complemented well to the previous Session with a detailed focus on the EU and its Member States’ policy and regulatory framework assessment with discussing the ways of their knowledge management.

In the original Agenda of the workshop, attached to the circular distributed among participants, had the following introduction to the Session:

This session aims at presenting how RMIS addresses primary raw materials related legislation at EU Community and Member States national levels, with a view of identifying further needs, gaps and discussing options for improvements. To this end, the presentations are expected to bring in the national perspective, also with a view on the global trends, and Community benchmarking and harmonization efforts, as well as better support for the implementation. Specific objectives include:

- *How global trends could be reflected in RMIS in the broad context of good governance, including the Social License to Operate scheme, and the need for conceptual change.*
- *Examine the role of sectoral policies as drivers and frames for sustainable development of the domestic extractive sector.*
- *Assess and discuss progressive new solutions from national scale legal acts and best regulatory practices, and their ways of integration into RMIS.”*

With a view on the above objectives, the national contact persons of the EU Member States at the Raw Materials Supply Group (RMSG NCPs) received an invitation from the organizers, inter alia, with the following questions to be addressed in their contribution, echoing in part the above objectives, and also adding a few specific ones:

- *“What are the recent national implementation experiences worth sharing in the context of exploration and mining, facing the regulatory/legislative framework at European, national, regional or local levels?*
- *What are the current trends and plans in your country on policy making and strategic thinking with regard to raw materials (e.g. change in primary and secondary minerals policy, new strategic reports, changes in other sectoral policies that affect this sector, streamlining efforts, etc.)? Could one expect game changers in the foreseen strategies?*
- *What is the approach taken by exploration and mining companies operating in your country to the PERC (Pan-European Reporting Standards) or IFRS (International Financial Reporting Standards) and what are the problems you noticed related to this topic?*
- *How could RMIS better serve the interests of MS (or regional) scale governments and help them sharing their knowledge on the framework conditions?”*

In addition, as mentioned already in the “Foreword”, this report also contributes to the efforts of DG GROW in support of the Second (Domestic) Pillar of the RMI by promoting the annual updates on the EU Member States regulatory profiles based on the MINLEX report (2017)⁷. In the request for the annual update by DG GROW the following new questions were added to the original country profile schemes:

- *“Do you have national or regional guidance document or a piece of legislation specific to Environmental Impact Assessment on mineral extraction? If yes, please provide.*
- *Could you please specify at which permitting stage is a detailed EIA is required in your country?*
- *Does your country apply the option of Article 4(b) of the EIA Directive („... for projects listed in Annex II, Member States shall determine whether the project shall be made subject to an assessment in*

⁷ European Commission, 2017: Legal framework for mineral extraction permitting procedures for exploration and exploitation in the EU. „The MINLEX study” <https://publications.europa.eu/en/publication-detail/-/publication/18c19395-6dbf-11e7-b2f2-01aa75ed71a1/language-en/format-PDF;http://www.minlex.eu/index.html>

accordance with Articles 5 to 10 through thresholds or criteria set ...) for mining projects? If yes, under what criteria?

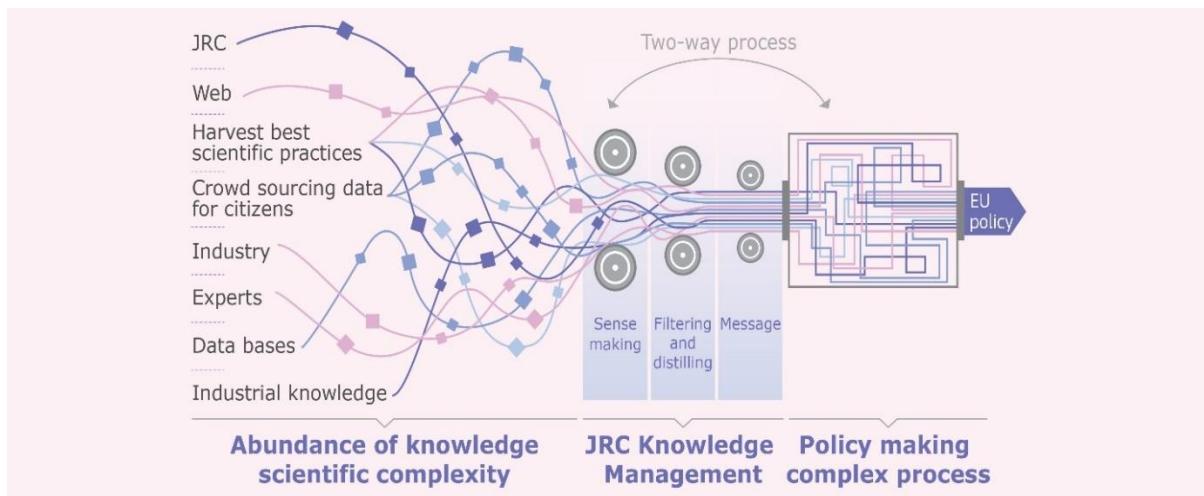
- Was there any case in your country when Article 10 of the EIA Directive was applied („limitations ... with regard to commercial and industrial confidentiality, incl. intellectual property, and safeguarding of public interest“)? Which were these?
- Do competent authorities in your country apply the IPPC permit and the Extractive Waste BREF for mining under the scope of Industrial Emissions Directive?
- Do you have national BREF(s) (Best Available Technique Reference Document(s)) specific to the whole (or stages or subsectors) minerals extractive sector?"

Obviously, it was impossible to cover all the above aspects in the 10-15 minutes presentation that was available for the NCPs, therefore, the emphasis was on the country's novel regulatory and related knowledge management solutions from which other participants could benefit.

2.1.2 Knowledge management at the JRC and RMIS

The Commission Communication on Data, Information & Knowledge Management (C(2016) 6626), {SWD(2016) 333 final}) allocates sound duties to JRC in science and technology evidence based policy support on the Community level. The JRC also generates original data but the vast majority of its knowledge management activity is related to the added value by performing data collection and re-structuring, sense making, filtering, visualization and serving of data and resulting policy briefings for the European Commission but also to other Community level decision makers⁸. The information comes from many sources from crowd sourcing to universities and industry to individual experts. Further, it should be noted that the process is 2-way and dynamic both in the information and policy making domains.

Figure 2. Visualization of Knowledge Management at the JRC (Vladimír Šucha, 2019)⁹



The institutional and instrumental manifestation of the above mandate and strategy of JRC are Directorate D on Knowledge Management, the vertical (thematic) Knowledge Centres (e.g. KC for Bioeconomy), the horizontal (methodology-driven) Competence Centres (e.g. CC on Modelling), and the Communities of Practice (CoP) which are the spontaneous aggregations around scientific topics. The JRC explicit knowledge is openly accessible¹⁰.

The Raw Materials Information System (RMIS) is the Commission's reference web-based knowledge platform on non-fuel, non-agriculture raw materials. The first version of the RMIS was released in 2015 as a permanent website under the JRC Science Hub. The markedly upgraded RMIS 2.0 was presented in details in the 2017

⁸ http://publications.jrc.ec.europa.eu/repository/bitstream/JRC110151/2017-12-07_a3-leaflet_km-infographics.pdf

⁹ Šucha, V., Knowledge Management at the JRC – Approach and lessons learned, Presentation at ECB meeting 23rd January 2019

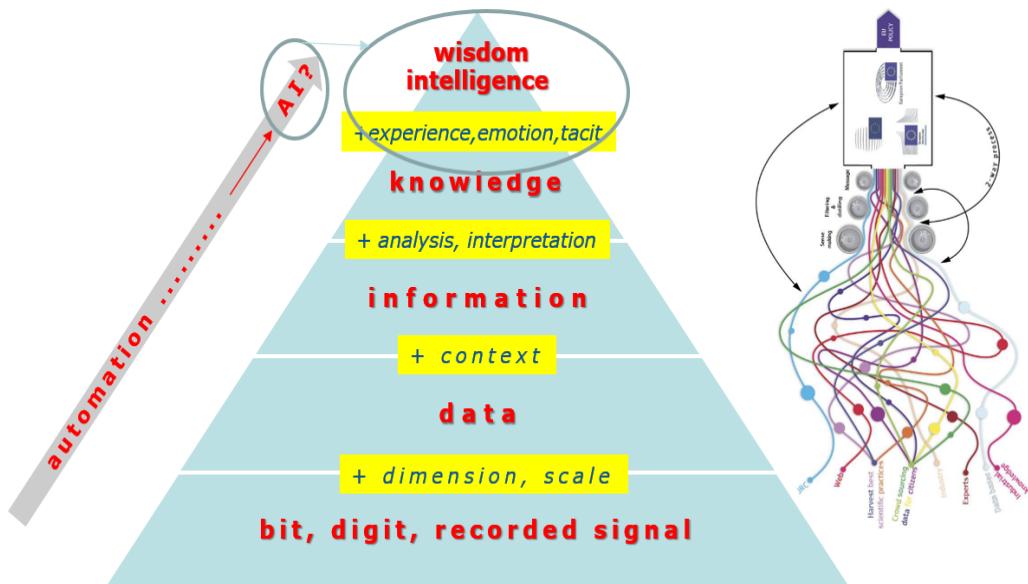
¹⁰ EU Science Hub: ec.europa.eu/jrc; Twitter: @EU_ScienceHub; Facebook EU Science Hub - Joint Research Centre; LinkedIn: Joint Research Centre; YouTube: EU Science Hub

“RMIS Roadmap & Progress Report”, launched during the 2017 “Raw Materials week” event, in Brussels, as well as in the second periodical progress report in 2019¹¹.

Policy and legislation, and good governance in a broader sense, have been major functional elements of RMIS since its launch, as well as presentation and discussion topics at the series of the annual RMIS workshops, and at the European Raw Materials Knowledge Base Events in frame of the annual EU Raw Materials Week(s). Law and social sciences are generally considered as “soft-sciences” which are not based on factual quantitative data. Although this opinion might be valid when compared to nature sciences and engineering, good governance and framework conditions are increasingly captured in quantitative figures and indicators (e.g. EU Raw Materials Scoreboard)¹².

On the other hand, legislation, in an ideal case, represents the joint wisdom in democratic systems, and often quoted as a major driver for innovation too. In this regard, legislation together with other framework conditions and good governance has an important position in the knowledge management hierarchy in general, and in the field of raw materials management too.

Figure 3. RMIS functions in the context of the knowledge hierarchy and the JRC knowledge management strategy (after Hamor, 2019)¹³



2.1.3 Terminology

Law has a thousand years' history and a well-established set of international terminology and related definitions. The term "governance" has a similarly long record of use. Governance is the process of decision-making by which decisions are implemented, or not implemented. The term governance can apply to corporate, international, national, local governance or to the interactions among other sectors of society.

In contrast, the concept of good governance emerged only ca. 20+ years ago¹⁴. Good governance was a subjective term that describes how public institutions conduct public affairs and manage public resources and assets in the preferred way. The concept of good governance emerged primarily as a model to compare ineffective economies or political bodies with viable economies and political bodies. In this regard, it has been

¹¹ Manfredi S., Hamor T., Wittmer D., Nuss P., Solar S., Latunussa C.E.L., Tecchio P., Nita V., Vidal, B., Blengini G.A., Mancini L., Torres de Matos C., Ciuta T., Mathieu F., Pennington D. (2017): Raw Materials Information System (RMIS): Towards v2.0 – An interim progress report & roadmap, EUR 28526 EN, Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-66933-0, doi:10.2760/119971, JRC106005 (http://publications.jrc.ec.europa.eu/repository/bitstream/JRC106005/rmis_roadmap_progress_report_-_final_-_final_-_online.pdf)

Manfredi, S., Hamor, T., Blengini, G.A., Bonollo, B., Ciupagea, C., Ciuta, T., Eynard, U., Garbossa, E., Georgitzikis, K., Huisman, J., Latunussa, C., Mancini, L., Mathieu, S., Mathieu, F., Nita, V., Pennington, D., Torres De Matos, C., Unguru, M., Vidal Legaz, B., Wittmer, D., 2019. Raw Materials Information System (RMIS): 2019 Roadmap & Progress Report - Context, content & foreseen priorities – JRC Technical Report, ISBN 978-92-76-07984-2, DOI 10.2760/195796, 54 p.

¹² Vidal-Legaz, B., G. A. Blengini, F. Mathieu, C. Latunussa, L. Mancini, V. Nita, T. Hamor, F. Ardente, P. Nuss, C. Matos, D. Wittmer, Laura T. Peiró, E. Garbossa, C. Pavel, P. Dias, D. Blagoeva, S. Bobba, J. Huisman, U. Eynard, F. Persio, H. Gervasio, C. Clupagea, D. Pennington 2018: Raw Materials Scoreboard - European Commission, Luxembourg, 120 p.; ISBN 978-92-79-89746-7 doi:10.2873/13314 ET-01-18-725-EN-C

¹³ Hámor, T. 2019: Framework conditions in RMIS – 3rd International RMIS workshop presentation, Ispra
¹⁴ <https://www.unescap.org/sites/default/files/good-governance.pdf>

frequently applied to raw material supply countries in comparison with end-user countries or countries with a mature extractive sector. This approach yet echoes in the recent International Resource Panel report on Minerals Governance (2019)¹⁵, to a certain extent.

The World Bank¹⁶ recognizes four elements of good governance:

- a) Public sector management emphasizing the need for effective financial and human resource management through improved budgeting, accounting and reporting and rooting out inefficiency particularly in public enterprises (through restructuring).
- b) Accountability in public services, including effective accounting, auditing, and decentralization and generally making public officials responsible for their actions and responsive to consumers.
- c) A predictable legal framework with rules known in advance (a reliable and independent judiciary and law enforcement mechanisms).
- d) Availability of information and transparency in order to enhance policy analysis, promote public debate and reduce the risk of corruption.

In line with the above bi-polar character of the early use of the concept, the first and only definition on good governance in the EU Community acquis communautaire is published in a Commission Communication on the EU-ACP countries partnership context¹⁷:

"Governance" generally describes the exercise of political, economic and administrative power in the management of public affairs.

"Good governance" implies managing public affairs in a transparent, accountable, participative and equitable manner showing due regard for human rights and the rule of law. It encompasses every aspect of the State's dealings with civil society, its role in establishing a climate conducive to economic and social development and its responsibility for the equitable division of resources. It has two dimensions: the political dimension concerns strictly political action by the government and the institutional dimension the economic and social management of resources.

This bi-polar approach on good governance is also used by national governments to justify major re-structuring of public administration by comparing the previous bad practices with the newly built structures and schemes¹⁸.

Good governance has eight major characteristics. It is participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law¹⁹. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society.

Figure 4. The characteristics of good governance (UNESCAP, 2009)

¹⁵ IRP (2019). Mineral Resource Governance in the 21st Century: Gearing extractive industries towards sustainable development Ayuk, E. T., Pedro, A. M., Ekins, P., Gatune, J., Milligan, B., Oberle B., Christmann, P., Ali, S., Kumar, S. V., Bringezu, S., Acquatella, J., Bernaudat, L., Bodouroglo, C., Brooks, S., Burgii Bonanomi, E., Clement, J., Collins, N., Davis, K., Davy, A., Dawkins, K., Dom, A., Eslamishoar, F., Franks, D., Hamor, T., Jensen, D., Lahiri-Dutt, K., Petersen, I., Sanders, A. R. D. A Report by the International Resource Panel. United Nations Environment Programme, Nairobi, Kenya. 60 p. (<http://www.resourcepanel.org/reports/mineral-resource-governance-21st-century>)

¹⁶ World Bank. (2002). Reforming Public Institutions and Strengthening Governance: A World Bank Strategy. New York.

¹⁷ Communication from the Commission to the Council and the European Parliament: Democratisation, the rule of law, respect for human rights and good governance: the challenges of the partnership between the European Union and the ACP States (COM(1998) 146 final)

¹⁸ https://www.researchgate.net/publication/287430933_Governance_Restructuring_and_the_New_Public_Management_Reform_South_African_Perspectives

¹⁹ <https://www.unescap.org/sites/default/files/good-governance.pdf>



Good governance in a broad sense involves a number of major elements in practice:

- political stability, low corruption level, harmonized sectoral policies, efficient regulatory framework (smart legislation, one-stop-shop of competent authorities, streamlined permitting schemes);
- competitive economics, supportive financial & fiscal framework, transparent accounting, investment attractiveness (taxation, incentives, banking, customs, permitting fees, etc.), traceability of materials and goods, good infrastructure, etc.;
- developed social conditions (labor market, education, innovation culture, SLO, gender balance, mature NGOs);
- availability and open on-line accessibility of digital data & information, with limited time span of confidentiality; and most of the above constituents appear
- at different scales, such as international, supranational, national, regional, local²⁰, corporate levels.

For example, at corporate level, good governance implies the application of ethical business practices, corporate social responsibility, due disclosure of information, the prevention of bribery and corruption and the contribution to sustainable development. On corporate scale the term integrity is also highly relevant, which refers mainly to ethical and lawful behavior, including systems and processes through which an individual or organization can report concerns about illegal, irregular, dangerous or unethical practices related to the organization's operations.

One specific aspect of good governance is resource governance, which is defined as "the manner in which power is exercised and policies are made in the management of a country's oil, gas and mineral resources for development" (Natural Resource Governance Glossary)²¹. According to the International Council of Metals and Mining (ICMM)²², good governance is primarily based on transparency and accountability. This is formulated in the first of the ICMM Ten Principles²³, which serve as a best-practice framework for sustainable development in the mining and metals industry. The importance of good governance in the mining sector is also stressed in the report on the nineteenth session of the Commission on Sustainable Development of the United Nations (2011)²⁴.

In conclusion, almost all the above elements have corresponding instruments at all levels of governance. It is also important to note that good governance manages the vast majority of „man-made” aspects of sustainable development but cannot be liable for, therefore out of its scope, are the pristine natural conditions, such as the geological settings, occurrences of mineral raw material reserves, baseline (“zero-state”) environmental and biodiversity conditions. Obviously, the later management of these natural resources do belong to good governance, such as minerals management, environmental management, nature conservation, and others.

Figure 5. Major components and scales of good governance

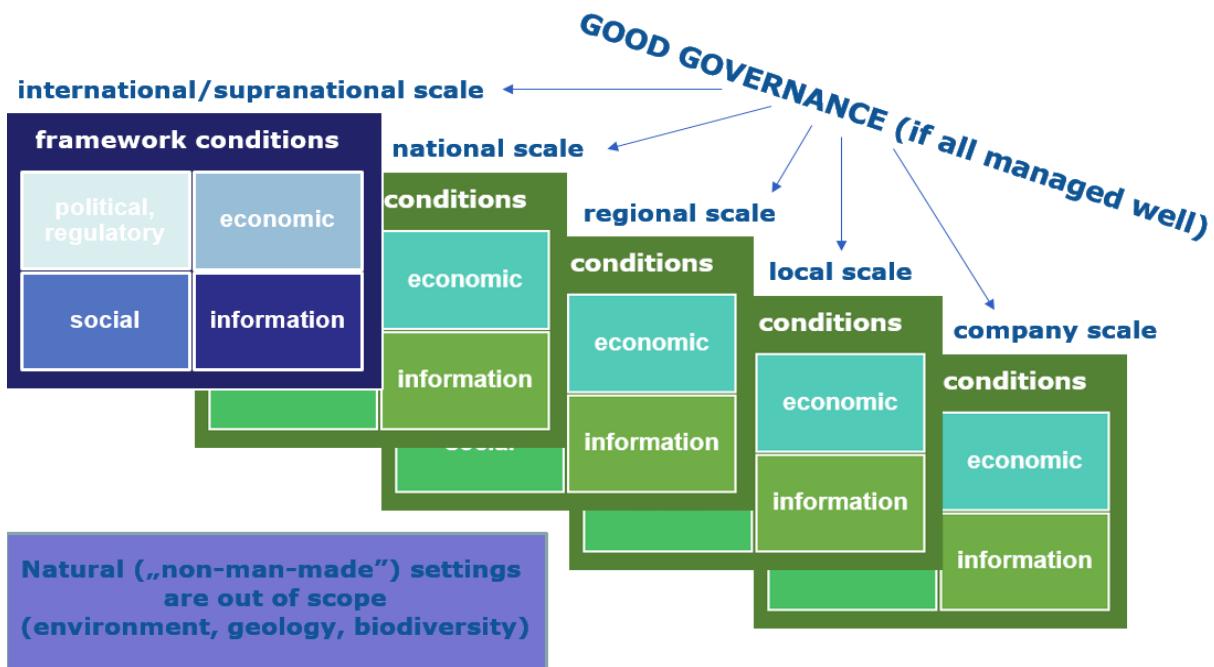
²⁰ <https://www.undp.org/content/dam/aplaws/publication/en/publications/democratic-governance/dg-publications-for-website/a-users-guide-to-measuring-local-governance-/LG%20Guide.pdf>

²¹ <https://resourcegovernance.org/sites/default/files/documents/natural-resource-governance-glossary.pdf>

²² <https://www.icmm.com/en-gb/society-and-the-economy/governance-and-transparency>

²³ <https://www.icmm.com/en-gb/members/member-commitments/icmm-10-principles>

²⁴ <https://sustainabledevelopment.un.org/intergovernmental/csd19>



Another important aspect of good governance is that it contributes to all SDG Goals²⁵, more explicitly to 16 Peace, Justice and Strong Institutions and to 17 Partnership for the Goals.

Figure 6. Sustainable Development Goals



"Framework conditions" do not have similarly specific terminology background. It is a collective term for all conditions that do or may have an impact on economic activities, sectors, and thematic policy fields. As compared to governance, it has no similar benchmarking character and it is not limited to any specific context.

With reference to the EU Raw Materials Initiative and its implementing measures and related documents, "framework conditions" are cross cutting at all three pillars of RMI with an emphasis on the second "domestic" pillar. Framework conditions are also tackled in the Circular Economy Action Plan (EC, 2015) but more implicitly.

There are a number of Priority Areas in the Strategic Implementation Plan of the European Innovation Partnership on Raw Materials (EIP RM SIP) with regard to framework conditions:

II.A. Improving Europe's raw materials framework conditions

II.1. Minerals policy framework

²⁵ <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>

- II.2. Access to minerals potential in the EU
 - II.3. Public awareness, acceptance and trust
- II.B. Improving Europe's waste management framework conditions and excellence.

At the workshop, Priority Area II.A. Improving Europe's raw materials framework conditions and related knowledge management practices was the focus of the Session "Updating Knowledge on Member States' Governance of Exploration and Mining".

2.1.4 Current and planned RMIS services in relation to good governance and framework conditions

Figure 7. The “Policy & Legislation” tile in RMIS, subchapter “EU Community secondary law”

The screenshot shows the RMIS interface for EU Community Secondary Law. The main content area displays a list of legislative pieces related to Minerals, such as Council Regulation (EC) No 2368/2002 implementing the Kimberley Process certification scheme for the international trade in rough diamonds. To the right, a search result for this regulation is shown on the EUR-Lex website, including details like the document number (32002R2368) and its status ('In force').

This thematic tile includes an overview of European Union Community policy documents and legislation on raw materials, as well as relevant international conventions and Member State (MS) level legislation. Policy & Legislation is an important component of good governance. Since legislation is developing rapidly, this chapter is revisited and updated annually.

Figure 8: The “Policy & Legislation” tile in RMIS, subchapter “Member States Legislation”

The screenshot shows the RMIS interface for Member States Legislation. It features a grid of European flags representing various member states. A red banner at the top right reads '+ legislation in English! (in 2019)'. A yellow arrow points from the 'MINLEX Profiles' link in the sidebar to this grid. Another yellow arrow points from the '+ legislation in English! (in 2019)' link in the sidebar to a thumbnail of the 'MINLEX - Finland Country Report' document.

The subchapter “Member States Legislation” is currently based on three sources of information, the outputs of the MINVENTORY, MIN-GUIDE and MINLEX projects. The update of the MINLEX country profiles is on-going. It is envisaged that all these information will be merged in the future. As well, an additional new service is foreseen under this subchapter, by providing the major pieces of national legislation in English for all interested users, such as governments, investors, lawyers, and the public.

The tile “Terminology & Library” of RMIS includes a ‘terminology’ section which currently contains a Legal Glossary, a collection of terms and definitions extracted from the Community legislation. In the second half of

2019, this will be extended by a new subchapter, the Technical Glossary, a collection of definitions derived from H2020 reports and international sources. The first version of the 'RMIS Library' contains and serves the most important reports and documents that are linked to RMIS and/or relevant in the broader raw materials context.

Figure 9. Dynamic visualization of the RM Scoreboard in RMIS

Raw Materials Scoreboard 2018



One of the Raw Materials Scoreboard cluster addresses explicitly the framework conditions on mining, however, a number of indicators at other clusters have relevance and can be indicative to framework conditions and good governance in general, such as mineral policy framework, public acceptance, knowledge and skills, corporate R&D investment, export restrictions, geographical concentration and governance.

Figure 10. The "Environmental and Social Sustainability" tile in RMIS, subchapter "Social Dimension"



The classic fields of social and environmental sustainability are very well developed at the RMIS. The social dimension covers the aspects of good governance in a holistic way, presenting ASM issues, conflict minerals, the labor market conditions, occupational health and safety, good governance and integrity, and related international initiatives, to mention a few.

In addition, the chapters "Economics & Trade" and "Country Profiles" of RMIS also provide a wealth of information on framework conditions, such as trade agreements, investment and regulatory framework, innovation regime, political, social and environmental conditions.

2.2 Minerals Policy Governance fostering an effective policy framework

Governing the secure and sustainable supply of minerals from primary production faces particularly “wicked” dynamics. Mineral policies and governance arrangements address these underlying dynamics, i.e. multiple stakeholder interests, competing land-use interests (e.g. tourism or conservation versus mining), or institutional complexity (e.g. different policy objectives), as they often manifest themselves in market failures, land-use conflicts, and/or lack of societal trust and acceptance of the sector.

2.2.1 The challenge of minerals policy governance and the MIN-GUIDE Approach

Recognizing the need to understand the complexity of minerals governance in securing sustainable primary mineral production, the MIN-GUIDE Horizon 2020 project²⁶ provided an unprecedented overview of the status of minerals policy governance mechanisms that are currently adopted by EU MS²⁷. In this regard, the MIN-GUIDE project identified some underlying challenges for minerals policy governance to foster effective policy frameworks:

- The need for **policy mixes** (e.g. financial incentives for investments in addition to regulatory instruments).
- A call for clear legislation to **avoid policy duplication** (as this makes e.g. permitting processes lengthy).
- The need for **effective strategic policy planning frameworks** and long-term orientation (sought after, for instance, by industry to establish security of investment, and include resource-related sustainability considerations more strongly).
- The requirement of **coordination between ‘linked’ policy areas and sectors** (e.g. influencing mining and minerals policy).
- The need for stakeholder involvement (e.g. address low levels of **public acceptance** and **NIMBY-** attitudes towards mining).

The MIN-GUIDE approach to good governance utilized principles of ‘governance for sustainable development’ in order to tackle the challenges above and identify effective mineral policy governance in the EU (see Figure 11 below).

Figure 11. The MIN-GUIDE approach to good governance



2.2.2 Building blocks of minerals policy governance

Particularly relevant aspects in the context of minerals policy are horizontal- and vertical policy integration, participation, long-term visioning and short-term action, as well as reflexivity and learning (evaluation and

²⁶ MIN-GUIDE H2020 Project: This project received funding from the European Union’s Horizon 2020 Research and Innovation Programme under grant agreement No. 689527 <https://www.min-guide.eu/>

²⁷ Endl et al., 2018: EU and EU MS Minerals Policy Report: A Study of Policy Instruments and Governance Modes in Europe. Deliverable 2.3. MIN-GUIDE project <https://www.min-guide.eu/project-results>

Endl et al., 2016: Minerals Policy Governance in Europe: Good Practice Examples in the EU Member States. MIN-GUIDE Deliverable 2.2, <https://www.min-guide.eu/project-results>

adaptation)²⁸. These four aspects of the MIN-GUIDE approach for Good Governance²⁹ correspond to specific challenges often faced by the minerals policy sector: A policy strategy can provide guidance and show commitment towards long-term goals. Horizontal- and vertical policy integration responds to challenges of policy coherence between sectors and national-regional entities³⁰. Stakeholder involvement can be used to include community needs and/or increase public acceptance and, at a later stage, to achieve a Social License to Operate³¹. Lastly, policy evaluation links to the responsiveness and capacity of governments to (re-)design policies depending on their effectiveness, as well as shows a commitment to adhere to certain targets and objectives of a given policy.

Strategic Policy Framework

Public policy faces particular challenges: notably, streamlining policy instruments and objectives, coordinating the work of different authorities, and showing commitment to the minerals sector in response to external pressure (e.g. SLO, market fluctuations, etc.). As highlighted in the previous chapters, industry is calling for harmonization of minerals policies and clear minerals policy strategies in EU MS.

In an effort to address these challenges, 14 out of 28 EU MS have designed and implemented National Minerals Strategies (NMS). A NMS is a guiding document devising responsibilities and mandates for involved authorities along with a set of objectives, targets and clear timeframes for implementation³². The presence of a NMS can indicate the importance attributed to the minerals sector and a government's commitment to strategically address the challenges of a stable and sustainable supply of minerals. Thus, a NMS can provide guidance to public institutions and stakeholders on the direction and expectation of the national (or sub-national) level with regard to regulating the sector. A NMS should set out to create the 'right framework conditions for mining'; by ensuring coherence between regional and local strategies and other relevant policies, and, when appropriate, integrating a mix of different policy instruments.

Policy Integration

One of the main challenges of minerals policy is its interconnectedness with other policy areas. Hence, mechanisms of policy integration should address 'the lack of coordination' between relevant policy areas and, consequently, avoid policy duplication or inconsistencies. One example is the use of airborne drone exploration technology that has been influenced in its licensing and deployment by aviation policy, as well as policies on data regulation and transparency, privacy and security, education and labor. Thus, in order to ensure more effective licensing and use of innovative exploration approaches, there is a need for cross-sectoral collaboration of different public authorities, which can be achieved through Horizontal Policy Integration (HPI) (ministerial and cross departmental collaboration). Moreover, Endl et al. (2018)³³ stated that "stronger linkages between national and federal state (and regional) policies are desirable, as is a simpler 'one-stop-shop' type of contact point for permitting procedures". Thus, a good governance approach to minerals policy also calls for mechanisms of Vertical Policy Integration (VPI) (collaboration between different levels of government).

A total of 14 EU MS out of the 21 EU MS that were surveyed reported having active HPI mechanisms, which are (most often) applied to tackle a specific challenge, e.g. silo-thinking or conflicting objectives/agendas between related departments. Policy integration often requires both vertical and horizontal mechanisms to achieve effective integration of policies with cross-sectoral importance and impacts³⁴. In the MIN-GUIDE survey, 12 EU MS reported having active VPI mechanisms, in which 9 out of these are directly concerned with minerals policy. The large number of minerals policy VPI reflects the importance that EU MS are attributing to involving local and regional authorities, as they often are responsible for the 'day-to-day' administration of policies, e.g. permitting procedures.

Stakeholder Involvement

²⁸ Endl, A., 2017. Addressing "Wicked Problems" through Governance for Sustainable Development – A Comparative Analysis of National Mineral Policy Approaches in the European Union, *Sustainability*, no.9 <https://doi.org/10.3390/su9101830>

²⁹ Endl et al., 2016. Minerals Policy Governance in Europe: Good Practice Examples in the EU Member States. MIN-GUIDE Deliverable 2.2 (p.4) for a full explanation of the MIN-GUIDE approach for Good Governance <https://www.min-guide.eu/project-results>

³⁰ Klaus Jacob and Axel Volkery, "Institutions and Instruments for Government Self-Regulation: Environmental Policy Integration in a Cross-Country Perspective," *Journal of Comparative Policy Analysis: Research and Practice* 6, no. 3 (December 2004): 291–309.

³¹ European Commission and Directorate-General for Internal Market, Raw Materials Scoreboard European Innovation Partnership on Raw Materials.

³² Endl, A., 2017. Addressing "Wicked Problems" through Governance for Sustainable Development – A Comparative Analysis of National Mineral Policy Approaches in the European Union, *Sustainability*, no.9 <https://doi.org/10.3390/su9101830>

³³ Endl et al., 2018: The MIN-GUIDE Policy Guide: Guidance for EU and MS mineral policy and legislation. Deliverable 1.3. MIN-GUIDE project. <https://www.min-guide.eu/project-results>

³⁴ Jacob, Klaus, and Axel Volkery. "Institutions and Instruments for Government Self-Regulation: Environmental Policy Integration in a Cross-Country Perspective." *Journal of Comparative Policy Analysis: Research and Practice* 6, no. 3 (December 2004): 291–309. <https://doi.org/10.1080/1387698042000305211>

Sustainable minerals supply is influenced by multiple stakeholder interests, for example industry representatives, individual companies, research and innovation actors, concerned communities, etc.. Hence, stakeholder involvement in minerals policy not only concerns public acceptance, but also the inclusion of 'external' expertise and knowledge in the policy process. Public acceptance and awareness is a particular challenge for the mining sector, with low levels of public acceptance compared to other sectors³⁵. Endl et al. (2018)³⁶ outlined the need to improve public acceptance and awareness to address the NIMBY-effect and SLO. Cooperation between government, industry, and experts was recommended in the chapter on deep sea mining, to ensure decisions are based on the best available scientific knowledge. Involving stakeholders and the public is an important tool in addressing the lack of acceptance and legitimacy of the extractive sector and understand the potential for mitigation and compensation of negative impacts on stakeholders.³⁷

The importance of involving stakeholders in minerals policy is also illustrated by the number of EU MS that actually have stakeholder involvement mechanisms in place: out of the surveyed EU MS (21), a total of 18 countries reported having active stakeholder involvement mechanisms in place (8 EU MS even stated that they have 2 active mechanisms in place). The high share of countries applying stakeholder involvement mechanisms indicates the importance governments put on public awareness and involvement, as well as the importance for the mining sector to realize stakeholder involvement as a necessary part of good governance. If done well, stakeholder involvement processes increase the chances of acceptance/understanding of policy activities (by external stakeholders), the understanding of the concerns of stakeholders (by policymakers and industry), possibilities for alleviating impacts from extraction activities particularly for local communities, and the utilization of knowledge and expertise of stakeholders (by policy and industry alike). Therefore, special attention should be paid to assuring the quality of stakeholder involvement processes. There are several good practice cases on how to involve stakeholders in minerals policy and governance (see examples from e.g. Austria, Finland and Greece).

Policy evaluation

The effectiveness of policies is influenced by a government's ability to design, implement and evaluate policies to ensure internal and external consistency, and the overall coherence of the policy³⁸. This has a direct influence on industry: "(...) imposing new policies might drive companies towards process improvements and more environmentally sound operations, but may also stifle development and lead to less innovation as compliance costs increase"³⁹, and, thus, have both intended and unintended effects. Hence, the fourth building block of minerals policy governance addresses the government's ability to be responsive to impacts, consistency and coherence of the respective policies⁴⁰. Policy evaluation can provide important information leading to the revision of policy, adaptation of targets/goals or perhaps reorganisation of resources to achieve stipulated targets, and, thereby ensuring the effectiveness of the policy under scrutiny.

The MIN-GUIDE data shows that policy evaluation seems to be a somewhat unexplored process in EU MS' minerals policy governance frameworks. What is interesting to note is that the mineral policy evaluation mechanisms applied were about monitoring targets and outputs, indicating a proactive and attentive approach by the MS to improve and amend strategies and legislation. Moreover, some EU MS included either stakeholders or external auditors in the evaluation process in order to create process legitimacy and objectivity.

Based on the overall governance challenges of the minerals sector, and public policy challenges identified in the context of minerals policy and industry innovation, **MIN-GUIDE provided practitioners with a concrete set of recommendations**. The recommendations follow the MIN-GUIDE approach for good governance, together with good practice cases and examples from EU MS⁴¹.

³⁵ JRC analysis based on data from the (2013) Flash Eurobarometer 363 related to question 6.5 of the report Values were reported by country as well as average values for the EU – which corresponds to EU-27 since the survey took place before Croatia joined the EU.

³⁶ Endl et al., 2018: The MIN-GUIDE Policy Guide: Guidance for EU and MS mineral policy and legislation. Chapter: 2.3 Mineral and Metallurgical processing. Deliverable 1.3. MIN-GUIDE project <https://www.min-guide.eu/project-results>

³⁷ European Commission and Industry Directorate-General for Internal Market Entrepreneurship and SMEs, Raw Materials Scoreboard European Innovation Partnership on Raw Materials. (Luxembourg: Publications Office, 2016).

³⁸ Jacob and Volkery, "Institutions and Instruments for Government Self-Regulation."

³⁹ Endl et al., 2018: The MIN-GUIDE Policy Guide: Guidance for EU and MS mineral policy and legislation. chapter 2.1 and chapter 2.5. Deliverable 1.3. MIN-GUIDE project <https://www.min-guide.eu/project-results>

⁴⁰ Jacob, Klaus, and Axel Volkery. "Institutions and Instruments for Government Self-Regulation: Environmental Policy Integration in a Cross-Country Perspective." *Journal of Comparative Policy Analysis: Research and Practice* 6, no. 3 (December 2004): 291–309. <https://doi.org/10.1080/1387698042000305211>

⁴¹ Endl et al., 2018: The MIN-GUIDE Policy Guide: Guidance for EU and MS mineral policy and legislation. Chapter: 2.6 Minerals Policy Governance. Deliverable 1.3. MIN-GUIDE project. <https://www.min-guide.eu/project-results>;

Endl et al. 2016. Minerals Policy Governance in Europe: Good Practice Examples in the EU Member States. MIN-GUIDE Deliverable 22 <https://www.min-guide.eu/project-results>

3 Minerals Policy Framework: current actions and future plans at Member States' level

3.1 Finland

3.1.1 Regulatory framework

3.1.1.1 Legislation, ownership and categories of minerals

The primary legal basis is the Mining Act, which covers metallic ores and industrial minerals. Non-claimable minerals are regulated by the Land Extraction Act. Mineral extraction rights belong to the discoverer.

3.1.1.2 Regulatory framework and permitting

The Finnish Safety and Chemicals Agency (Tukes) is responsible for onshore and offshore permits. The Regional State Administrative Agencies grant the environmental permits whereas the EIA procedure is supervised and controlled by the regional Centres for Economic Development, Transport and the Environment. Concerning exploration for minerals, an applicant may reserve an area by submitting a notification to Tukes. An exploration permit is valid for maximum four years which may be extended by a maximum of three years repeatedly, for a maximum of 15 years. A fixed-term extraction permit may remain valid for a maximum of 10 years. Subsequently, an extension of ten years (or 5+5 years) can be applied for.

3.1.1.3 Recent progress of the regulatory framework

The fitness check of mining related regulation was launched due to public debate and on the social media and politicians since 2018. The President emeritus of Supreme Administrative Court is the rapporteur of the report. The questionnaire was sent to 100+ stakeholders, half which answered. A hearing event was organized, as well an open portal accommodated further comments. First findings were published in April 2019. The final report is handed over to the minister in charge, and will be translated into English.

The new government is to decide on the technical amendments. Working groups will be established to develop proposals on environmental legislation, land use legislation, etc.

Mining is mentioned several times in the government program, such as for example taxation. Mines will be transferred to electricity tax class I and removed from the scope of the energy tax ceiling. The prospects for introducing a special new mine tax (royalty) will be studied in order to ensure that society is reasonably compensated for mineral wealth extraction. The possibility of taxing profits on the sale of mining rights in Finland even when foreign corporations hold these rights will be investigated.

Improving the environmental protection of mines is on the agenda. The purpose of the reform is to improve the level of environmental protection and ensure the operating conditions of mines, while also improving local acceptability and influencing opportunities:

- Provisions will be made to give municipal authorities the right to decide through land use planning whether it is possible to carry out mining activities in the municipality.
- Improve the position and right to information of property owners and landowners in the area affected by mines.
- When undertaking significant mining projects, the rights of indigenous peoples will be taken into account as required by the current legislation.
- Improve the compatibility of mining permits and environmental permits.
- Take into account the environmental impacts of planned mines at the earliest stage possible.
- The ability to take into account the uranium content of ore when assessing the environmental impacts of mines.
- Develop the regulation on securities so that environmental responsibilities are dealt with in all situations.
- Mining activities targeting minerals in the seabed will also be included within the scope of the legislation.
- The permit processes, practices and possible need for restriction concerning mineral prospecting rights in nature conservation areas.

Current trends and plans on policy making and strategic thinking:

- Energy transformation – climate change – sustainable development.
- Main focus on some raw materials only – now battery minerals Li, Co, Ni.
- Responsible sourcing.
- National strategy 2010, action plan 2013, research strategy 2015.
- Proposal of a new strategy/road map – broader scope:
 - Primary and secondary sources, recycling, life cycle;
 - Security of supply;
 - Critical commodities;
 - Did not get approval in the government negotiations.
- National measures to enhance battery value chain
 - Finnish Minerals Group Ltd – state owned investor and value chain promotor/facilitator;
 - Business Finland: Comprehensive R&D&I program for battery value chain.
- EIA in the Arctic (May 2019)
 - https://www.sdwg.org/wp-content/uploads/2019/05/EIA_Report_Screen_Lores_Spreads.pdf
 - Good practice recommendations, cases.

Exploration and mining companies and the PERC or IFRS, eventual issues:

- accepted alternative to the Canadian NI 43-101 and JORC,
- companies are showing increasing interest,
- FAMMP = Fennoscandian Association of Metals and Minerals Professionals
 - FAMMP is a non-profit association for individuals working in the mining sector and having the professional qualification and work experience to be able to function as Competent Persons (Qualified Persons is used synonymously) for public reporting of exploration results, mineral resources and mineral reserves in accordance with the internationally recognized PERC reporting standard, or another similarly CIRSCO based reporting standard.

What concerns the RMIS and sharing knowledge on the framework conditions, RMIS is a “one stop source”. For example, it is easier to find information therein than at single EU-projects. Information on legislation and up-to-date-ness is a challenge also because no Member States conditions and legal solutions may vary significantly but it is extremely useful.

3.1.1.4 Information access

- Government Decree on Mining Activities:
<http://www.finlex.fi/en/laki/kaannokset/2012/en20120391.pdf>
- Land Extraction Act: <http://www.finlex.fi/en/laki/kaannokset/1981/en19810555>
- Making Finland a leader in the sustainable extractive industry – action plan:
<https://tem.fi/documents/1410877/3437254/Making+Finland+a+leader+in+the+sustainable+extractive+industry+04072013.pdf>
- Finland's Minerals Strategy:
http://projects.qtk.fi/export/sites/projects/minerals_strategy/documents/FinlandsMineralsStrategy_2.pdf
- The Network for Sustainable Mining:
<http://www.euromines.org/news/newsletters/2014/bestpracticemineralpolicyfinland>
- Green Mining Mineral sector development program: <https://www.businessfinland.fi/en/for-finnish-customers/services/programs/>
- Mining Act 621/2011: <http://www.finlex.fi/en/laki/kaannokset/2011/en20110621.pdf>

3.2 Sweden

3.2.1 Regulatory framework

3.2.1.1 Legislation, ownership and categories of minerals

In Sweden, the right to grant access to concession minerals and permits to extract mineral deposits is reserved to the state. The “concession minerals” are legally defined in the Minerals Act and comprise metallic ores, a wide range of industrial minerals, coal, oil, gaseous hydrocarbons and diamonds. The right to extract “non-concession minerals” (aggregates, dimensional stone, limestone or other minerals not listed in the Minerals Act) belongs to the landowner. If the developer does not own the land in question, the right to explore and extract must be set by a contract with the landowner.

3.2.1.2 Regulatory framework and permitting

Mineral exploration and the extraction of “concession minerals” are governed by the Minerals Act. However, exploration permits or exploitation concessions do not confer exemption from other laws and regulations. Mines must meet the same environmental requirements as other industrial operations. The Swedish Environmental Code is therefore particularly relevant, as permits for extraction must be granted under both the Minerals Act and the Environmental Code. The primary law concerning the extraction of “non-concession minerals” is the Environmental Code. The Minerals Act does not apply to these. The competent authority for mining is the Mining Inspectorate, who issues permits for mineral exploration and extraction permit or mining concessions for mineral deposits associated with the Minerals Act. Permit subject to conditions under the Environmental Code is decided by the land and environmental court.

3.2.1.3 Recent progress of the regulatory framework

The current important changes in legislation are that uranium has been removed as a concession mineral in the Minerals Act, and extraction is also prohibited by amendments to the Environmental Code, even as a by-product.

The new Government will introduce a ban on the exploration and exploitation of coal, oil and gas. The regulations for the extraction of alum shale (organic rich formation dominated by black shale) will be tightened. The new regulations are planned to apply from 2022.

Alum shale in Sweden host important metals such as: V, Ni, Zn, Mo, Co, Nd, Cu, Cd, Pb, U, Ag, Au..., therefore the Government is now to appoint a commission of inquiry to conduct a thorough examination of various alternatives.

Within the framework of the Smart Industry strategy – a strategy for new industrialization for Sweden (launched in 2016) several actions are relevant for raw materials:

- The Geological Survey of Sweden has been commissioned provide new information (geological mapping) of innovation critical metals (primary resources as well as mine waste). The report is due in March 2020.
- The Swedish Agency for Growth Policy Analyses has been commissioned to investigate the possibility to introduce labeling systems for sustainable produced metals (traceability of metals).

Fossil Free Sweden initiative aims at:

- mobilize and highlight actors who are contributing to climate efforts and a fossil-free society.
- different sectors who contributed to the initiative and written Road maps for becoming Fossil Free.

What concerns PERC reporting, the Swedish Associations for Mines, Minerals and Metal Producers (SveMin) recommends its members to follow the PERC Reporting Standard. However, also other CRIRCSO style reporting standards such as for example JORC code are used. The Fennoscandian Association for Metals and Minerals Professionals (FAMMP) gathers Qualified/Competent Persons (QP) that meets the organization's requirements for competence and experience to make assessments of exploration results, mineral resources and mineral reserves that meet the requirements of the PERC standard.

RMIS is an important tool in bridging the knowledge gap. The need of metals (incl. metal need for transformation to fossil free energy alternatives) and current availability of metals from different sources (primary and secondary) need to be further analyzed by the JRC in RMIS. As well, RMIS has an important role to enable informed decisions with knowledge based data.

3.2.1.4 Information access

- Minerals Act (English): <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC042438/>

- Minerals Act (National language): <https://www.ecolex.org/details/legislation/minerals-act-lex-faoc042438/>
- Sweden's Minerals Strategy For sustainable use of Sweden's mineral resources that creates growth throughout the country: <https://www.governmentse/reports/2013/06/swedens-minerals-strategy-for-sustainable-use-of-swedens-mineral-resources-that-creates-growth-throughout-the-country/>
- Minerals Ordinance: <https://www.min-guide.eu/mineral-policy/minerals-ordinance-1461>

3.3 Estonia

3.3.1 Regulatory framework

3.3.1.1 Legislation, ownership and categories of minerals

All bedrock mineral resources belong to the state. All mineral resources in “mineral deposits of national importance” and in public waterbodies and on state land belong to the state. Landowners own non-bedrock mineral resources found on their land, i.e. only the quaternary sediments (e.g. sand, gravel and peat). The primary legal basis of mineral extraction activities is the Mining Act and the Earth’s Crust law.

3.3.1.2 Regulatory framework and permitting

The majority of the mining permits are granted by the Environmental Board, which is governed by the Ministry of Environment (if the mineral deposit in question is of national importance then the Ministry of Environment will oversee the permitting procedures). The Ministry is advised (in a non-binding way) by the Mineral Resources Committee on issues of exploration and extraction of mineral resources, validation of mineral reserves, land rehabilitation projects, etc.. Supervision and monitoring is conducted by the Environmental Inspectorate. Holders of an exploration or extraction permit have to ensure that the plans for mining are prepared and the mining operations are conducted under the conditions set in these permits. In general, the permitting procedures for geological investigation and exploration are neither excessively expensive nor burdensome to the applicants.

3.3.1.3 Recent progress of the regulatory framework

- There has been little progress in subsurface policies and regulation over the last 30 years. However, recently there have been a few developments which show that Estonia is moving forward with its mineral resources policies.
- In January 2019, a revised oil shale mining royalties scheme was introduced (original scheme was enforced in 2016), which ties the royalties to the world market price of the 1% sulphur heavy fuel oil – the main product of Estonia’s oil shale.
- In January 2018, the Geological Survey of Estonia was founded – one of its main objectives is the exploration of Estonia’s mineral resources potential and the Survey is currently undertaking numerous projects:
 - The exploration potential of Estonian Black Shale (report due in second half of 2019).
 - The investigation of Jõhvi magnetic anomaly and its exploration potential (drilling program set to commence in late 2019).
 - The exploration potential of critical raw materials and battery minerals in NE Estonia (drilling program set to commence in late 2019 / early 2020).
- There are numerous changes in Estonian subsurface regulatory framework, that are planned for the new future, such as:
 - The application of a CIRSCO classification system for future exploration reporting. Currently, there is no obligation for companies to report on any predefined classification system.
 - Defining “concession minerals” and setting up a mining concession scheme in the Earth’s Crust Act.
 - New royalties allocation policy to increase public acceptance, awareness and trust in the communities where mining occurs.

3.3.1.4 Information access

- Regulation of Minister of Environment - requirements for mineral resources: <https://www.riigiteataja.ee/akt/891302>
- Regulation of the Minister of Environment for restoring the land after geological surveys: <https://www.riigiteataja.ee/akt/905828>
- Regulation of the Minister of Environment - how to conduct geological surveys: <https://www.riigiteataja.ee/akt/905848>
- Mining Act No. 20, 118 F 2003: <http://faolex.fao.org/docs/texts/est49832.doc>
- Earth's Crust Act: <http://faolex.fao.org/docs/texts/est98321E.doc>
- National Development Plan for the Use of Construction Minerals 2011–2020: <https://www.envir.ee/et/ehitusmaavarade-kasutamise-riiklik-arendukava-2011-2020>
- General principles of Earth's crust policy until 2050: https://www.envir.ee/sites/default/files/mpp_2050_kujundatud_eng.pdf

3.4 Ireland

3.4.1 Regulatory framework

3.4.1.1 Legislation, ownership and categories of minerals

Minerals in Ireland are either state-owned or privately owned, but may also have a combination of both. Private mineral ownership arises mainly when the lands in question have not been dealt with by the Land Commission. The Irish Mining Law, the Minerals Development Acts, names “scheduled minerals” to a group consisting of mainly metals and industrial minerals such as gold, silver, copper, lead, tin, sulphur, mercury, barites, chalk, clay, feldspar, gypsum, etc. which belong to the state. “Non-scheduled” minerals such as stone, clay, gravel and sand belong to the landowner. The Minerals Development Acts govern onshore and offshore mineral exploration and development.

3.4.1.2 Regulatory framework and permitting

Exploration and extraction permitting is governed by the Minister for Communications, Energy and Natural Resources, which acts through the Exploration and Mining Division (EMD) of the Department of Communications, Energy and Natural Resources (DCENR). EMD acts as a “one-stop shop” for exploration permits (called “prospecting licenses”). For exploration, no EIA procedure is required. Only holders of current licenses are considered to develop such minerals within the license area. Permits are not required for exploring for aggregates. For onshore mineral developments, the EMD, the EPA and the local County Councils are the agencies whose permission is needed. The main authorization, granted by the Minister, is called “State Mining Facility” (“State Mining Lease/License”) and is subject to the Minerals Development Acts. The Minister may issue a State Mining Lease for minerals in state ownership or a state mining license for minerals not in state ownership to work the minerals.

3.4.1.3 Recent progress of the regulatory framework

The Mineral Industry faces new challenges:

- Small (junior) companies find the deposits;
- Finding economically viable deposits is getting more difficult/ expensive;
- More and more deposits are blind deposits;
- Small companies are finding it harder to raise capital;
- More minerals are now required to provide for society’s demands;
- Society wants ‘stuff’ but not mineral deposits!

In meeting the above challenges Ireland approved the new Minerals Development Act of 2017 which codified the existing practice and consolidates and modernizes the legislation. It consists of some 250 regulations. The secondary legislation is being drafted, *inter alia*, covering:

- Some new areas; mineral title can now be determined post mineral license.

- Greater transparency in relation to royalties.
- EMD continues its policy of publicly releasing data (worth €100s of millions) online and free of charge.

Ireland's policy and regulation

- Transparent and fair regulatory system. Tried and tested regime over many years. Robust legislation
- Ranks first in Fraser Institute for policy perception (2014-2017) and fourth (2018)
- One stop shop for exploration licenses – approximately 4 months
- DCCAЕ, EPA and Local Authorities work closely together to ensure no duplication for mining permits (currently there are ca. 600 permits released).

Development in Ireland is a clear transparent process with three permits required:

- Planning permission,
- IPC license,
- Mining lease/license.

All these may be applied for at the same time. The three competent authorities work together to avoid duplication, and the Closure, Remediation, Aftercare Management Plan (CRAMP) is also functioning well. For example, when the Galmoy and the Lisheen mines were closed the social, environmental and economic aspect were taken into full account.

The current trends – policy, strategy, other sectoral policies that affect the sector are the Environmental Directives and Ireland's Legislation such as:

- Birds and Habitats Legislation,
- Water framework legislation,
- Groundwater legislation,
- Aarhus Convention,
- EIA screening for mineral exploration deep drilling,
- Environmental screening of exploration activities.

It has to be stressed that environmental legislation needs to be proportionate.

What concerns PERC, it is CRISCO aligned, therefore it is supported by the Department of Communications, Climate Action and Environment, and not the UNFC. Company's use CRISCO aligned codes and standards because

- It provides the appropriate code and standard for reserves and resources.
- It is required by the stock exchange.
- It was developed to reduce scandals.
- It applies the competent person who has a personal liability over the reporting.

In case the EU supports UNFC, it shall not use the terms reserves and resources which are not UNFC terms.

With regard to the Raw Materials Information System – RMIS, information is important but communicating is even more important. The 12 icons on the RMIS website are major and relevant topics but a primary raw materials icon is not present. The Country profiles are yet limited, reaching completeness shall be a short term target. Data are important, only "drilling will find a deposit".

3.4.1.4 Information access

- Minerals Development Act 1940: <http://www.irishstatutebook.ie/eli/1940/act/31/enacted/en/print.html?printonload=true>
- Minerals Development Act 2017: <https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/34/MineralsDevelopmentAct2017.pdf>
- Energy (Miscellaneous Provisions) Act 2006: <https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/34/Energy%20-Miscellaneous%20Provisions-%20Act%202006.pdf>

- Minerals Development Act 1979: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/34/MINERALS_DEVELOPMENT_ACT_1979.pdf
- Minerals development Act 1995: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/34/MINERALS_DEVELOPMENT_ACT_1995.pdf
- Minerals Development Act 1999: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/34/Mineral_development_act_1999.pdf
- Petroleum and Other Minerals Development Act 1960: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/34/Petroleum_and_other_Minerals_Development_Act_1960.pdf
- Mines and Minerals Act 1931: <http://www.irishstatutebook.ie/eli/1931/act/54/enacted/en/html?q=mines%20and%20minerals%20act>
- Minerals Development Regulations 1979: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/37/Minerals_Development_Regulations_1979.pdf
- Minerals Development Regulations 1994: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/37/Minerals_Development_Regulations_1994.pdf
- Minerals Development (Application Fees for certain state mining facilities) Regulations 1996: https://www.dccae.gov.ie/en-ie/natural-resources/legislation/Documents/37/Minerals_Development_Regulations_1996.pdf

3.5 Belgium (Flanders)

3.5.1 Regulatory framework

3.5.1.1 Legislation, ownership and categories of minerals

Onshore industrial and building materials belong to the landowner or to the mine owner, minerals in the continental shelf to the federal government. Legislation and permitting procedures are the responsibility of the three Regions, whereas offshore remains under the control of the federal government.

In Flanders, construction and industrial minerals like clay, loam, sand and gravel are extracted.

The licensing of extraction is governed by the "omgevingsvergunning" (integrated environmental permit or physical aspects permit). A permit for an extraction site can only be approved if the area is part of an extraction zone in the spatial planning. A procedure to create new zones for extraction is in place and is linked to the management of surface mineral resources in Flanders.

There is no specific exploration permitting for surface minerals, only a reporting obligation for drillings.

3.5.1.2 Regulatory framework and permitting

In Wallonia, all legislation on extractive industries is based on the distinction between mines and quarries which are defined according to the substance extracted (quarries encompass construction and industrial minerals, and subsurface for mines energetic and metallic minerals). Quarries are mainly permitted by the local authority, the "Communal College" which is the one that issues extraction permits after various stages which involve other public co-authorities. Underground mining concessions are granted by the Walloon Government (its delegated minister).

In Brussels Region for mines and quarries there are two categories (1A and 1B) depending on the surface of exploitation, respectively, larger or smaller than 25,000 m². For the Category 1A an Environmental Impact Report is necessary, for the Category 1B an Environmental Impact Assessment is necessary. Permits are valid in principle for a period of 15 years.

For Flanders, the integrated environmental permit entered into force on 1 January 2018. It is a true one-stop-shop. For example, the EIA is part of it. Permit applications for all relevant activities, regardless of who the competent authority is, are submitted digitally at one contactpoint. For extraction of surface mineral resources, the Provincial Executives of the five Flemish provinces are the competent authorities in most cases. Examples of advisory bodies are the divisions competent for natural resources, groundwater, waste, waste water and spatial planning of the Flemish government and the municipality. The EAI is assessed by the competent division of the Flemish government.

Unlike before, changes to the integrated environmental permit application are possible during the permitting procedure without having to restart from the beginning. This is seen as a time saver. In addition, the new procedure proves to be an administrative simplification.

3.5.1.3 Recent progress of the regulatory framework

In the Flemish regulatory framework, a distinction is made between gravel on the one hand and the other surface mineral resources on the other hand. This distinction has grown historically and is the result of the limited geographical area near the river Meuse in which extractable gravel occurs. The legislative experiences with gravel can be the most important case to present at this Session.

Historically, in the 1990s it was decided to set a quota (maximum quantity) for gravel extraction and also introduced a special tax on it which was allocated to local societies impacted, for rehabilitation and for research into the use of alternatives for gravel. However, the recycling of C&D waste and other alternatives could not fill the gap in demand. Therefore, the decree was amended following the principles that gravel extraction remains finite but is allowed as a secondary production in the extraction of underlying quartz sand (subject to tax), in infrastructure works (not subject to tax) and as 'Project Gravel Extraction' (not subject to tax). 'Project gravel extraction' is gravel extraction which is accompanied by the realization of a societal project of major public interest which in itself is not aimed at extracting gravel, for example nature development and flood prevention. Instead of the purpose of a project, gravel extraction is a means of realizing the project. The involvement of all stakeholder from the launch of the idea is an essential part of the concept. The permit for the first project was issued in May 2019.

Though the regulatory framework is different for the other Flemish surface mineral resources, some of the experiences with gravel, like the embedding in a broader societal project and the active participation of different stakeholders from the start of the project, now serve as an example.

Other recent trends in policy and strategic thinking concerning raw materials are integrated thinking, circular economy and expansion of data provision, both for policy and society. Examples of this are:

- "Omgeving": The policy fields of spatial planning and environment were integrated into a single global policy, in which the physical environment is viewed in a broad context
- By way of the "MDO", data is periodically collected on the production and use (including sectors and applications) of primary and secondary raw materials, imports and exports. A stock monitoring model is under development in which different types of sand and gravel will be visualized in the economic system.
- In the General Surface Mineral Resources Plan "AOD", the reserves for each surface mineral resource are compared to an estimation of how much of the resource will be needed in the next five year (in which secondary and alternative raw materials and import are taken into account). It also contains calculations for development perspectives for the extractive industry for 25 years and actions for the next five years. A conclusion is drawn about whether new areas for extraction are necessary, however without proposing potential locations,
- Natural (Mineral) Resource Assessment,
- Combining above ground and underground models (3D planning),
- Natural Capital Accounting.

RMIS is a good idea, well worked out, although the Search options shall be developed, as well as the flow of raw materials between Member States could serve the interest of governments.

3.5.1.4 Information access

- "Arrêté de l'Exécutif Régional Wallon" of 26 July 1990 – Tender & Procedure for the granting of concessions: <http://environnement.wallonie.be/legis/solsoussol/min005.htm>
- Decree of 31 May 2007- Amendment of Base Mines Decree 1988 (Wallonie): <https://wallex.wallonie.be/index.php?doc=4553&rev=8852-4201>
- Mines Decree of 7 July 1988, incl. various amendments (Wallonie): <http://environnement.wallonie.be/legis/solsoussol/min001.htm>
- Arrêté Royal of 28 November 1939 - Obligation to report underground exploration (Wallonie): <http://environnement.wallonie.be/legis/solsoussol/soussol001.htm>
- Coordinated laws on mines, shallow open pit mines & quarries,, of 15 September 1919, incl. various amendments (Wallonie): <http://environnement.wallonie.be/legis/solsoussol/min002.htm>

- Arrêté Royal" of 5 May 1919 on General Police Regulations on mines, shallow open pit mines & quarries incl. various amendments (Wallonie): <http://environnement.wallonie.be/legis/solsoussol/min010.htm>
- Mineral Resources in Flanders - the Flemish Policy: <http://ebi.vlaanderen.be/publications/documents/27876> (parts of this document are outdated)
- Law of 13 June 1969 on the exploration and the exploitation of nonliving resources of the territorial sea and the continental shelf: http://www.ejustice.justfgov.be/cgi_loi/change_lg.pl?language=fr&la=F&table_name=loi&cn=1969061330
- Law of 20 January 1999 for the Protection of the Marine Environment and for the organization of marine spatial planning in the sea areas under the jurisdiction of Belgium: http://www.ejustice.justfgov.be/cgi_loi/change_lg.pl?language=fr&la=F&table_name=loi&cn=1999012033
- Flemish Decree on Surface Mineral Resources and amendments: <https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1011533¶m=inhou&ref=search&AVIDS=>
- Flemish Decree on Gravel and amendments: <https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1000735¶m=inhou&ref=search&AVIDS=1005678,1005686,1005687,1005688,1005691,1005693,1005694,1005695,1005697,1005699,1005701,1005702,1081885,1081886,1101554,1101556,1101559,1101560,1101609,1129777,1129778,1129779,1213743,1257243,1325491,1325493,1325494,1327885,1368134,1368160>
- Decreet betreffende de Omgevingsvergunning and amendments "Omgevingsvergunningsdecreet": <https://codex.vlaanderen.be/Zoeken/Document.aspx?DID=1024690¶m=inhou&ref=search&AVIDS=>

3.6 Hungary

3.6.1 Regulatory framework

3.6.1.1 Legislation, ownership and categories of minerals

In Hungary all minerals are the property of the state. The primary ruling legislation is the Mining Act of 1993. It defines areas "open" or "closed" for exploration.

3.6.1.2 Regulatory framework and permitting

Whether an area is "open" (exploration is permitted by the regional authorities) or "closed" (exploration permit can be obtained through a mineral concession contracted centrally) is determined by the Mining and Geological Authority (MBFSZ) in decrees. Since 2010 the country is "closed" for exploration and extraction of ore minerals, hydrocarbons, coal and geothermal energy. In 2015 regional mining authorities and several other authorities merged to form county "Government Offices" (20 in total including Budapest), and the first-instance permitting procedure is considered a "one-stop-shop". For minerals not requiring a concession (i.e. for construction and industrial minerals) the Government Offices issue the permit. These incorporate mining, environment, nature conservation, soil protection, and cultural heritage aspects. Interested clients can lodge an appeal against almost all resolutions, in this case MBFSZ acts as the second-instance authority.

Concerning exploration, for aggregates and industrial minerals a simple vertical permitting scheme rules the procedure; for ores, a concession tendering procedure is in place prior to the permitting scheme. A concession is given for a maximum of 35 years and can be extended for another 17.5 years. The exploration period can have a duration of four years and may be extended for another two years (in exceptional cases for two more years). Prior to extraction the establishment of a mining plot and an approved Technical Operation Plan is needed, approved for 5 years in case of underground mining, and 15 years in the case of opencast.

3.6.1.3 Recent progress of the regulatory framework

The Mineral Resource Management and Utilization Action Plan (ÁCST) was initiated in 2012 and this document was discussed with relevant ministries. This Action Plan is dealing mainly with energy minerals and the REE's. It has been published in the official Hungarian Bulletin in 2018. The Mining Law (Act No. XLVIII. 1993 on Mining) is a comprehensive piece, together with its implementing legislation (Governmental Decree No. 203/1998. (XII.19.) on the implementation of the Act No. XLVIII. 1993 on Mining) control the whole sequence of the mining activity from the exploration phase to the closure of mines with the relevant obligatory data service.

The Statute (Governmental Decree No. 161/2017. (VI. 28.) on the Mining and Geological Survey of Hungary (MBFSZ) describes the related tasks supporting the mineral policy.

Even if there is no comprehensive Mineral Strategy for all types of mineral there is the Mineral Resource Management and Utilization Action Plan for strategic minerals that was published last year. The Mining Law deals with all types of minerals from exploration via exploitation to the mine waste management and other state geological tasks. The implementing legislation specifies the details. The new Statute Government Decree on the MBFSZ describes the related tasks supporting the mineral policy.

Competent authority framework changes:

- Before April of 2015: the main responsible authority for mining permitting was the Hungarian Office for Mining and Geology (MBFH) and its Regional Mining Inspectorates.
- Since April 2015 regional mining authorities and several other authorities have merged to form "Government Offices" (20 in total including Budapest), and now the permitting procedure is considered a "one-stop-shop".
- MBFSZ acts as the second-instance authority if the first-instance permitting procedure is appealed. Other important second-instance co-authorities are represented by County Government Offices with different departments (e.g. environmental) and water (with directorates at national and county levels), the National Parks Directorates that are supervised by the Ministry of Agriculture.

Significant change appeared when the Hungarian Office for Mining and Geology with its Regional Mining Inspectorates have separated and Mining Departments were integrated into Government Offices where other relevant departments together work on exploration and exploitation permissions, so this system may be considered as a one-stop shop assessment. The Mining and Geological Survey acts as the second-instance authority in the permitting procedure but the maintenance of mineral resource inventory and collecting royalty is a first-level instance task.

The Mining Departments in Government Offices issue licenses for geological and mineral exploration, exploitation, the utilization of waste rocks, explosion activity, the exploitation and utilization of geothermal energy, activities related to carbon capture and storage, activities related to hydrocarbon exploitation (e.g. hydraulic fracturing, using acid etc.), activities related to propane-butane gas (storage, distribution etc.) and activities related to water source protection.

Novel differences in the exploration scheme:

- Aggregates and industrial minerals: simple vertical permitting scheme.
- Metallic ores: a concession tendering procedure is in place prior to the permitting scheme.
- Exploration permit on open areas can be accomplished in 8 or 25 days according to the General Administration Order („ÁKR”).
- The presentation of an exploration technical operations plan (TOP) within 6 months after the exploration permit, which must be approved by relevant departments in the G.O.
- EIA: environmental department may prescribe it, but EIA is seldom required for exploration (e.g. can be required for deep drilling).
- A final report must be drawn up on the results of the exploration. In theory, applicants for aggregates and industrial minerals may receive permission to start exploration within 35 days.
- A concession is given for a maximum of 20 years and can be extended for another 10 years.

Regarding exploration of industry minerals the permitting scheme is simple vertical. Beside the traditional permitting procedure from the beginning to the end of the mining activity a new legislative umbrella is the General Administration Order (ÁKR). According to this ÁKR exploration permit on open areas can be accomplished between 8 to 25 days. Government Office may require environmental impact assessment. The exploration technical operations plan must be approved by different departments in the Government Office. In theory, applicants for aggregates and industrial minerals may receive permission to start exploration within 35 days.

Novelties in extraction permitting:

- A major permitting step is the establishment of a mining plot. It needs to submit this claim within 5 months after the approval of the final exploration report.
- This 5-month period does not include the environmental permit (permit for environmental protection or IPPC license, affected parties shall be provided with the relevant information at least 30 days before the public hearing).

- The mining entrepreneur is obliged to commence the operational extraction within 5 years from the establishment of the mining plot. To get a mining plot, the applicant needs to have the environmental permit approved (by Reg. 314/2005) with plans for other land uses (soil use change and land remediation).
- Then an extraction TOP (explaining the management of extraction and mine waste utilization) must be approved by the Government Office (Mining Department). This may be approved for a period of 15 years at all types of mining activity. If the entire area is not used for extraction the period can be extended for 7,5 years.
- In theory, applicants for aggregates and industrial minerals may start extraction within 1-1.5 years, whereas for ore minerals another 3-4 years is needed for the concession procedure (extraction permit: a minimum of four years).

Regarding extraction a major permitting step is the establishment of a mining plot. This 5-month period does not include the environmental permit. The mining entrepreneur is obliged to commence the operational extraction within 5 years from the establishment of the mining plot. To get a mining plot, the applicant needs to have the environmental permit approved. The extraction TOP must be approved by the Government Office. In theory, applicants for aggregates and industrial minerals may start extraction within 1-1.5 years.

The concession scheme involves that Hungary is closed for energy minerals (incl. hydrocarbons, coal, geothermal energy) 2500 m below the surface and for ores. A preliminary EIA that is called vulnerability and loadability study is required and is done by the MBFSZ with the assistance of relevant authorities. Final studies are published (www.mbfesz.gov.hu), as well the call for tender. The winner has the exclusive right to sign a contract and to apply for the rets of the above permits.

Mineral Resource Management and Utilization Action Plan 1345/2018. (VII. 26.) Government Decision was published officially on 26th of June in 2018. The main topics are:

- 1) Approval of the implementation of the Action Plan.
- 2) Linking between minerals and energy utilization and other sectors like infrastructure, land use planning.
- 3) Publication of the Action Plan.
- 4) Maintenance of the implementation of the Action Plan.
- 5) Financial background of new modern basic research and review of public burden/taxes of mining entrepreneurs and simplifications.
- 6) Innovative technologies (low carbon emission, carbon capture and sequestration and recycling, unconventional oil and gas, geothermal energy).
- 7) Possibilities of reopening of coal mines (clean coal technology).
- 8) Mining culture and development of this position in the society.
- 9) Extension of mining data service.
- 10) Establishment and maintenance of a modern and uniform mineral resources inventory.

Other relevant progress:

- Amendment of Mining Act (<https://net.jogtar.hu/jogsabaly?docid=99300048.TV>): specifications on public and data and data having public importance.
- More transparent procedure of data service (ML 25 § (3). Last amendment: Jan. 2019. Data are confidential:
 - o a) data provided by the mining entrepreneur in the course of exploration as far as the termination of exploration right but not later than the valid decision on the application for the establishment of mining plot,
 - o b) data provided by the mining entrepreneur for the mining plot as far as the termination of mining right but not later than 3 (three) years from date of the reporting obligation.
- According to the amendment of the Mining Act data on the locality of exploration and the date of exploration has a public importance, so this type of data is publicly available.
- Beside the obligation on data service from companies on annual exploitation, type of minerals the exact locality needs also to be provided.
- The Mineral Resource Management and Utilization Action Plan deals with recycling and innovative technologies that is a good trend to improve the approach of utilization of secondary raw materials.

- The Hungarian Waste Management Federation shares professional information and news concerning the execution of the European Union's action plan for the Circular Economy, the adoption of related EU legislation and other measures, the transposition of those into Hungarian law, and in general the topic of the circular economy (www.hosz.org) in both Hungarian and English as well.
- The National Environmental Program by the Ministry of Agriculture provides a comprehensive framework for Hungary's environmental policy objectives - the protection of natural values, the economic (sustainable) use of resources, and the improvement of the environmental conditions of human health. Civil society organizations play an outstanding role in meeting these objectives.
- Involvement of relevant parties and stakeholders: there is inter-ministerial consultation on decision-making level but competent professional (mining and environmental) organizations are also involved

According to the development of the bridging document and taking into account national characteristics the traditional / Russian type classification may be aligned with the CIRSCO type reporting and the UNFC.

What concerns the EIA legislation, prior the exploitation environmental impact assessment may be needed to the exploration and sure to the Technical Operation Plan of exploration. There may be some other types of permissions (e.g. use of the area for other purposes with regards to soils). The major legislative documents are the following:

- Government Regulation No. 314/2005 on EIA and IPPC (<https://net.jogtar.hu/jogsabaly?docid=A0500314.KOR>).
- Act No. LIII of 1996 on nature conservation (<https://net.jogtar.hu/jogsabaly?docid=99600053.TV>)
- Government Regulation No. 275/2004 on Natura 2000 sites (<https://net.jogtar.hu/jogsabaly?docid=A0400275.KOR>).
- Government Regulation No. 312/2012 on construction permitting (<https://net.jogtar.hu/jogsabaly?docid=A1200312.KOR>).
- Ministerial Decree No. 14/2008 (IV. 3.) on mining waste management (<https://net.jogtar.hu/jogsabaly?docid=A0800014.GKM>).
- Act No. CXL of 2004 on the General Rules of Administrative Proceedings and Service (<https://net.jogtar.hu/jogsabaly?docid=A0400140.TV×hift=20170101&txtreferer=A1100190.TV>).
- In the SNAP SEE project (www.snapsee.eu) the "New EC guidance on Natura 2000 for the non-energy extractive industry" was translated into Hungarian and were disseminated on stakeholder consultations (2015).
- BAT recommendation for waste management has been published in Hungarian here: <https://ippc.kormany.hu/bat-kovetkeztetesek>.
- The details of the COMMISSION DECISION of 2018/1147 of 10 August 2018 to provide the European Parliament and the Council with the implementation of Directive 2010/75/EU are available here: <https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:32018D1147&qid=1541513674833&from=HU>.
- These documents and conclusions are taken into considerations in authority works.
- BREF document is available for waste treatment: <https://ippc.kormany.hu/bref-vezetoi-osszefoglalok>
- Ferrous Metal Processing: https://ippc.kormany.hu/download/1/f9/70000/vasfemfeldolgozas_bref.pdf
- Mining Act: 28 § (1) The mining contractor is obliged to maintain and enforce the provisions of this Act and the technical and technological safety regulations specified in the regulations issued for its implementation.
- There is no available BREF doc for Management of Tailings and Waste-rock in Mining Activities that was published.

Regarding the RMIS:

- o Proper and updated (periodically reviewed) data and information would be useful for companies and government bodies and for the academy sector as well.
- o Data on demand and supply sides would support sustainable resource management.
- o Benefits of RMIS should be disseminated on all levels.
- o Integration of good practices, case studies EU-funded project results.

3.6.1.4 Information access

- Mining and Geological Survey of Hungary: www.mbfesz.gov.hu
- Wolters Kluwer Hungary Information Services: <https://netjogtarhu/>
- Governmental decree No. 161/2017 on the Mining and Geological Survey of Hungary <https://mbfsz.gov.hu/en/>
- Mining Law No. 48/1993 : <https://netjogtar.hu/jogsabaly?docid=99300048.TV>

3.7 Italy

3.7.1 Regulatory framework

3.7.1.1 Legislation, ownership and categories of minerals

In Italy “first category minerals” are state-owned; these are energy minerals, metallic ores, industrial minerals such as salt, potash, barite, fluorspar, gemstones, garnet, corundum, leucite, fluorite, strontium minerals, talc, asbestos, cement marl and lithographic stones. Marine sand and gravel also belong to central State.

“Second category minerals” are peat, construction minerals (except marl for cement), quartz and silica sand, igneous rock, limestone, chalk and dolomite, clay, and other industrial minerals not included in the first category. They are property of the land owner.

3.7.1.2 Regulatory framework and permitting

Competences related to planning and management, including permitting, passed from the national State to the Regions. Italy has a decentralized regime and each region has its own relevant regional laws (RL) regulating extraction and environmental permitting procedures. The authorities responsible for permitting issues for onshore “first category” and “second category” non-energetic minerals are the Regions.

The central State has no permitting competences for onshore non-energetic minerals but only for offshore ones. The national ministry responsible for the permitting of marine aggregates is the Ministry of Economic Development.

3.7.1.3 Recent progress of the regulatory framework

The foundation of the Italian Mining Code dates back nearly 100 years, major reforms in the governance were introduced at the end of the XX century and in the latest 20 years it has been quite stable with the following historical record:

Royal Decree n. 1443/1927 and in some part is still valid setting general principles: Main typologies of mineral and quarry materials.

President Decree DPR 616/1959 Mining police and mining safety regulation have been mainly introduced in the '60s.

In 1977 President Decree 616/1977 allocated to Regions the administration activities on Hydrogeology, Quarry and Peatlands.

In the 1980s the environmental code (EIA, emission limits, etc.) have significantly add sustainability perspective & separation of the Italian Geological Office from the Italian Mining Office (1986).

In 1996 Legislative decree on the transposition of the EU directive 92/91/CEE and 92/104/CEE on safety.

In the 1998 with the Legislative decree 112/1998 a major reform have been introduced “devolution” to the Italian Regions the competence in the field of Licensing and Control on mining.

1998-2001: The whole traditional central Directorate dedicated to mining and the Mining district offices have been transferred to the Regions.

Transposition of the Directive 2006/21/CE on extractive waste D.Lgs 117/2008.

President Decree 78/2007 structured the former National Mining Council (Consiglio Superiore delle Miniere) into section b) of the Italian Commission for the Hydrocarbons and Georesources (i.e. CIRM b).

Transposition of the Directive on updates on EIA (Legislative Decree 104/2017) transferred back to EIA procedures at central level (i.e. to the Ministry of Environment) on certain exploration and extraction more strategic/complex cases of first category minerals: «minerals used for the extraction of metals, metalloids and their compounds; graphite, solid fuels, asphaltic and bituminous rocks; radioactive substances.”

The currently ongoing major policy initiatives are the

- Strengthen governance on mining heritage initiatives:
 - REMI networks on Mining Heritage and Geoparks,
 - National Mining Heritage Day,
 - Proposal of a specific legislation.
- Better dialogue with stakeholders:
 - National Raw Material Lab-community has set up as multi-stakeholders: Draft of a National Raw Material Strategy,
 - Reconnect Regions and Central Offices in order to decrease fragmentation.
- Recover a national-level mining statistics and primary raw materials information
 - National Statistics Office (ISTAT) "Anthropic pressure and national risks - annual report on Extractive Activities from Mining and Quarrying", for the third time in 2019,
 - MISE - Italian RMIS in collaboration with the JRC,
 - ISPRA - Italian Geological Service (i.e. Gemma GIS, Mine4Eu, etc.),
 - Ministry of Finance (Italian State-owned endowment report).
- Since 2018 part of UNECE working groups on classification reforms.
- In 2018 a SSRS project have been submitted with the aim to review and update the Mining.

3.7.1.4 Information access

- Italian RMIS: <https://unmig.mise.gov.it/index.php/it/dati/materie-prime/dati-relativi-alle-risorse-minerarie-italiane>
- www.istat.it
- National Mining Code: <https://unmig.mise.gov.it/index.php/it/dati/materie-prime>
- Italian Mining Heritage: <https://unmig.mise.gov.it/index.php/it/dati/materie-prime/valorizzazione-del-patrimonio-minerario>
- D.P.R. 24 luglio 1977 n.616 <http://www.normativaitaliana.it/nazionale/DPR%202024-07-1977%20n.616.asp>
- D.lgs. 31/3/1998 n. 112 <http://www.parlamento.it/parlam/leggi/deleghe/98112dl.htm>
- Legge Costituzionale N.3/2001 <http://www.parlamento.it/parlam/leggi/01003lc.htm>
- Decreto Legislativo N.85/2010 <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legislativo:2010:85>
- D.lgs. 22 giugno 2012 n. 83 <http://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legge:2012-06-22:83>
- Regional Law on Mining Activities (Sardinia): <http://www.regione.sardegna.it/j/v/86?v=9&c=72&s=1&file=1989030>
- Regional Law on Mining Activities (Sicilia): [http://www.regione.sicilia.it/industria/corpo%20delle%20miniere/normativa%20di%20riferimento%20in%20materia%20di%20cave%20\(Giacimenti%20di%20lI%20categoria\)1.htm](http://www.regione.sicilia.it/industria/corpo%20delle%20miniere/normativa%20di%20riferimento%20in%20materia%20di%20cave%20(Giacimenti%20di%20lI%20categoria)1.htm)
- Regional Law on Mining Activities (Calabria): <http://www.provincia.cosenza.it/portale/portalmmedia/2014-10/LR.%20n.%2040%205%20novembre%202009.pdf>
- Regional Law on Mining Activities (Basilicata): https://www.regione.basilicata.it/giunta/files/docs/DOCUMENT_FILE_523493.pdf
- Regional Law on Mining Activities (Campania): http://www.sito.regione.campania.it/leggi_regionali1995/lr17_1995.pdf
- Regional Law on Mining Activities (Molise): [http://www.regione.molise.it/web/crm/lr.nsf/\(a2005\)/271478A14AAA306BC1256FE800369363?Open Document](http://www.regione.molise.it/web/crm/lr.nsf/(a2005)/271478A14AAA306BC1256FE800369363?Open Document)

- Regional Law on Mining Activities (Abruzzo): http://www2 consiglio regione abruzzo it/leggi_tv/abruzzo_lr/1983/lr83054.htm
- Regional Law on Mining Activities (Marche): http://www consiglio marche gov it/banche_dati_e_documentazione/leggirm/leggi/visualizza/vig/1225
- Regional Law on Mining Activities (Umbria): <http://www assocaveumbria org/file/normativa/04 pdf>
- Regional Law on Mining Activities (Tuscany): <http://raccoltanormativa consiglio regione toscana it/articolo?umndoc=um%3Anir%3Aregione toscana%3Alegge%3A2015-03-25>
- Regional Law on Mining Activities (Friuli-Venezia Giulia): <https://lexview-intregione fvg it/FondiNormative/xml/xmllex aspx?anno=1986&legge=35>
- Regional Law on Mining Activities (Bolzano): http://lexbrowser provincia bz it/doc/20150821/it/lp-2003-7/legge_provinciale19_maggio_2003_n_7.aspx
- Regional Law on Mining Activities (Trento): <https://www consiglio provincia tn it/leggi-e-archivi/codice-provinciale/Pages/legge.aspx?uid=15798>
- Regional Law on Quarry Activities (Piemonte): <http://arianna consiglio regionale piemonte it/base/coord/c1978069 html>
- Constitutional Law 3/2001: passing of competence on mining from State to Regions: <http://www parlamento it/pa rlam/leggi/01003lc.htm>
- Decree 21/1979: Explosive rules for mining extraction: <https://unmig misegov it/index php/it/informazioni/normativa-di-settore>
- Royal Decree laying down the legislative framework on mining activities: <http://faolex fao org/docs/texts/ita38601 doc>

3.8 Spain

3.8.1 Regulatory framework

3.8.1.1 Legislation, ownership and categories of minerals

Mining operations are governed by the Mining Law. The 17 Spanish Autonomous Regions may enact additional mining rules. All mineral deposits and geological resources are public domain goods, thus mining activity can be performed by holding a permit or concession. The competent authorities are the General Directorate of Energy and Mines Policy (Ministry of Energy, Tourism and Digital Agenda) and the Autonomous Regions. The permits required depend on the type of "mineral section" (A, B, C or D), metals and industrial minerals belong to Section C, and construction minerals to A & B:

- Section A resources
 - Authorization of use
- Section B resources
 - Authorization of utilization of mineral and thermal waters, mining waste, underground structures
- Section C and D resources
 - Prospection permits, exploration permits, mining concessions

3.8.1.2 Regulatory framework and permitting

The exploration phase in Spain is covered by two different type of permits. Prospection permits do not allow performing mining operations such as trenches, drilling, etc., whereas exploration permits involve minor excavating works and drillings, and have more requirements by the environmental authorities, e.g. preliminary EIA and a restoration plan. The permitting procedures are governed by a multi-authorization system, such as mining, environment, cultural heritage, land use planning, and other permits are requested by different administrations with various timeframes. During the administrative process of granting a permit, if a report is required the process is stopped and the deadlines increase. The banning of mining operations by Autonomic Governments and Municipalities is happening through land use planning. The Supreme Court established in its decision of 3 November 2010 that restrictive land use planning would violate the Mining Law, but this doctrine

has yet to be adopted by the legislation to provide legal security to mining rights and to safeguard the access to mineral resources.

3.8.1.3 Recent progress of the regulatory framework

A recent draft legislative proposal on Climate change has been prepared and circulated with no explicit reference on the extractive sector. The coal mines are closed in Spain, ca. 200 jobs are lost.

The exploration and production of hydrocarbons is forbidden.

Later this year the revision of the legislation (Royal Decree) on extractive waste and mine closure is planned.

The Spanish standards on sustainable mining can be good examples for progressive regulatory solutions.

3.8.1.4 Information access

- Criteria to include resources under section A of the Mining Law: <https://www.boe.es/buscar/doc.php?id=BOE-A-1995-4152>
- Spanish Standardization Institute: <http://www.reemain.eu/Partners/Aenor.kl>
- Royal Decree No. 777/2012 Amendment to Royal Decree No. 975/2009 on the management of waste from extractive industries and the protection and rehabilitation of areas affected by mining activities: https://www.boe.es/diario_boe/btx.php?id=BOE-A-2012-6500
- Law establishing Centre for Energy Efficiency and Mining Development: <https://www.boe.es/buscar/doc.php?id=BOE-A-2012-5931>
- Act on mining management of the Balearic Islands: https://www.boe.es/diario_boe/btx.php?id=BOE-A-2014-11171
- Promotion of the Mining Law 1977: <https://www.boe.es/buscar/doc.php?id=BOE-A-1977-14715>
- Promotion of the Mining Law 1980: <https://www.boe.es/buscar/doc.php?id=BOE-A-1980-15814>
- Promotion of the Mining Law 1986: <https://www.boe.es/buscar/doc.php?id=BOE-A-1986-17241>
- General Regulation of Mining Basic Safety: <https://www.boe.es/buscar/doc.php?id=BOE-A-1985-10836>
- Restoration of Areas Affected by Mining Activities 2009: <https://www.boe.es/buscar/doc.php?id=BOE-A-2009-9841>
- Restoration of Areas Affected by Mining Activities 2012: <https://www.boe.es/buscar/doc.php?id=BOE-A-2012-6500>
- Minimum safety rules to protect mine workers: https://www.boe.es/diario_boe/txt.php?id=BOE-A-1997-21178
- Mining Regulatory Regime: <https://iclg.com/practice-areas>

3.9 Portugal

3.9.1 Regulatory framework

3.9.1.1 Legislation, ownership and categories of minerals

The primary legal basis for the extraction of state-owned minerals (metals and industrial minerals) is Law No. 54/2015 for exploration and use of geological resources, including marine minerals. For land-owned (or privately owned) minerals extracted in quarries the guiding principles relating to their exploration and extraction are regulated by Decree-Law No. 270/2001.

3.9.1.2 Regulatory framework and permitting

The national mining authority for state-owned minerals is the DGEG (under the Ministry of Economy) which acts as a “one-stop shop” for mining permits in the exploration, extraction and post-extraction phases. For obtaining exploration rights, no environmental impact assessment is required. The granting of extraction rights for state-owned minerals is by means of a Government contract. For quarries, the licensing depends on the quarry type: for large quarries the authority is DGEG, for small ones it is the local municipal chamber. For offshore activities, the rights for exploration and extraction are granted by DGEG and the applicant must obtain a maritime area use authorization by the Sea Minister.

3.9.1.3 Recent progress of the regulatory framework

Portugal is a mining country, since Roman times several area have been mined for: tin, Copper, Zinc, lead, Tungsten, etc. . There are two important copper and zinc mines in Alentejo, Iberian Pyrite belt. The Lithium potential is significant and new projects are running. Dimension stones, aggregates and industrial minerals are also voluminous.

Legal framework:

- Geological resources framework: Law 54/2015 (June 2015),
- Mineral deposits regulation (public domain) DL 88/90 (March 1990),
 - Mines: all metallic minerals, kaolin, quartz, feldspar, special clays, special sands, halite, gypsum, talc,...,
- Quarries regulation (private domain) DL 340/2007 (October 2007)
 - Quarries: marbles, limestones, clays, granites, aggregates, slates,...
- Waste management: DL 10/2010, of 4th February,
- Environment Impact Assessment: DL 152-B/2017 of 11th December (Directive nº2014/52/UE transposition for the Portuguese legislation),
- Health and Safety: DL 162/90 of 16th March,
- Land use: DL 80/2015 and DL 15/2015.

The above pieces of national legislation are rather stable, the recently (2015) revised Mining Act was in force since 1990 (25 years). This introduced the new appraisal rights as an option.

Although there are 2 autonomous regions, Madeira and Azores, the Mining Act applies nationally.

The public domain mining rights are summarized below.

Rights	Subject	Conditions
Prior appraisal rights	Metallic mineral deposits for undertaking studies for the best knowledge of existing resources; analysis of available information and of the samples taken.	15 km ² max. 1 year.
Exploration rights	Applied for the development of activities aimed to increase the knowledge of the geological resources and the determination of its characteristics, until the revelation of the existence of economic value.	up to 500 km ² (Terrestrial Area) up to 5 000 km ² (Maritime Area) 5 years max. (extensions included) A bond is provided (10% of expenditure) A fee is paid every year, based on the area occupied (€/km ²)
Experimental exploitation rights	When due to the features, the nature of the mineral deposit and the level of knowledge of the mineral occurrence, there aren't yet the necessary conditions for the immediate application for effective exploitation rights.	5 years max. (extensions included) A bond is provided (10% of expenditure) Royalties are paid every year
Exploitation rights	For the operations of extraction and beneficiation of mineral resources.	Duration of the exploitation contracts are of 90 years maximum (extensions included) A bond is provided

		Royalties are paid every year
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What concerns the EIA legislation, it is DL 152-B/2017 (11th December). For exploration no EIA is needed, for exploitation EIA is needed in the following cases.

General case:

- Open pit mines and quarries in an area of more than 15ha or more than 200.000 tons extraction/year or if there are several open pit mines/quarries within a radius of 1Km and in total they exceed the thresholds.

Underground mines and quarries – in an area of more than 15ha or more than 200.000 tons extraction/year.

In sensitive areas:

- Mandatory EIA for projects that exceed thresholds defined for general case.
- In cases where projects do not reach the thresholds for the general case, there will be a case-by-case analysis for decision on EIA.

If the Government or the permitting organization decides that due to the dimension, location and characteristics of the project it is needed an EIA. Note: This applies to projects that do not exceed the limits for EIA in the general case.

In case of extensions of projects (already licensed) which will exceed 20% of area or production.

In Portugal, the Environmental Impact Assessment is in force through the DL 151-B/2013 published on the 31st October 2013, which has had amendments and is now republished on the DL 152-B/2017 of 11th December.

Portugal is committed to social responsibility:

1. Rehabilitation of abandoned mining sites (since 2007).

Portugal is committed to correct environmental liabilities and impacts of centuries of mining activity (passive until 1990). Since 1990, every mining company is responsible to ensure the environmental rehabilitation. Beyond that, the Government defined a policy and created due financial and institutional conditions for the execution of Environmental Remediation of Old Mining Areas Plan (DGEG and EDM).

2. Social openness and responsibility:

- Involvement of Municipalities: All municipalities are consulted during the license/permitting procedures.
- Public participation and Involvement of Stakeholders: Prior to issuing the exploration/exploitation permit, DGEG makes public on the Government Journal and on national and local journals about the application (30 working days for complaints).
- Participate on the Land use Plans at national, regional and municipal levels. Applying the principle of parity and co-existence.
- Promotion of meetings, workshops and debates with stakeholders to stress the importance and peculiarity of mineral resources.

3. New royalties policy to increase of public acceptance, awareness and trust by allocating part of the money coming from mining companies in regions where mining occurs to improve life quality and local programs.

The recent success cases in the above context are:

- Publication of 2 new land use diplomas which enforce the importance of geological resources and states the compatibility with agriculture and forest land uses.
- Involvement practices of stakeholders such as public consultation and regional meetings.
- Creation of the Portuguese Partnership on the geological resources (July, 2015).

Royalties policy include:

- to support inspection and regulation activities DGEG (Mining Authority),

- to support research LNEG (Geological Survey),
- to support the rehabilitation of abandoned mining sites EDM (State Owned mining company for rehabilitation of old mines) - More than 35M€ have been applied on environmental rehabilitation of abandoned mining sites,
- is applied in social, environment and I&D projects and programs in the regions where mining occurs to improve life quality and local programs Municipalities.

With regard to exploration there are a number of recent conditions from the Ministry of Environment:

- All annual exploration working programs have to be sent to the National Environmental Agency, Land use Regional CCDR, or National Institute for Nature Conservation and Biodiversity for opinion.
- Progressive rehabilitation of the land during exploration works is mandatory.

Ensuring international participation:

- In the EU Initiatives, groups, plans and projects,
- Promote the mineral resources potential and exchange knowledge and good mining practices: PDAC,...
- Several cooperation agreements with countries outside EU.

In Portugal there is no obligation for reporting on a predefined classification system. Mining companies operating in Portugal have to report under the international standard reporting systems. The majority of mining companies report under CRIRSCO (Committee for Mineral Reserves International Reporting Standards), such as CIM, NI 43-101, JORC, SAMCODES, SME or PERC classification system.

What concerns the role of RMIS, it is complementary to MS actions. There is the opportunity to develop complementary actions, such as:

- Update legal framework data from each MS, validated by the each Member State/Region;
- Update geological data in each MS, validated by each Member State;
- Compile data with resources and reserves in each MS, and in the EU, validated by each MS;
- Have a strong communication area/pillar directed to the society, presenting good examples in the mining industry, the importance of mineral resources in our daily lives, and having an educational purpose.
- Strong communication role towards the European society in order to accomplish the Second Pillar of RMIS.

3.9.1.4 Information access

- Directorate general for energy and geology: www.dgeg.gov.pt
- Law on environmental rehabilitation of degraded mining areas: <https://dre.tretas.org/dre/135003/portaria-330-2001-de-2-de-abril>
- Law on prevention and control of pollution: <https://dre.tretas.org/dre/117703/decreto-lei-194-2000-de-21-de-agosto>
- Law on licences, and the installation, operation, closure and postclosure maintenance of landfills of waste disposal: <https://dre.tretas.org/dre/152365/decreto-lei-152-2002-de-23-de-maio>
- Law on wastes from extractive industries: <https://dre.tretas.org/dre/269504/decreto-lei-10-2010-de-4-de-fevereiro>
- General Legal Framework for the Discovery and Use of Geological Resources: http://www.ordermengenheiros.pt/fotos/editor2/lei_54_2015_regimejuridico.pdf
- National Strategy for Geological Resources - Mineral Resources (english): <http://coltreources.com/wp-content/uploads/2015/02/National-Strategy-for-Geological-Resources-Mineral-Resources-Resolution-of-the-Council-of-Ministers-No-78-2012.pdf>
- National Strategy for Geological Resources - Mineral Resources (national language): <https://www.ccdr-a.gov.pt/docs/desenvRegional/2014-2020/EstrategiaNacionalRecursosGeologicos.pdf>
- Mineral Deposits Regulation: <https://dre.tretas.org/dre/7667/decreto-lei-88-90-de-16-de-marco>
- Quarrying Law: <https://dre.tretas.org/dre/7670/decreto-lei-89-90-de-16-de-marco>

- General Health and Safety at Work in Mines and Quarries Regulation: <https://dre.tretas.org/dre/20565/decreto-lei-162-90-de-22-de-maio>

3.10 Greece

3.10.1 Regulatory framework

3.10.1.1 Legislation, ownership and categories of minerals

The Greek Mining Code distinguishes mineral raw materials into two categories: a) "metallic minerals" which, either on the surface or underground, do not belong to the landowner of the area they occur in, nor to the state, and b) "quarry minerals", which belong to the landowner. Metallic minerals include (native) metals, all metallic compounds, precious stones, radioactive and energy minerals, sulphur, talc, fluoride, asbestos, dolomites with MgO content >21 %, feldspars, mineral salt, organic sediments, and others. Quarry minerals comprise aggregates, marbles and other ornamental rocks, and almost all industrial minerals. Exploration and exploitation rights of metallic minerals, except energy and radioactive minerals, can be conceded to anyone interested.

3.10.1.2 Regulatory framework and permitting

The main first-instance authorities are, at national level, the Ministry of Environment and Energy and, at regional/local level, the 7 De-centralised (Regional) Administrations and the 13 Administrative Regions. Who issues which permit depends on the mineral type, size of the project/activity, land use peculiarities, and the land ownership.

The Ministry (YPEN) is the competent authority for the approval of any technical exploitation study for both quarry and metallic minerals, in accordance with the Regulation on Mining and Quarrying Activities (KMLE), and for the Environmental Permission (AEPO) of the extractive activities included in sub-category A1. Furthermore, mining concessions are granted by the Ministry (by Presidential Decrees). The relevant Decentralized Administration grants the administrative authorization for exploration of quarry minerals (industrial minerals, marble, aggregates) located on public land and is also the competent authority for the environmental permission (AEPO) for extractive activities grouped into sub-category A2. The Administrative Regions grant exploration license for ores, the "Mineral Exploration License" (namely AME).

3.10.1.3 Recent progress of the regulatory framework

The Greek mining/metallurgical industry constitutes an important sector of the economic activity of the country. According to the 2017 Report on Mining and Quarrying Activity by the Ministry of Environment and Energy, during 2017 there were 14.000 employees in the sector, rehabilitation bank guarantees comprised more than 23 m€, leasing fees were 17 m€ and royalties paid were 2.1 m€.

The main mining legislation is the Mining Code – Legislative Decree 210/1973, as amended by Law 274/1976 for metallic minerals, and for the quarry minerals are the Law 4512/2018, and the Regulation on Mining and Quarrying activities (KMLE Ministerial Decision D7/A/12050/2223/2011).

Ore mining is of public interest, protected by the Greek Constitution. The mineral right is a particular property right (*in rem*) separated from land property rights, whereas the quarrying right belongs to the owner of the land. The owner of the mineral rights has the exclusive right to explore/ extract/ exploit the minerals lying above or below the surface of the ground, except those owned by the State (energy minerals, such as lignite and geothermal resources).

The mining right either it belongs to the State and is leased or it is granted by a Presidential Decree (establishing the Mine Concession) for a period of 50 years (with an option for 25 more and a further option for 25 more years). Prior to Mine Concession, a Mineral Exploration License given by the Head of the Region is required, which provides the right to explore.

The major changes by the Law 4512/2018 are:

Ore exploration:

- Reformed procedure regarding the Mineral Exploration License.
- The Standard Environmental Commitment Approval replaces the "approved EIA study" when the exploration activities are limited (max 0,5m³/acre etc.).
- EIA study approval is needed when drilling or extended excavation is taking place during exploration activities. When exploration is taking place without excavation work (e.g. geophysical methods) is subject to notification.

Content of the Technical Study:

- The Standard Technical Commitment Approval replaces the “approved technical study”.

E/M equipment:

- the installation permit is abolished in case of non-complex equipment, the required supporting documents are submitted along with the technical study, while the operation permit is replaced by a notification.

The new legal regime of quarries (The provisions of L.4512/2018) involves the following changes:

- Unification of the previous existing scattered and complex provisions.
- Simplification of the licensing procedure.
- Use of information technology (in combination with L. 4442/2016)- Notify Business Information System.
- Rationalization of fees royalties and rents.
- Parameterization of fines.
- Total time of quarry licensing: The maximum lease term of the right to exploit all quarry minerals is set at 70 years (instead of 40) in order to achieve financially sustainable investments.
- Licensing: The exploitation license is abolished. It is replaced by notification (in case of private ownership) or the lease agreement (in case of public or municipal land). The exploration activity is subject to notification (private ownership) or an administrative authorization (public or municipal land). The Technical Study approval of the exploration activity is abolished. The Standard Technical Commitment replaces the “approved technical study”.
- Licensing (E/M equipment): The installation permit is abolished, while the operation permit is replaced by a notification.
- New framework for fines: parameterized fining system (fines regarding breaches of the Regulation on Mining and Quarrying activities and illegal exploitation).

A good example of simplification is summarized in the below Table (based on the Presentation “New provisions of the licensing process for quarry minerals and ores” by Dr. D. LAMPOU - REMIX INTERREG EUROPE, DELPHI 2018)

Number of relevant administrative actions required	MARBLE OR INDUSTRIAL MINERALS QUARRY IN PUBLIC LAND	AGGREGATES QUARRY IN PRIVATE LAND
BEFORE L.4512/2018	32	31
AFTER L.4512/2018	14	12
FINAL PERMISSION	LEASE AGREEMENT	NOTIFICATION

Greece does not have yet a formal framework for minerals reporting purposes.

3.10.1.4 Information access

Administrative tools, access to Information:

Quarrying and Mining activity, annual minerals report (www.latomet.gr)

Transparency portal (<https://diavgeia.gov.gr/>)

Environmental Impact Assessment licenses (<http://aepo.ypeka.gr/>)

Digital environmental registry of quarrying and mining projects (<http://eprm.ypeka.gr/>)

The online platform for “business notification” (<https://notifybusiness.gov.gr>)

THE NEW INFORMATION SYSTEM (<https://notifybusiness.gov.gr>) is the online platform of Notify Business covers all cases where “license” or “approval” has been replaced by “business notification” as an administrative tool:

- ✓ exploration and exploitation of quarry minerals in private areas,
- ✓ installation and operation of electromechanical equipment (E/M) within quarries,
- ✓ exploration of metallic minerals mainly with geophysical methods,
- ✓ operation of complex E/M within mines.

Other resources:

- Law 4512/2018 (Quarrying Law, Government Gazette 5/A/2018) http://www.latomet.gr/ypan/view_laws.aspx
- Ministerial Decision Δ7/A/oik.12050/2223/235.2011 Regulation on Mining and Quarrying Activities (Government Gazette 1227/B/2011): <http://www.latomet.gr/ypan/Hypertrak/BinaryContent.aspx?pagenb=11080>
- National Policy for the Strategic Planning and Exploitation of Mineral Resources: <http://www.latomet.gr/ypan/Hypertrak/BinaryContent.aspx?pagenb=12091>
- Measures and regulations for the management of waste from the extractive industry in accordance with Directive 2006-21-EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC (Government Gazette 2076/B/2009): http://www.elinyae.gr/el/lib_file_upload/2076b_09.1254401107218.pdf
- Legislative Decree 210/1973 'The Mining Code' (Government Gazette 277/A/1973): <http://www.latomet.gr/ypan/Hypertrak/BinaryContent.aspx?pagenb=4031>

3.11 Norway

3.11.1 Regulatory framework

The EEA Agreement enables Norway, as one of the three EEA EFTA States to participate fully in the Internal Market and vice versa. It covers the four freedoms, competition and state aid rules, and certain horizontal and flanking areas. The EEA Agreement, its annexes and protocols form part of the EU acquis.

The following EU policies are not covered by the EEA Agreement: common agricultural and fisheries policies, customs union, common trade policy, common foreign and security policy, justice and home affairs, direct and indirect taxation and economic and monetary union. Therefore, the scope of the EEA Agreement differs from that of the EU treaties

3.11.1.1 Legislation, ownership and categories of minerals

In Norway exploration activities and commercial operations within the mining industry is regulated through the Mineral Act by the Directorate of Mining. The land use (zoning plans) is regulated by the Planning- and Building Act by the concerned municipality or municipalities. The discharge permit is regulated through the Pollution Act by the.

The categories of minerals determine the ownership. The state's minerals make up all metals with weight higher than 5 grams / cm³ or higher. (Despite this, Titanium is state owned). Landowner minerals are minerals with a weight lower than 5 grams / cm³. State minerals typically includes gold, copper and other metals, while privately Norwegian Environment Agency owned minerals include industry minerals, aggregates and natural stone. In order to extract landowners' minerals, the company need to sign an agreement with the landowner, while the Directorate of Mining with Commissioner of Mines at Svalbard give permits to extract state owned minerals.

3.11.1.2 Regulatory framework and permitting

The Mineral act regulates the exploration, production and closure phase of the mining projects in addition to financial collateral requirements. Directive 2006/21/EC of the European Parliament and of the Council of 15 March 2006 on the management of waste from extractive industries and amending Directive 2004/35/EC is incorporated in this law. However, mining companies are affected by a broad range of other laws and regulations like environmental regulations, area planning, indigenous rights and safety regulations like other industries. This concerns all sorts of mining industry, both state-owned and privately-owned minerals.

Companies seeking greenfield mining industry possibilities need to obtain exploration permit, approved regulation plan, emission permit and operating license. This involves three different governmental levels and every process needs public consultation and for some parts of the country consultations with indigenous groups.

Norway, with its large offshore areas have recently regulated offshore mining in the "Ocean floor mineral Act" of March 22. 2019.

3.11.1.3 Recent progress of the regulatory framework

The Planning and Building Act was evaluated in 2014 with minor changes for the mining industry. The Ministry of Trade, Industry and Fisheries is currently evaluating the Mineral Act. The outcome of the evaluation is yet to see. The ministry has shown significant interest in the mining industry and actively promoted the commercial possibilities it represents.

The Norwegian Environment Agency has currently conducted two evaluations, one on the issue of underwater tailing disposal which concludes that there is no reason to ban the method. The other was a general evaluation on the regulatory framework covering the mining sector.

Norway is a member country of the European Economic Area which transposed most the European Community environmental legislation, with the exception of the Natura2000 system. Norway is the largest European producer of Al, Ni, silicon, Siliciumcarbide, Ferromanganese, Titanium minerals, Carbonate filler and coating. Three new mines are being permitted, involving sea tailings deposition as an approved technology as a result of ca. 50 detailed EIA studies.

The present Mineral Law from 2010 is under evaluation, to be assessed against environmental law this year. There is Government declaration of Jan. 2019, there will be no new Sea Tailings Deposition (STD) permits until 2021.

Tailing disposal in general is an «fact resistant» issue:

- However, environmental NGO Bellona supports the newest STDs as alternative to land deposits, to preserve land and reduce pollution. They also support mining for minerals to alleviate energy and transport transition.
- NYKOS, a 5 years research project on new knowledge on STD.

22.03.2019: New law for minerals on the ocean floor.

Promising new investigations at Fens field: 2 holes at 1 km depth with REE ore indications at 700 and 1000 m.

Roadmaps for decarbonized metal production in 2050 has been published.

3.11.1.4 Information access

Norway, unfortunately, is not included in the RM Scoreboard, and RMIS. As well, it was excluded from most of the key H2020 projects.

Access to minerals information: www.dirmin.no

4 Summary

The primary objective of this workshop session was to share practices and experience on the framework conditions' information and knowledge management at country level. This report does not target at any comparison or benchmarking of the individual solutions at national scale. In this respect, the conclusions drawn are rather summaries in nature, and the lessons learnt address mainly the proposals with regard to the future development of the EU Raw Materials Information System.

The legal and regulatory framework conditions across European countries vary a lot. In a number of Member States, the minerals legislation is on a "stand-by" position. Elsewhere, even in traditional mining countries, a set of absolute banning has been published or in preparation, for example on uranium because of environmental concerns, or on hydrocarbons and coal due to the national decarbonization programs, the latter is also driven by the relevant EU regulation on phasing out state aid schemes for the coal industry. A number of Member States show good progress on promoting the sector by the introduction of supportive national policies, reducing the administrative burden, enhanced and early engagement of interested stakeholders, among other regulatory solutions.

Almost all countries have free, open access information source to their national legislation and the competent authorities, and they operate interactive information services on the occurrences of mineral deposits, extractions sites, productions and generated extractive waste volumes, etc..

What concerns the functionalities of the RMIS, participant experts appreciated the current services of the RMIS in general, as well as with regard to the content on the EU Community and the EU Member States national legislation and permitting schemes. Many of the experts are actively involved in the 2019 update of their national regulatory country profiles. Many stressed that not only these chapters but all of the content in the RMIS with country-specific data shall be validated by the national entities and experts.

A good indication of the success of the RMIS is that numerous experts called for a brief but informative RMIS leaflet printed in all official EU languages, which they could further distribute and promote on national scale, also with a view on harmonization needs and as an evidence during governmental inter-service negotiations and at stakeholders fora.

It was emphasized that JRC provides a stable, permanent infrastructure and human resources to operate the RMIS into which, therefore, Member States have their own interest to provide data. On the other end, it implies that RMIS shall further develop its hosting and serving capacities in harmony with the specifications of the data supplied and the targeted end-users.

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Annexes

Annex 1. Agenda of the workshop



Agenda

Third International RMIS Workshop

Joint Research Centre, Ispra, Italy
11th-12th June 2019



The European Commission's
science and knowledge service
Joint Research Centre

Third International RMIS Workshop - Agenda

JRC Ispra, 11th June, Tuesday

11:00-14:00 Arrival at the Joint Research Centre // Registration in Bdg. 36. Room 3.

12:30 Buffet lunch

14:00-15:30 Opening Session / Raw Materials Policies and Knowledge Management in the EU: forward looking

chaired by Constantin Ciupagea, Head of Unit Land Resources, DG JRC

This session sets the scene how the past and future development of the raw materials policy field and related R&I activities induce the growing need for a functioning knowledge management framework. In accordance, the progress and plans at RMIS will be presented and discussed.

Support to Raw Materials Policies and Knowledge management at JRC, Constantin Ciupagea, HoU, Directorate Sustainable Resources, DG JRC

Raw Materials Policies beyond 2020, Maria Nyberg, DG GROW

EU Partnership with raw material supply countries, Sergio Piazzardi, DG DEVCO

Recent Results and Future Plans in the Community R&D in the raw materials and circular economy domain, Laura Petrov, EASME

Proceedings of the EIT Raw Materials Summit 2019, with special focus on knowledge management, Ignacio Calleja, EIT RM

Recent progress and future priorities of the JRC Raw Materials Project, David Pennington, JRC

Raw Materials Information System (RMIS): state-of-play and the 2019 Roadmap report, Simone Manfredi, JRC

Discussion

15:30 Coffee break

15:30-17:30

Session / Social and environmental knowledge on raw material supply chains

chaired by Christian Wimmer, DG ENV and Prof. Leonardo Tognotti, Director, Dipartimento di Ingegneria Civile e Industriale, Università di Pisa

This session focuses on sustainability aspects associated with supply chains of non-energy, non-agricultural raw materials, with a view on identifying key knowledge gaps that could be filled through the RMIS. In particular, it concentrates on the environmental and the social dimensions. Specific objectives include:

- *Analysis of synergies and common areas of interest with the OECD portal for supply chain risk information;*
- *Good governance, social and environmental information in the RMIS: potential to support responsible sourcing and rooms for further improvement with current resources;*
- *Identifying complementarities and data exchanges with OECD, EEA and other entities.*

Strengthening the knowledge-base on sustainability aspects of raw material supply chains: the role of a research institution, Leonardo Tognotti, University of Pisa

The OECD Due Diligence Guidance for Responsible Minerals and OECD Portal for Supply Chain Risk Information, Louis Marechal, OECD

Minerals governance - The IRP report, Patrice Christmann, IRP

RMIS in support of the role of raw materials supply chains to the SDGs

- **The social dimension: responsible sourcing in batteries value chain**, Lucia Mancini, JRC, with input from Andrés Zaragoza, Global Battery Alliance (World Economic Forum)
- **The environmental dimension**, Beatriz Vidal, JRC

Improving data on extractive waste, Christian Wimmer, DG ENV

Initiatives and information to assess sustainability in mining, Gudrun Franken, Head of Unit Mining and Sustainability, BGR, Germany

Sustainability preferences and choices of consumers, Tobias Persson, Swedish Agency for Growth Policy Analysis

Discussion

19:00

Workshop dinner (Villa Borghi)

JRC Ispra, 12th June, Wednesday

9:00-13:00

Session / Updating Knowledge on Member States' Governance of Exploration and Mining

chaired by Silvia Grandi, MISE Italy and David Pennington, JRC

This session aims at presenting how RMIS addresses primary raw materials related legislation at EU Community and Member States national levels, with a view of identifying further needs, gaps and discussing options for improvements. To this end, the presentations are expected to bring in the national perspective, also with a view on the global trends, and Community benchmarking and harmonization efforts, as well as better support for the implementation. Specific objectives include:

- How global trends could be reflected in RMIS in the broad context of good governance, including the Social License to Operate scheme, and the need for conceptual change.
- Examine the role of sectoral policies as drivers and frames for sustainable development of the domestic extractive sector.
- Assess and discuss progressive new solutions from national scale legal acts and best regulatory practices, and their ways of integration into RMIS.

Welcome address – Giovanni De Santi, Director, Directorate Sustainable Resources, DG JRC

Framework conditions in RMIS – Current actions and future plans, Tamas Hamor, JRC

Progress of national legislation: Updating country profiles in RMIS

Finland – Riikka Aaltonen, Ministry of Economic Affairs and Employment

Sweden – Katarina Persson Nilsson, Ministry of Enterprise and Innovation

Ireland – Eibhlín Doyle, Dept. of Communications, Climate Action & Environment

Belgium, Flanders – Renate Schoofs, Government of Flanders, Department of Environment & Spatial Development

Hungary – Zoltan Horvath, Mining and Geological Survey of Hungary

Italy – Silvia Grandi, Ministry of Economic Development

Spain – Carmen Marchan, Ministry of Energy, Tourism and Digital Agenda

Portugal – Paula Castanheira Dinis, Directorate-General Energy and Geology (DGEG), Ministry of Environment and Energy Transition

Greece – Effrosyni Varvitsioti, Ministry of Environment and Energy

Norway – Sverre Alhaug Hostmark, Federation of Norwegian Industries

11:00

Coffee break

11:20

Towards a circular future: analysis of national and sectoral strategies with a focus on raw materials – based on “2019, Even more from less” EEA report, Daniel Montalvo, European Environment Agency

The MIN-GUIDE’s online Minerals Policy Guide, Andreas Endl, Vienna University of Economics and Business (Institute for Managing Sustainability)

MinLand – a H2020 project focused upon linking of mineral policies and land use policies, Ronald Arvidsson, SGU

Discussion

13:00

Lunch break

14:30-17:00 **Session / Strengthening the knowledge-base on specific Secondary Raw Materials**

chaired by Maria Nyberg, GROW and Fabrice Mathieu, JRC

This session aims at presenting how RMIS plays its role in increasing the availability of data and knowledge on secondary raw materials, as well as on material flows. It also aims at zooming in on the knowledge on specific secondary (critical) raw materials potentially arising from some waste flows. Specific objectives include:

- *Updates of the RMIS developments related to data and knowledge on secondary raw materials;*
- *State of knowledge from various sectors / waste flows (e.g. electr(on)ic equipment, batteries, vehicles, mining waste);*
- *Discussing ways forward.*

RMIS in support to improvements of the knowledge-base on secondary raw materials' supply chains, Jaco Huisman, JRC

Strategies for improving knowledge on the collection of WEEE, batteries and ELV, José Riso, DG ENV

End of life vehicles management at FCA, Francesco Bonino, FCA

Knowledge on vehicles stocks and flows, Amund Loevik, EMPA, Maria Ljunggren Söderman, Chalmers University

15:50 Coffee break

16:10 **The impact of second-use of vehicle batteries on raw materials availability, the example of Lithium and Cobalt,** Silvia Bobba, JRC

Providing information on the potential role of landfills and mining waste as supplier of critical and other raw materials, Maria Nyberg, DG GROW

Discussion

17:00 **Closure of the RMIS workshop**

Annex 2. Presentations

Giovanni De Santi



Slide 1/11



Slide 2/11



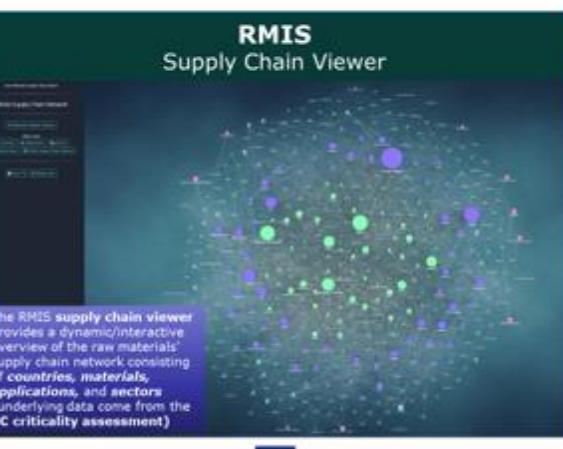
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Slide 4/11



Slide 5/11



Slide 6/11

RMIS Raw Materials' Profiles

RMIS Country Profiles

Slide 7/11

Slide 8/11

3^o International RMIS Workshop

June 11-12, 2019, JRC Ispra
(+ORAMA workshop, June 13-14)

Participants of this 2019 edition:

- 70+ participants, 20 Countries,
- 4 DGs (JRC, GROW, ENV, DEVCO)
- 2 EU Agencies (EASME, EEA)
- 1 Knowledge Innovation Centre (EIT)

Three thematic sessions:

- Social & environmental knowledge on RM supply chains (*day 1, yesterday*)
- Updating knowledge on MS' governance of exploration & mining (*day 2, today*)
- Strengthening the knowledge-base on specific SRMs (*day 2, today*)

RMIS Workshop, session: Updating knowledge on MS' governance of exploration & mining

Chair
Silvia Grandi (Italian Ministry for Economic Development – MISE)
David Pennington (JRC-D3, Raw Materials project leader)

Contributions from
MS: Finland, Sweden, Ireland, Belgium, Hungary, Italy, Spain, Portugal, Greece, Norway
European Environment Agency (EEA)
H2020 projects: MinGUIDE & MinLAND
JRC: Framework conditions in RMIS & Updating country profiles in RMIS

Specific objectives include:

- How global trends could be reflected in RMIS in the broad context of good governance, including the Social License to Operate scheme, and the need for conceptual change.
- Examine the role of sectoral policies as drivers and frames for sustainable development of the domestic extractive sector.
- Assess and discuss progressive new solutions from national scale legal acts and best regulatory practices, and their ways of integration into RMIS.

Slide 9/11

Slide 10/11

Enjoy the workshop!

rmis.jrc.ec.europa.eu
ec-rmis@ec.europa.eu

(2018 RMIS workshop)

Joint Research Centre
The European Commission's science and knowledge service

Slide 11/11



Slide 1/19

Framework conditions in RMIS: Current actions and future plans

Tamas Hamor
& JRC RAW MATERIALS TEAM

RMIS workshop, Ispra - June 12th, 2019

OUTLINE OF THE PRESENTATION

- Session objectives
- terminology
- current RMIS functions on framework conditions
- future plans
- country profiles (the MINLEX update)
- conclusions



Slide 3/19

SESSION OBJECTIVES I (AGENDA)

Session „Updating Knowledge on Member States’ Governance of Exploration and Mining“

„This session aims at presenting how RMIS addresses primary raw materials related legislation at EU Community and Member States national levels, with a view of identifying further needs, gaps and discussing options for improvements. To this end, the presentations are expected to bring in the national perspective, also with a view on the global trends, and Community benchmarking and harmonization efforts, as well as better support for the implementation. Specific objectives include:

- *How global trends could be reflected in RMIS in the broad context of good governance, including the Social License to Operate scheme, and the need for conceptual change.*
- *Examine the role of sectoral policies as drivers and frames for sustainable development of the domestic extractive sector.*
- *Assess and discuss progressive new solutions from national scale legal acts and best regulatory practices, and their ways of integration into RMIS.“*

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SESSION OBJECTIVES II (INVITATION LETTER)

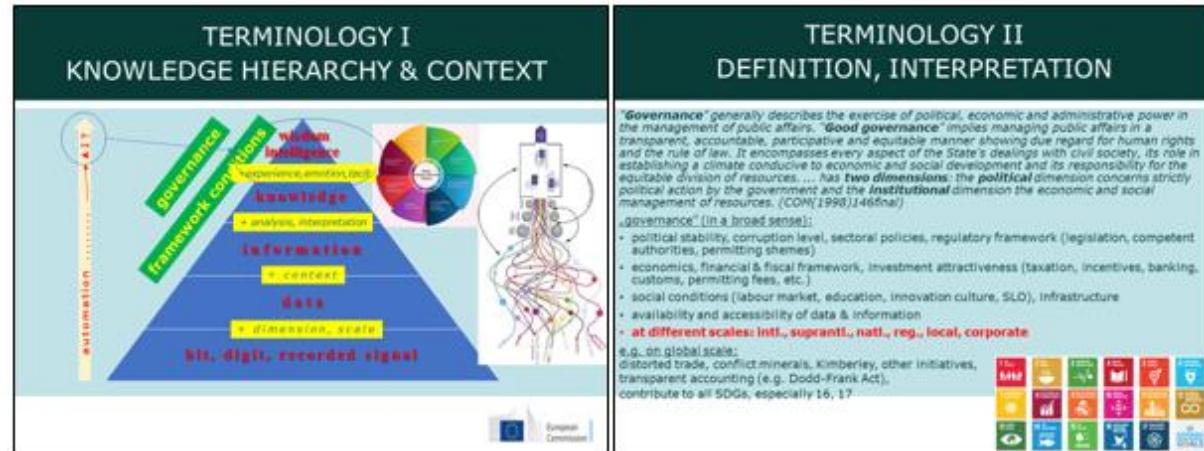
- *What are the recent national implementation experiences worth sharing in the context of exploration and mining, facing the regulatory /legislative framework at European, national, regional or local levels?*
- *What are the current trends and plans in your country on policy making and strategic thinking with regard to raw materials (e.g. change in primary and secondary minerals policy, new strategic reports, changes in other sectoral policies that affect this sector, streamlining efforts, etc.)? Could one expect game changers in the foreseen strategies?*
- *What is the approach taken by exploration and mining companies operating in your country to the PERC (Pan-European Reporting Standards) or IFRS (International Financial Reporting Standards) and what are the problems you noticed related to this topic?*
- *How could RMIS better serve the interests of MS (or regional) scale governments and help them sharing their knowledge on the framework conditions?*

Slide 5/19

SESSION OBJECTIVES III (LETTER ON MINLEX UPDATE)

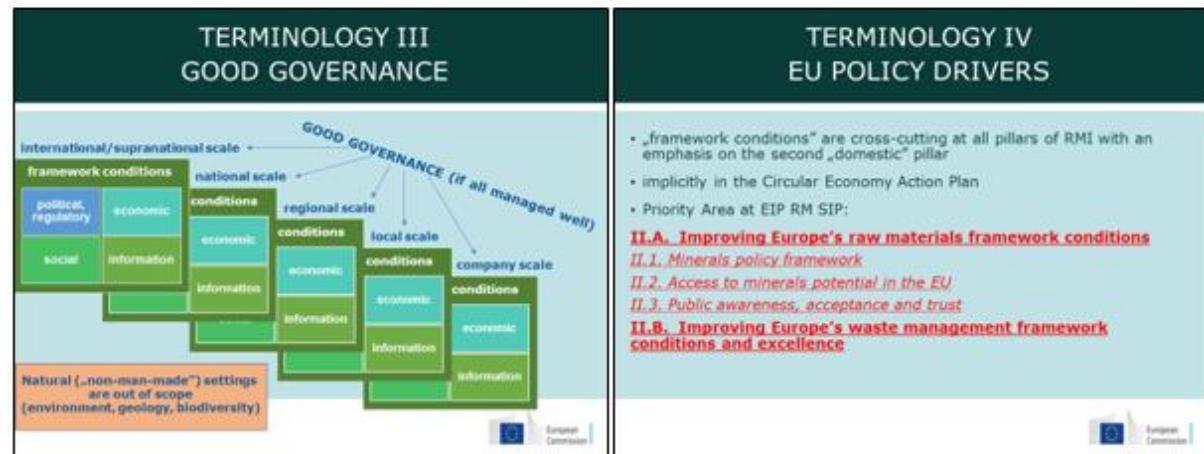
- *Do you have national or regional guidance document or a piece of legislation specific to Environmental Impact Assessment on mineral extraction? If yes, please provide...*
- *Could you please specify that at which permitting stage is a detailed EIA is required in your country?*
- *Does your country apply the option of Article 4(b) of the EIA Directive (... for projects listed in Annex II, Member States shall determine whether the project shall be made subject to an assessment in accordance with Articles 5 to 10 ... through thresholds or criteria set ...) for mining projects? If yes, under what criteria?*
- *Was there any case in your country when Article 10 of the EIA Directive was applied (... limitations ... with regard to commercial and industrial confidentiality, incl. intellectual property, and safeguarding of public interest?)? Which were these?*
- *Do competent authorities in your country apply the IPPC permit and the Extractive Waste BREF for mining under the scope of Industrial Emissions Directive?*
- *Do you have national BREF(s) (Best Available Technique Reference Document(s)) specific to the whole (or stages or subsectors) minerals extractive sector?*

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Slide 7/19

Slide 8/19



Slide 9/19

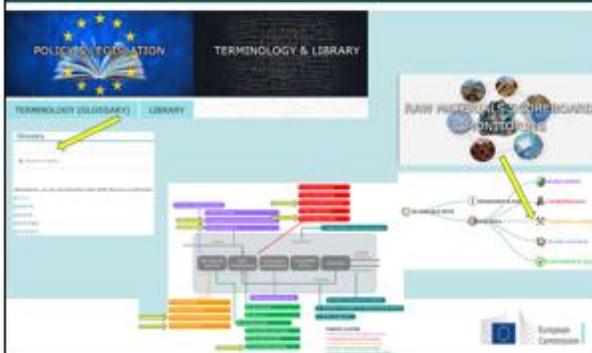
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Slide 11/19

Slide 12/19

CURRENT RMIS FUNCTIONS FRAMEWORK CONDITIONS III



Slide 13/19

CURRENT RMIS FUNCTIONS FRAMEWORK CONDITIONS IV



Slide 14/19

FRAMEWORK CONDITIONS R&I PROJECTS

Relevant projects:

- MINLEX, MINVENTORY, MINATURA, MIN-GUIDE, MINLAND on **RMI second pillar**
- INTRAW, STRADE, FORAM on **RMI first pillar**
- Rather few on **RMI third pillar**, on finance framework, on public awareness (MIREU)



Slide 15/19

CONCLUDING REMARKS

„Framework conditions“ are major constituents of „Good governance“, therefore:

- prime instruments in achieving SDGs,
- permanently updated content in RMIS

To be further developed in RMIS in 2019+:

- MIN-GUIDE transfer (country profiles, etc.)
- MINLEX country profile updates + MS Mining Acts in English
- Country profiles extension to EU28
- Social and trade context development & update
- Library & Gateway (framework conditions projects & outputs)



Slide 16/19

Thank you for your attention!

Enjoy the Session!

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Slide 17/19

Situation Finland

riikka.aaltonen@tem.fi

Ministry of Economic Affairs and Employment of Finland

National update

Fitness check of mining related regulation

- Public debate and criticism, social media and politicians since 2018
- Election 14.4.2019

President emeritus of Supreme Administrative Court, Pekka Vihervuori

- Rapporteur
- Written comments from almost 50 sources: authorities/NGOs/stake holders
- Hearing event
- Comments via public portal, open 3 months
- First findings published 26.4.2019
- Report handed over to the minister 17.6.2019 (will be translated to English)

Next steps decided by the new government and minister

- Technical amendments to be done quickly
- Working groups to develop some questions, environmental legislation, land use legislation

Mining tax?

Slide 1/7

Slide 2/7

Mining in government program

Mining and taxation

- Mines will be transferred to electricity tax class I and removed from the scope of the energy tax ceiling.
- The prospects for introducing a specific mine tax will be studied in order to ensure that society is reasonably compensated for mineral wealth extraction.
- The possibility of taxing profits on the sale of mining rights in Finland even when foreign corporations hold these rights will be investigated.

Improving the environmental protection of mines

We will review the legislation on mining. The purpose of the reform is to improve the level of environmental protection and enhance the operating conditions of mines, while also improving local acceptability and influencing opportunities for investment.

- Provisions will be made to give municipal authorities the right to decide through land use planning whether it is possible to carry out mining activities in the municipality.
- improve the position and right to information of property owners and landowners in the area affected by mines.
- When undertaking significant mining projects, the rights of indigenous peoples will be taken into account as required by the current legislation.
- improve the compatibility of mining permits and environmental permits
- take into account the environmental impacts of planned mines at the earliest stage possible
- ability to take into account the uranium content of ore when assessing the environmental impacts of mines.
- develop the regulation on securities so that environmental responsibilities are dealt with in all situations.
- Mining activities targeting minerals in the sea bed will also be included within the scope of the legislation.
- The permit processes, practices and possible need for restriction concerning mineral prospecting rights in nature conservation areas.

Slide 3/7

Slide 4/7

Exploration and mining companies and the PERC or IFRS, eventual issues

- Europe is not a major actor/player
- accepted alternative to NI 43-101 and Jorc
- Companies are showing increasing interest
- FAMMP = Fennoscandian Association of Metals and Minerals Professionals
 - FAMMP is a non-profit association for individuals working in the mining sector and having the professional qualification and work experience to be able to function as Competent Persons (Qualified Persons is used synonymously) for public reporting of exploration results, mineral resources and mineral reserves in accordance with the internationally recognized PERC reporting standard, or another similarly CRIRSCO based reporting standard.

RMIS and sharing knowledge on the framework conditions

- Up-to-date data available, "one stop source" – easier to find than single EU-projects
- Legislation
 - Is a living organism, up-to-dateness is a challenge
 - Heterogeneous, no MS is another alike
 - Updating is constantly ongoing
- What is relevant information to be shared?
 - Where relevant legislation is available?
 - In what languages?
 - Permitting processes, requirements, authorities, timeframe ... key information
- Implementation of the Directives varying from MS to MS
 - Can be challenging to have information on but would be useful

Slide 5/7

Slide 6/7

Updating country profiles – SWEDEN

Katarina P Nilsson, Ministry of Enterprise SE



Photo: Boliden

Outline

- New and upcoming regulation changes in the Minerals Act and Environmental Code
- Other initiatives (Commissions to Authorities)
- PERC
- RMIS - Importance of bridging knowledge gap (Knowledge based data to enable informed decisions)

Government Offices of Sweden

Ministry of Enterprise and Innovation

Slide 1/10

Slide 2/10

Changes in legislation – uranium has been removed as a concession mineral in the Minerals Act

Starting on August 1st, 2018, in accordance to a change in the Minerals Act (1991: 45), uranium will be removed from the list of concession minerals (in Chapter 1. 1 § 1 Minerals Act).

Extraction of uranium in Sweden is since the same date prohibited by amendments to the Environmental Code

Government Offices of Sweden

Ministry of Enterprise and Innovation

January agreement of 2019

Agreement between the two parties forming the Government (Social Democrats and the Green Party) with the Centre Party and the Liberal party

- Exploration and exploitation of coal, oil and gas will be prohibited (cf. uranium)
- The regulations for when extraction of minerals may take place from alum shale (organic rich formation dominated by black shale) will be tightened (new legislation from 1 January 2022)

Government Offices of Sweden

Ministry of Enterprise and Innovation

Slide 3/10

Slide 4/10

Alum shale in Sweden

- Host metals such as: V, Ni, Zn, Mo, Co, Nd, Cu, Cd, Pb, U, Ag, Au...
- the Government is now to appoint a commission of inquiry to conduct a thorough examination of various alternatives

Government Offices of Sweden



Other initiatives

Commission made within the framework of the **Smart Industry strategy** – a strategy for new industrialisation for Sweden (launched in 2016)

Government Offices of Sweden



Ministry of Enterprise and Innovation

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Examples of actions within the Smart Industry strategy

The Geological Survey of Sweden has been commissioned provide new information (geological mapping) of innovation critical metals (primary resources as well as **mine waste**). Report due: Mars 1, 2020

The Swedish Agency for Growth Policy Analyses has been commissioned to investigate the possibility to introduce labeling systems for sustainable produced metals (traceability of metals). Reported February 2019

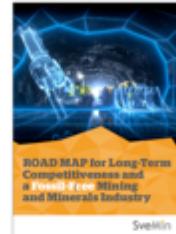


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Fossil Free Sweden initiative

The Fossil-free Sweden initiative will mobilise and highlight actors who are contributing to climate efforts and a fossil-free society.

Different sectors have contributed to the initiative and written **Road maps** for becoming Fossil Free. The road maps also signals policy related barriers that need to be removed.



SveMin

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PERC

- The Swedish Association for Mines, Minerals and Metal Producers (SveMin) recommends its members to follow the PERC Reporting Standard.
- The Fennoscandian Association for Metals and Minerals Professionals (FAMMP) gathers Qualified/Competent Persons (QP) that meets the organisation's requirements for competence and experience to make assessments of exploration results, mineral resources and mineral reserves that meet the requirements of the PERC standard.



Ministry of Enterprise and Innovation

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RMIS – bridging the knowledge gap

- The need of metals (incl. metal need for transformation to fossil free energy alternatives) and current availability of metals from different sources (primary and secondary) need to be analysed
- RMIS has an important role in bridging the knowledge gap – there is a need for knowledge based data to enable informed decisions



Ministry of Enterprise and Innovation

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Ireland's Mineral Industry

- Importance of industry and challenges it faces
- National regulatory/legislative framework - Mineral exploration and development
- Current trends – policy, strategy, other sectoral policies that affect the sector
- PERC/CRISCO aligned codes and standards and IFRS
- RMIS better serve the interest of MS

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Importance of industry and challenges it faces

- If it cannot be grown, it must be mined and even grown products commonly require input from minerals
- Houses, medical, road and rail networks, bicycles, cars, electricity (generation and transmission), green economy, phones, TV, computers, toothpaste, kitchen ware, clothes, art etc.

Importance of industry

Critical for green energy and the circular economy

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Importance of industry

Challenges the Mineral Industry faces

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Challenges the Mineral Industry faces

Region	Estimated Discoveries 2007	% of Total Discoveries	No. of New Deposits	% of New Deposits	Estimated Value 2007	% of Total Value	Total
Australia	321	12%	221	29%	3.12	19%	8.34
Canada	327	13%	82	9%	6 x 10 ³	18%	8.42
USA	312	12%	31	3%	7 x 10 ³	18%	8.42
Latin America	338	13%	108	13%	1 x 10 ⁴	19%	8.33
Pacific/N. Asia	310	12%	30	3%	3 x 10 ³	14%	8.39
Africa	321	12%	197	23%	2 x 10 ³	17%	8.87
WE Europe	34	1%	34	4%	3 x 10 ³	2%	8.42
China	342	13%	82	9%	2 x 10 ⁴	19%	8.33
EU + EE	313	12%	32	3%	3 x 10 ³	14%	8.39
Rest of World	—	—	22	3%	3 x 10 ³	2%	8.33
TOTAL	3,697	100%	867	100%	12 x 10³	100%	8.47

Source: Metal Mining Industry Analysts 2007

MinEx Consulting Strategic advice on mineral economics & exploration

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Challenges the Mineral Industry faces

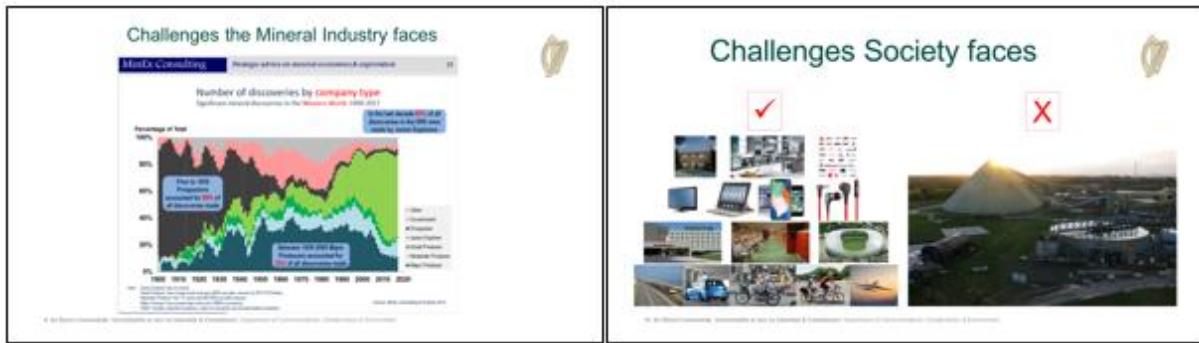
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Source: Metal Mining Industry Analysts 2007

MinEx Consulting Strategic advice on mineral economics & exploration

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Labelling/awareness	Challenges the Mineral Industry faces
<p>1. Contains Mined Materials and 2. Manufactured using Mined Materials</p> <p><small>© An Táin Comhordach, Comhairle an Átha Cliath & Comhairle, Comhairle Cathair Chorcaí, Comhairle Chontae</small></p>	<ul style="list-style-type: none"> Small companies find deposits Finding economically viable deposits is getting more difficult/expensive More and more deposits are blind deposits Small companies are finding it harder to raise capital More minerals are now required to provide for society's demands Society wants 'stuff' but not mineral deposits! <p><small>© An Táin Comhordach, Comhairle an Átha Cliath & Comhairle, Comhairle Cathair Chorcaí, Comhairle Chontae</small></p>

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What the Big 4 say Mining Executives are thinking about	Socio-economic issues
<p><small>© An Táin Comhordach, Comhairle an Átha Cliath & Comhairle, Comhairle Cathair Chorcaí, Comhairle Chontae</small></p>	<p>DEMAND</p> <ul style="list-style-type: none"> Urbanisation Big politics EU rules EU Social challenges The disconnect SLTO No licence Environment Green needs minerals Communications Acceptance of science Legacy sites <p>Artificial Intelligence</p> <p>Workforce attraction</p> <p><small>© An Táin Comhordach, Comhairle an Átha Cliath & Comhairle, Comhairle Cathair Chorcaí, Comhairle Chontae</small></p>

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Minerals Development Act 2017	Ireland's policy and regulation
<ul style="list-style-type: none"> The Minerals Development Act 2017 was enacted on 26th July 2017. Codifying existing practice It consolidates and modernises the legislation and consists of some 250 regulations The secondary legislation is being drafted Some new areas; mineral title can now be determined post mineral licence Greater transparency in relation to royalties EMD continues its policy of publicly releasing data (worth €100s of millions) online and free of charge <p><small>© An Táin Comhordach, Comhairle an Átha Cliath & Comhairle, Comhairle Cathair Chorcaí, Comhairle Chontae</small></p>	<ul style="list-style-type: none"> Transparent and fair regulatory system. Tried and tested regime over many years. Robust legislation Ranks first in Fraser Institute for policy perception (2014-2017) and fourth (2018) One stop shop for exploration licences – approximately 4 months DCCAE, EPA and Local Authorities work closely together to ensure no duplication for mining permits <p><small>© An Táin Comhordach, Comhairle an Átha Cliath & Comhairle, Comhairle Cathair Chorcaí, Comhairle Chontae</small></p>

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Exploration in Ireland



Number of Prospecting Licences	576
Number of State Mining Licences / Leases	16
Fraser Institute Survey 2016 - 63 jurisdictions	
Index	
Policy Perception	49th
Investment Attractiveness	108th

Development in Ireland

- Clear transparent process
- Three permits required:
 - Planning permission
 - IPC licence
 - Mining lease/licence
- May be applied for at the same time
- The three authorities work together to avoid duplication
- Closure, Remediation, Aftercare Management Plan (CRAMP)



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Mine Closure post 1990s

Galmoy



Social, environmental and economic analysis of the effects of Galmoy and Lisheen Mines on their respective local communities

Lisheen



© An Taisce Environmental Assessment of the Galmoy and Lisheen Mines on their respective local communities

Current trends – policy, strategy, other sectoral policies that affect the sector

Environmental Directives and Ireland's Legislation

- Birds and Habitats Legislation
- Water framework legislation
- Groundwater legislation
- Aarhus Convention
- EIA screening for mineral exploration deep drilling?
- Environmental screening of exploration activities

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Environmental legislation needs to be proportionate

Mineral Exploration

Mapping, prospecting and geochemistry



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Mineral Exploration

Geophysics



Mineral Exploration

Digging



Location of previous drill site



2015 - trenching



2016 - post trenching

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Europe needs to develop its own resources Not defer responsibility

- Proportionate not populist
- Minerals are needed for all business in Europe
- Minerals are critical for Europe's GDP
- Minerals are critical for jobs
- Europe needs security of supply of minerals and
- Europe can produce minerals responsibly

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PERC/CRISCO aligned

- PERC/CRISCO is supported by the Department of Communications, Climate Action and Environment
 - Company's use CRISCO aligned code and standard
- Why?

- It provides the appropriate code and standard for reserves and resources
- It is required by the stock exchange
- It was developed to reduce scandals
- Competent person

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PERC/CRISCO aligned

The EU supports UNFC

and yet

EU use the terms reserves and resources which are not UNFC terms.

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Raw Materials Information System - RMIS

- Information is important but communicating is more important.
- 12 icons on the RMIS website but a primary raw materials icon is not present
- Country profiles limited
- Data is important, **only drilling will find a deposit**

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Summary

- Europe needs to find and develop its own resources
- Environmental legislation should be proportionate
- The disconnect between society's demands and mining needs to be addressed
- A green future needs minerals



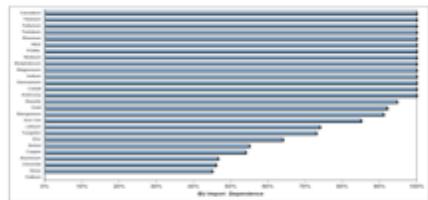
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Thank you for listening

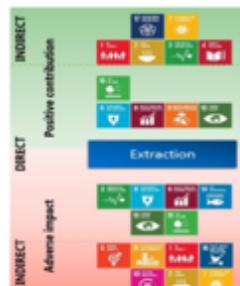
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Europe's Metal Import Dependency



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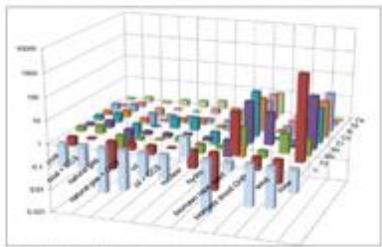


JRC, 2018

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Energy generation and raw materials



Source: Kleijn et al, 2011

Mining is a different business

- A long established activity
- Legacy issues
- Mineral ownership
- Minerals are where you find them
 - Can't move the site
 - May have to develop infrastructure (roads, power etc.)
- Can be a basis for national economic development
- Regulation
- Exploration
 - May take many years before find a deposit, no income
 - Uncertainty, imperfect knowledge, high cost of obtaining information
- Every mine is different because every deposit is different
- Plan for loss before you can – closure costs
- Capital intensive, high "sunk" costs
 - In other capital intensive industries may be able to sell the asset (e.g. oil), can't sell the mine shafts
- Specialised equipment with few suppliers
- Critical revenues – variable commodity prices = a price taker
- Taxation
- Environmental and social issues

Any more?

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End-of-life recycling rates



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Renate Schoofs

Progress of national legislation: Updating country profiles in RMIS Belgium, Flanders

III International Workshop on the European Union Raw Materials Information System
11-12 June 2019

Renate Schoofs

Government of Flanders
Department of Environment and Spatial Development
Flemish Planning Bureau for the Environment and Spatial Development (IVPO)

Implementation experiences mining

The legislative experiences with gravel

First experiences with the Physical Aspects Permit

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Policy making and strategic thinking RM

Integrated thinking "Omgiving"
Value chain/economy
Society- environment
Spatial-temporal

Data for policy and society

Circular Economy Primary and ultimate

MDO, Stock Monitoring
General Surface Mineral Resources Plan
DOV, Natural Resource Assessment
Combining above ground and underground models
Natural Capital Accounting

RMIS

- Good idea, well worked out
- Search options
- Flow of raw materials between Member States

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Thank you!

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Progress of national legislation: Updating country profiles in RMIS: HUNGARY

Dr. Zoltán Horváth
Department of Mineral Resource Management
12 of June 2019, RMIS Workshop, Ispra (JRC)

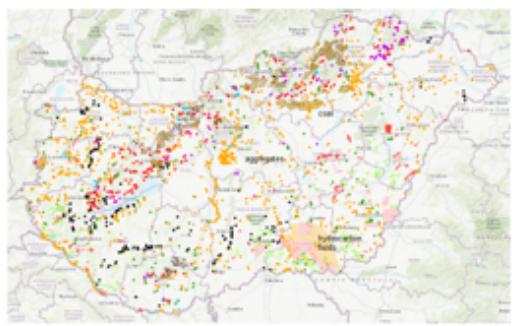
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Content

Background
Country profile (based on MINLEX study in 2017 written by Tamás Hámor et al.)
Answers for additional questions
Summary

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In general

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Legal background

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- Mineral Resource Management and Utilization Action Plan (ÁCST) was initiated in 2012 and this document was discussed with relevant ministries. This Action Plan is dealing mainly with energy minerals and the REE's. It has been published in the official Hungarian Bulletin on 26th of July 2018.
- Mining Law (Act No. XLVIII. 1993 on Mining): comprehensive.
- Implementing legislation (Governmental Decree No. 203/1998. (XII.19.) on the implementation of the Act No. XLVIII. 1993 on Mining) controls the whole sequence of the mining activity from the exploration phase to the closure of mines with the relevant obligatory data service.
- Statute (Governmental Decree No. 161/2017. (VI. 28.) on the Mining and Geological Survey of Hungary (MBFSZ) describes the related tasks supporting the mineral policy.

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Legal background

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Licencing and Concessions

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The Mining Departments in Government Offices give licenses for geological and mineral exploration, exploitation, the utilization of waste rocks, explosion activity, the exploitation and utilization of geothermal energy, activities related to carbon capture and storage, activities related to hydrocarbon exploitation [e.g. hydraulic fracturing, using acid etc.], activities related to propane-butane gas (storage, distribution etc.) and activities related to water source protection.

Operators are required to report exploration and exploitation data to the Mining Authority:

- data on quality, quantity and location of minerals when the exploration is completed;
- changes of the quantity of mineral resources during the exploitation annually;
- data on the remaining mineral resources after stopping the mine/quarry.

Exploration right, exploration Technical Operational Plan (TOP), exploration, exploration report, mining plot, extraction TOP, suspension TOP, closure, rehabilitation TOP: Approved TOP is a kind of guarantee for mineral safeguarding.

Mineral resources as they naturally occur belong to the state; they become the property of operators when they are extracted. Operators are required to pay royalty based on extraction.

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Legal background

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Exploration



- Aggregates and industrial minerals: simple vertical permitting scheme
- Ores: a concession tendering procedure is in place prior to the permitting scheme
- Exploration permit on open areas can be accomplished in 8 or 25 days according to the General Administration Order („ÁKR”);
- The presentation of an exploration technical operations plan (TOP) within 6 months after the exploration permit, which must be approved by relevant departments in the G.O.;
- EIA: environmental department may prescribe it, but EIA is seldom required for exploration (e.g. can be required for deep drilling).
- A final report must be drawn up on the results of the exploration. In theory, applicants for aggregates and industrial minerals may receive permission to start exploration within 35 days.
- A concession is given for a maximum of 20 years and can be extended for another 10 years.

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Extraction



- A major permitting step is the establishment of a mining plot. It needs to submit this claim within 5 months after the approval of the final exploration report;
- This 5-month period does not include the environmental permit (permit for environmental protection or IPPC licence, affected parties shall be provided with the relevant information at least 30 days before the public hearing).
- The mining entrepreneur is obliged to commence the operational extraction within 5 years from the establishment of the mining plot. To get a mining plot, the applicant needs to have the environmental permit approved (by Reg. 314/2005) with plans for other land uses (soil use change and land remediation).
- Same departments co-operate here.
- Then an extraction TOP (explaining the management of extraction and mine waste utilisation) must be approved by the Government Office (Mining Department). This may be approved for a period of 15 years at all types of mining activity. If the entire area is not used for extraction the period can be extended for 7,5 years.
- In theory, applicants for aggregates and industrial minerals may start extraction within 1-1.5 years, whereas for one minerals another 3-4 years is needed for the concession procedure (extraction permit: a minimum of four years).

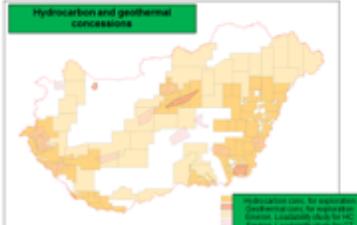
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Concession



- Hungary is closed for energy minerals 2500 m below the surface and for ores.
- a preliminary EIA that is called vulnerability and loadability study is required and is done by the Mining
- and Geological Survey of Hungary with the assistance of relevant authorities. Final studies are published on the website of the MBFSZ (www.mbfesz.gov.hu).
- Three stages of documents:
 - 1) Study
 - 2) Preliminary report
 - 3) Report
- Review by other authorities co-operate in this process



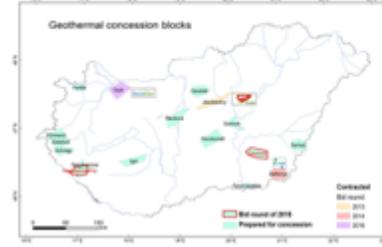
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Concession



The Mining Law regulates the details of concessions. According to a concession contract, the state cedes the right of exploration and exploitation of minerals and geothermal energy to the contracting party.

6 rounds completed, the 7th round is in progress for hydrocarbons, geothermal energy, coal. Result: 32 contracts.



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MBFSZ 2019

Inventory: Mineral Resources and Geothermal Energy

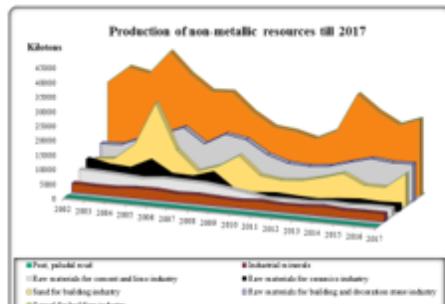


Mineral raw material	Production in 2018,		Geologic resources in place as of 1 January 2018,		Exploitable resources as of 1 January 2018,	
	Mt	Kt	Mt	Kt	Mt	Kt
Crocidolite	0,04	205,68	24,21			
Non-conventional	0,00	131,11	16,52			
Natural gas						
Conventional	1 876,54	186 445,06	76 196,40			
Non-conventional	5,27	3 921 322,0	3 985 155,00			
CO ₂	112,3	44 674,02	28 798,17			
Black coal	0,709	1 625 046	1 805 391			
Brown coal	81,941	3 105 856	2 241 524			
Lignite	7 890,0	5 686 865	4 240 830			
Uranium ore	0	29 799	29 799			
Tin ore	0	67 331	40 666			
Asbestos	1,3	123 895	79 705			
Lead and zinc ore	0	90 775	300 817			
Copper ore	0	785 170	720 450			
Non-ferrous metals	0	36 588	36 587			
Manganese-ore	0	29 864	51 982			

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Mineral Resource Inventory (www.mbfesz.gov.hu, available), non-metallic solid





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National experience to the EU approach



The Government – with regard to the National Energy Strategy 77/2011. (X.14.) that was accepted by the Parliament, in order to make the domestic energy supplies more cost-effective and environmentally friendly has approved the Action Plan. It contributes:

- to reduce the high dependency on energy imports
- to the improvement of the foreign trade balance of the country,
- to create domestic jobs and supply chains
- to the improvement of the social and economic situation of the former mining and industrial regions
- And tax revenues may also be incurred.

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National experience to the EU approach



Mineral Resource Management and Utilization Action Plan

1345/2018. (VII. 26.) Government Decision was published officially on 26th of June in 2018.

Main topics are:

- 1) Approval of the implementation of the Action Plan
- 2) Linking between minerals and energy utilization and other sectors like infrastructure, land use planning
- 3) Publication of the Action Plan
- 4) Maintenance of the implementation of the Action Plan
- 5) Financial background of new modern basic research and review of public burden/taxes of mining entrepreneurs and simplifications
- 6) Innovative technologies (low carbon emission, carbon capture and sequestration and recycling, unconventional oil and gas, geothermal energy)
- 7) Possibilities of reopening of coal mines (clean coal technology)
- 8) Mining culture and development of this position in the society
- 9) Extension of mining dataservice
- 10) Establishment and maintenance of a modern and uniform mineral resources inventory

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National experience to the EU approach



- Amendment of Mining Act (<https://net.jogtar.hu/jogsabaly?docid=99300048.TV>): specifications on public and data and data having public importance.
- More transparent procedure of data service (ML 25 § (3)). Last amendment: Jan. 2019. Data is confidential:
 - a) data provided by the mining entrepreneur in the course of exploration as far as the termination of exploration right but not later than the valid decision on the application for the establishment of mining plot,
 - b) data provided by the mining entrepreneur for the mining plot as far as the termination of mining right but not later than 3 (three) years from date of the reporting obligation.
- According to the amendment of the Mining Act data on the locality of exploration and the date of exploration has a public importance, so this type of data is publicly available.
- Beside the obligation on data service from companies on annual exploitation, type of minerals the exact locality needs also to be provided.

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Current trends



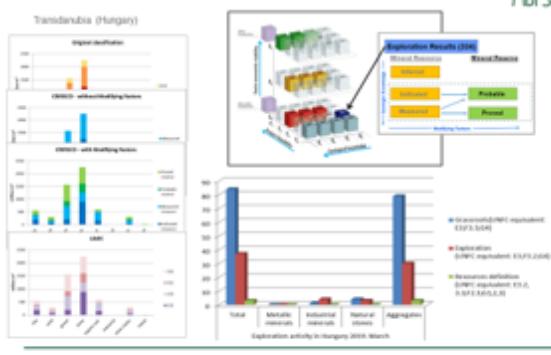
- The Mineral Resource Management and Utilization Action Plan deals with recycling and innovative technologies that is a good trend to improve the approach of utilization of secondary raw materials.
- The Hungarian Waste Management Federation shares professional information and news concerning the execution of the European Union's action plan for the Circular Economy, the adoption of related EU legislation and other measures, the transposition of those into Hungarian law, and in general the topic of the circular economy (www.host.org) in both Hungarian and English as well.
- The National Environmental Program by the Ministry of Agriculture provides a comprehensive framework for Hungary's environmental policy objectives - the protection of natural values, the economic (sustainable) use of resources, and the improvement of the environmental conditions of human health. Civil society organizations play an outstanding role in meeting these objectives.
- Involvement of relevant parties and stakeholders: there is inter-ministerial consultation on decision-making level but competent professional (mining and environmental) organizations are also involved

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Data harmonization: Mapping between national and international systems



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EIA legislation, guidance



- Prior the exploitation environmental impact assessment may be needed to the exploration and sure to the Technical Operation Plan of exploration. There may some other types of permissions (e.g. use of the area for other purposes with regards to soils).
- Legislative documents are the following:
 - Government Regulation No. 314/2005 on BA and IPPC (<https://net.jogtar.hu/jogsabaly?docid=A050011.EK06>)
 - Act No. LIII of 1996 on nature conservation (<https://net.jogtar.hu/jogsabaly?docid=9960053.TV>)
 - Government Regulation No. 275/2004 on Natura 2000 sites (<https://net.jogtar.hu/jogsabaly?docid=A0400275.K08>)
- Indirectly:
 - Government Regulation No. 312/2012 on construction permitting (<https://net.jogtar.hu/jogsabaly?docid=A1200312.K08>)
 - Ministerial Decree No. 34/2008 (IV. 3.3) on mining waste management (<https://net.jogtar.hu/jogsabaly?docid=A0800014.K08>)
 - Act No. CX of 2004 on the General Rules of Administrative Proceedings and Service (<https://net.jogtar.hu/jogsabaly?docid=A0001407.Kineszt-20120505&refer=A11001903.V>)
- In the SNAP SEE project (www.snapsee.eu) the "New EC guidance for Natura 2000 for the non-energy extractive industry" was translated into Hungarian and were disseminated on stakeholder consultations (2015).

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BREF - IED



- BREF recommendation for waste management has been published in Hungarian here: <https://ippc.kormany.hu/bat-kovetkeztesek>.
- The details of the COMMISSION DECISION of 2018/1147 of 10 August 2018 to provide the European Parliament and the Council with the implementation of Directive 2010/75 / EU are available here: <https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:32018D1147&qid=1541513674833&from=HU>.
- These documents and conclusions are taken into considerations in authority works.
- BREF document is available for waste treatment: <https://ippc.kormany.hu/bref-vezetoi-onzereloslok>
- Ferrous Metal Processing: https://ippc.kormany.hu/download/1/9/20000/vaslemelelsoleges_bref.pdf
- Mining Act: 28 § [1] The mining contractor is obliged to maintain and enforce the provisions of this Act and the technical and technological safety regulations specified in the regulations issued for its implementation.
- There is no available BREF doc for Management of Tailings and Waste-rock in Mining Activities that was published.

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Summary

- **Mining Law** and relevant legislative documents rule mining supervision
- **Aggregates and industrial minerals:** simple vertical permitting scheme
- **Ores and energy minerals:** a concession tendering procedure is in place prior to the permitting scheme (7th round is in progress)
- **National Mineral Resource and Geothermal Energy Inventory** by MBFSZ
- **The mining supervision** is also subject to the General Administration Order, one-stop shop, the Central Authority (MBFSZ) and Regional Mining Inspectorates are separated.
- **The legislation is more transparent with less bureaucracy, shorter deadlines**
- **Mineral safeguarding** is implemented via permitting (TOP) and LUP considers mineral management areas.
- **Environmental and social considerations are strong influencing access to minerals.**
- **Regarding the RMIS:**
 - Proper and updated (periodically reviewed) data and information would be useful for companies and government bodies and for the academy sector as well.
 - Data on demand and supply sides would support sustainable resource management.
 - Benefits of RMIS should be disseminated on all levels.
 - Integration of good practices, case studies EU-funded project results

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Thank you for your attention!

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Progress of Italian Legislation in Exploration and Mining of non-energy and non-agricultural raw material

Dr. Silvia Grandi
Head of Unit VI for Safety, Cartography, Statistics, Technical Regulatory Affairs – DGS-UNMIG
Italian Ministry of Economic Development

3rd International Workshop on the EU Raw Materials Information System
IRC ISPRA, 11th and 12th June 2019

The Foundation of the Italian Mining Code

The foundation of the Italian Mining Code dates back nearly 100 years old, major reforms in the governance were introduced at the end of the XX century and in the latest 20 years it has been quite stable.

- Royal Decree n. 1443/1927 and in some part is still valid setting general principles: Main typologies of mineral and quarry material
- President Decree DPR 616/1959 Mining police and mining safety regulation have been mainly introduced in the '60

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Basic distinction: "first" and "second" category mineral resources

First category minerals:

- state-owned
- include energy minerals (except peat), metallic ores, non-metallic ores of significant industrial importance such as salt and potash, barites and fluorspar, gemstones, garnet, corundum, leucite, fluorite, barium and strontium minerals, talc, asbestos, cement marl and lithographic stones.

[Nota bene] Rights to marine sand and gravel also belong to the national Italian State.

Second category minerals:

- property of the land owner
- extracted in quarries and include peat, materials for building, road and hydraulic constructions (except marl for cement), quartz and silica sand, mafic stones, sandstone, igneous rock, limestone, chalk and dolomite, sand and gravel, silica sand, common clay, and other industrial minerals not included in the "first category minerals".

Italian Mining Code: end of XX century reforms

In 1977 President Decree 616/1977 devoted to Regions admin activities on Hydrogeology, Quarry and Peatlands

In the 1980s the environmental code (EIA, emission limits, etc.) have significantly add sustainability perspective & separation of the Italian Geological Office from the Italian Mining Office (1986)

In 1996 Legislative decree transposition of the EU directive 92/91/CEE and 92/104/CEE on safety

In the 1998 with the Legislative decree 112/1998 a major reform have been introduced "Devolution" to the Italian Regions the competence in the field of Licensing and Control on mining

1998-2005: The whole traditional central Directorate dedicated to mining and the Mining district offices have been transferred to the Region

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Decreto Legislativo 31 marzo 1998, n. 112 - "Conferimento di funzioni e compiti amministrativi dello Stato alle regioni ed agli enti locali, in attuazione del capo I della Legge 15 marzo 1997, n. 59 – artt 33,34,35

Le competenze riconosciute allo Stato:

- ✓ la politica mineraria per le risorse collocate in mare;
- ✓ l'appropriaione di disciplinari tipo per gli esercizi di interesse statale;
- ✓ la determinazione dei limiti massimi dei diritti, canoni e contributi dovuti dai titolari dei permessi e delle concessioni, esse non siano stabiliti con legge;
- ✓ la ricerca mineralistica, la promozione dello sviluppo minerario all'estero, la raccolta e l'elaborazione dei dati relativi all'industria mineraria;
- ✓ la determinazione degli indirizzi della politica mineraria nazionale ed i relativi programmi;
- ✓ la dichiarazione di aree indistinte di mineralogia, sentite le regioni interessate;
- ✓ la definizione dei contenuti e della durata dei canali per il diploma di cui all'articolo 27, I-;
- ✓ la determinazione dei limiti massimi delle tariffe da corrispondere da parte dei richiedenti autorizzazioni, verifiche, collaudi, esse non siano stabiliti con legge;
- ✓ la determinazione dei requisiti generali dei progetti di rispetto ambientale che le regioni devono tenere presenti nei procedimenti per la concessione degli spiccioli contributi peculiari della legislazione statale;
- ✓ la determinazione degli indirizzi per la raccolta dei dati in materia di sicurezza e salute dei lavoratori nel settore minerario;
- ✓ il riconoscimento dell'idoneità dei prodotti esplosivi e la tenuta del relativo elenco.

Italian Mining Code: Main national legislative updates

- Transposition of the Directive 2006/21/CE on extractive waste D.Lgs 117/2008
- President Decree 78/2007 Structured the former National Mining Council (Consiglio Superiore delle Miniere) into section b) of the Italian Commission for the Hydrocarbons and Georesources (i.e. CIRM b))
- Transposition of the Directive on updates on EIA (Legislative Decree 104/2017) transferred back to EIA procedures at central level (i.e. to the Ministry of Environment) on certain exploration and extraction more strategic/complex cases of first category minerals: «minerals used for the extraction of metals, metalloids and their compounds; graphite, solid fuels, asphaltic and bituminous rocks; radioactive substances»

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DGS-UNMIG

Decreto Legislativo 16 giugno 2011, n. 206 - Attuazione della direttiva 2006/20/CE con Particolare riferito al Decreto Legge 2004, che rispetta le norme della DLSR/2004, e approva la relazione sui risultati concreti di determinati progetti studi e programmi, ai sensi degli articoli 12 e 14 del decreto legge 7 luglio 2012, n. 114.

[Screenshot]

Art. 22
Modifiche agli atti regolatori per le norme di accesso alle risorse regolatorie (aprile 2006, n. 252).
2. Atto legge italiano per la sostanziale modifica del decreto legislativo 8 aprile 2006, n. 252, come sopra.

[Screenshot]
Atto di parere: "Qualità e incidenza dell'impatto ambientale di riserva e conservazione delle riserve connesse ai minerali e metalli utilizzati per l'industria dei metalli, metallurgici e loro consoci: profili, condizioni sociali, risorse idriche e contenuti di sostanze metalliche".
[Screenshot]

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Ongoing policy initiatives

- Strengthen governance on mining heritage initiatives:
 - ✓ REMI networks on Mining Heritage and Geoparks
 - ✓ National Mining Heritage Day
 - ✓ Proposal of a specific legislation
- Better dialogue with stakeholders:
 - ✓ National Raw Material Lab-community has set up as multi-stakeholders: Draft of a National Raw Material Strategy
 - ✓ Reconnect Regions and Central Offices
- Recover a national-level mining statistics and primary raw materials information
 - ✓ National Statistics Office (ISTAT) "Anthropic pressure and national risks - annual report on Extractive Activities from Mining and Quarrying"
 - ✓ MISE - Italian RMIS in collaboration with the JRC
 - ✓ ISPRA - Italian Geological Service (i.e. Gemma GIS, Mine4Eu, etc.)
 - ✓ Ministry of Finance (Italian State-owned endowment report)
- Since 2018 part of UNECE working groups on classification reforms
- In 2018 a SSRS project have been submitted with the aim to review and update the Mining

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DGS-UNMIG

References

ITALIAN RMIS: https://UNARIO.MISE.GOV.IT/INDEX.PHP?IT/TA/TA/MATERIE-DRIVE/VA/DATI-RELATIVI-ALE-BISOSSI-MINERALI-ITALIANI	NATIONAL MINING CODE https://UNARIO.MIRE.GOV.IT/INDEX.PHP?IT/TA/TA/MATERIE-PRIME	ITALIAN MINING HERITAGE: https://UNARIO.MIRE.GOV.IT/INDEX.PHP?IT/TA/TA/MATERIE-PRIME/VALORIZZAZIONE-DELL-PATRIMONIO-MINERARIO
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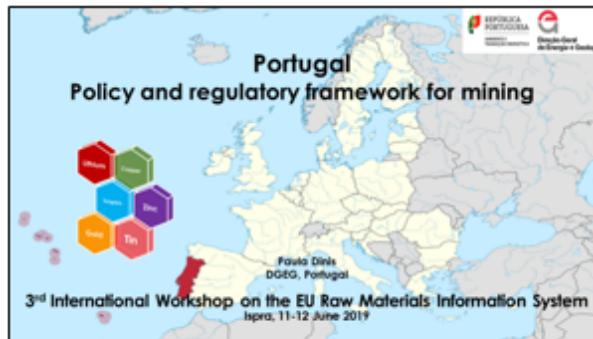
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Thank you for your attention!

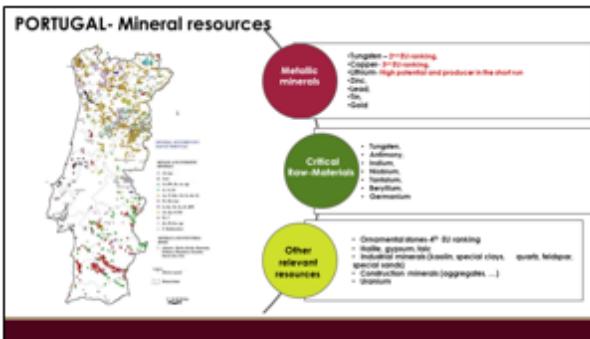
Dr. Silvia Grandi
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Italian Ministry of Economic Development

3rd International Workshop on the EU Raw Materials Information System
JRC ISPRA, 11th and 12th June 2019

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Questions from JRC

- What are the recent national implementation experiences worth sharing in the context of exploration and mining, facing the regulatory/legislative framework at EU, national, regional or local level?
- What are the current trends and plans in your country on policy making and strategic thinking with regard to raw materials (e.g. change in primary and secondary minerals policy, new strategic reports, changes in the sectoral policies that affect this sector, streamlining efforts, etc)? Could one expect game changes in the foreseen strategies?
- What is the approach taken by exploration and mining companies operating in your country to PERCor IFRS and what are the problems you noticed related to this topic?
- How could RMIS better serve the interests of MS (or regional) scale governments and help them sharing their knowledge on the framework conditions?

1- Legal framework

Geological resources framework: Law 54/2015 (June 2015)

- Mineral deposits regulation** (public domain) DL 88/90 (March 1990) → all metallic minerals, kaolin, quartz, feldspar, special clays, special sands, kaolin, gypsum, talc...
 - Quarries regulation** (private domain) DL 346/2007 (October 2007) → marl, limestone, clays, granites, conglomerates, stones...
- Waste management: DL 10/2010, of 4th February
Environment Impact Assessment: DL 152-B/2017 of 11th December (Directive n°2014/52/EU transposition for the Portuguese legislation)
Health and Safety: DL 142/90 of 16th March
Land use: DL 80/2013 and DL 15/2015

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Public Domain mining rights (MINES):

	Rights	Subject	Conditions
Prior appraisal rights	Metallic mineral deposits for undertaking studies for the best knowledge of existing resources; analysis of available information and of the samples taken.	15 km²/mines, 1 year.	
Exploration rights	Applied for the development of activities aimed to increase the knowledge of the geological resources and the determination of its characteristics, until the revelation of the existence of economic value.	up to 500 km² (Terrestrial Area); up to 5 000 km² (Maritime Area)	A bond is provided (10% of expenditure) A fee is paid every year, based on the area occupied (€/km²)
Experimental exploitation rights	When due to the features, the nature of the mineral deposit and the level of knowledge of the mineral occurrence, there aren't yet the necessary conditions for the immediate application for effective exploitation rights.	5 years/mines, (extensions included) A bond is provided (10% of expenditure) Royalties are paid every year	
Exploitation rights	For the operations of extraction and beneficiation of mineral resources.	Duration of the exploitation contracts are of 10 years maximum (extensions included) A bond is provided Royalties are paid every year	

EIA legislation: DL 152-B/2017 (11th December)

Explanation: No EIA needed

Explanation: EIA is needed in the following cases:

- General case:
• Open pit mines and quarries – in an area of more than 15ha or more than 200.000ton extraction/year or if there are several open pit mines/quarries within a radius of 1Km and in total they exceed the thresholds.
Underground mines and quarries – in an area of more than 15ha or more than 200.000ton extraction/year.

In sensitive areas:

- Majoritary BA for projects that exceed thresholds defined for general case.
• In cases where projects do not reach the thresholds for the general case, there will be a case by case analysis for decision on BA.

If the Government or the permitting organization decides that due to the dimension, location and characteristics of the project it is needed an EA. Note: This applies to projects that do not exceed the limits for BA in the general case.

In case of extension of permits (already licensed) which will exceed 20% of area or production.



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Questions from JRC

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Portugal is committed to social responsibility



1. Rehabilitation of abandoned mining sites (since 2007).

Portugal committed to correct environmental liabilities and impacts of centuries of mining activity (positive until 1990). Since 1990 every mining company is responsible to ensure the environmental rehabilitation.

The Government defined a policy and created conditions for the execution of Environmental Remediation of Old Mining Areas Plan (DODG and DMR).

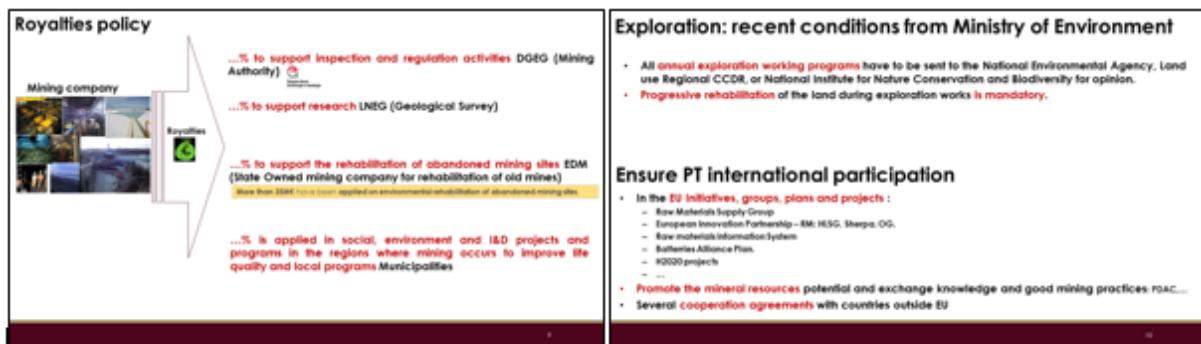
2. Social openness and responsibility:

- Involvement of Municipalities: All municipalities are consulted during the license/permitting procedures.
- Public participation and involvement of Stakeholders: Prior to issuing the exploration/exploitation permit, DODG makes public on the Government Journal and on national and local journals about that application (30 working days for complaints).
- Participation on the Land Use Plans (at national, regional and municipal levels). Applying the principle of parity and co-existence.
- Promotion of meetings, workshops and debates with stakeholders to stress the importance and peculiarity of mineral resources.

3. New royalties policy to increase of public acceptance, awareness and trust by allocating part of the money coming from mining companies in regions where mining occurs to improve life quality and local programs.

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Questions from JRC

- What are the recent national implementation experiences worth sharing in the context of exploration and mining, facing the regulatory/legislative framework of EU, national, regional or local level?
- What are the current trends and plans in your country on policy making and strategic thinking with regard to raw materials (e.g. changes in primary and secondary minerals policy, new strategic reports, changes in the sectoral policies that affect this sector, streamlining effects, etc)? Could one expect game changers in the foreseen strategies?
- What is the approach taken by exploration and mining companies operating in your country to PERC or IFRS and what are the problems you noticed related to this topic?
- How could RMIS better serve the interests of MS (or regional) scale governments and help them sharing their knowledge on the framework conditions?

3- Standard Reporting Systems

Mining companies operating in Portugal have to report under the International standard reporting systems.

The majority of mining companies report under CIRISCO (Committee for Mineral Reserves International Reporting Standards), such as CIM, NI 43-101, JORC, SAMCODES, SME or PERC classification system.

In Portugal there is no obligation for reporting on a predefined classification system.

The mining company may use any system as long as it is under International standard reporting systems.

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Questions from JRC

- What are the recent national implementation experiences worth sharing in the context of exploration and mining, facing the regulatory/legislative framework of EU, national, regional or local level?
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- How could RMIS better serve the interests of MS (or regional) scale governments and help them sharing their knowledge on the framework conditions?

3- RMIS: complementary role to MS actions



Opportunity to develop complementary actions:

- Update legal framework data from each MS, validated by the each Member State/Region;
- Update geological data in each MS, validated by each Member State;
- Compile data with resources and reserves in each MS, and in the EU, validated by each MS;
- Have a strong communication area/pillar directed to the society, presenting good examples in the mining industry, the importance of mineral resources in our daily lives, and having an educational purpose.

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THANK YOU

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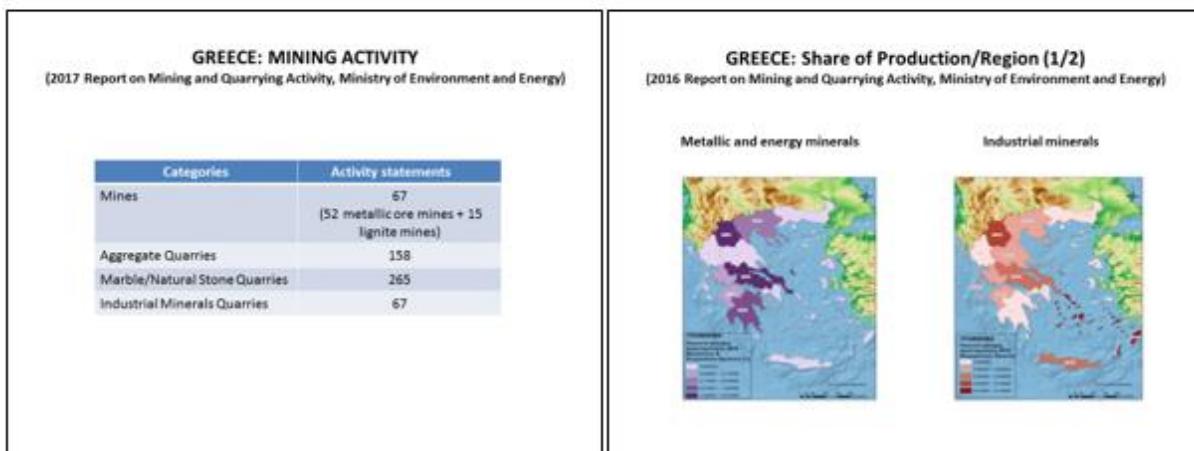


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THE REFORMED INSTITUTIONAL FRAMEWORK FOR EXPLORATION AND EXPLOITATION OF QUARRIES AND MINING ACTIVITIES IN GREECE																										
Effrosyni Varvitsioti Directorate of Development and Policy Directorate-General for Mineral Resources Ministry of Environment and Energy																										
GREECE: MINERAL PRODUCTION (2016) WORLD MINING DATA (C. REICHL, M. SCHATT, G. ZSAK) VOL. 33 MINERALS PRODUCTION / VIENNA 2018																										
<table border="1"> <thead> <tr> <th>Mineral/ore</th> <th>Rank (EU)</th> <th>Rank (Global)</th> </tr> </thead> <tbody> <tr> <td>Perlite</td> <td>1</td> <td>2</td> </tr> <tr> <td>Bentonite</td> <td>1</td> <td>5</td> </tr> <tr> <td>Bauxite</td> <td>1</td> <td>11</td> </tr> <tr> <td>Nickel</td> <td>1</td> <td>17</td> </tr> <tr> <td>Magnesite</td> <td>3</td> <td>8</td> </tr> <tr> <td>Lignite</td> <td>4</td> <td>10</td> </tr> <tr> <td>Aluminium</td> <td>5</td> <td>28</td> </tr> </tbody> </table>			Mineral/ore	Rank (EU)	Rank (Global)	Perlite	1	2	Bentonite	1	5	Bauxite	1	11	Nickel	1	17	Magnesite	3	8	Lignite	4	10	Aluminium	5	28
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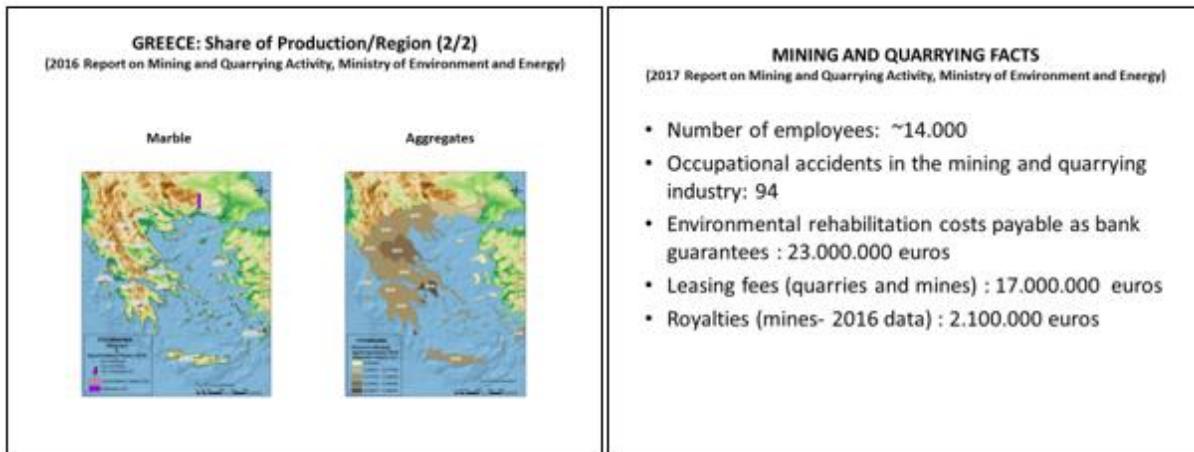
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MAIN MINING AND QUARRING LEGISLATION

- **Metallic minerals**

The Mining Code – Legislative Decree 210/1973, as amended by Law 274/1976

- **Quarry minerals**

Law 4512/2018

- Regulation on Mining and Quarrying activities (KMLE)
Ministerial Decision D7/A/12050/2223/2011

MINING CODE REGIME

- Ore mining is of public interest, protected by the Greek Constitution
- The mineral right is a particular property right (*in rem*) separate from land property rights.
- The owner of the mineral rights has the exclusive right to explore/ extract/ exploit the minerals lying above or below the surface of the ground, except those owned by the State (energy minerals, such as lignite and geothermal resources)
- The mining right either it belongs to the State and is leased or it is granted by a Presidential Decree (establishing the Mine Concession) for a period of 50 years (with an option for 25 more and a further option for 25 more years)
- Prior to Mine Concession, a Mineral Exploration License given by the Head of the Region, is required which provides the right to explore

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MINING CODE REGIME + MAIN CHANGES BY L.4512/2018

- **Ore exploration:**

- Reformed procedure regarding the Mineral Exploration License
- The Standard Environmental Commitment Approval replaces the "approved EIA study" when the exploration activities are limited (max 0,5m²/acre etc.)
- EIA study approval is needed when drilling or extended excavation is taking place during exploration activities. When exploration is taking place without excavation work (e.g. geophysical methods) is subject to notice.

- **Content of the Technical Study:**

- The Standard Technical Commitment Approval replaces the "approved technical study"

- **E/M equipment:**

- the installation permit is abolished in case of non-complex equipment , the required supporting documents are submitted along with the technical study, while the operation permit is replaced by a notification

THE NEW LEGAL REGIME OF QUARRIES (The provisions of L.4512/2018) (1/2)

- Unification of the previous existing scattered and complex provisions
- Simplification of the licensing procedure
- Use of information technology (in combination with L. 4442/2016)- Notify Business Information System
- Rationalization of fees royalties and rents
- Parameterization of fines

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THE NEW LEGAL REGIME OF QUARRIES (L.4512/2018- KEY CHANGES) (2/2)

- **Total time of quarry licensing:** The maximum lease term of the right to exploit all quarry minerals is set at 70 years (instead of 40) in order to achieve financially sustainable investments

- **Licensing:**

The exploitation license is abolished. It is replaced by notification (in case of private ownership) or the lease agreement (in case of public or municipal land). The exploration activity is subject to notification (private ownership) or an administrative authorization (public or municipal land).

The Technical Study approval of the exploration activity is abolished.

The Standard Technical Commitment replaces the "approved technical study".

- **Licensing (E/M equipment):**

The installation permit is abolished, while the operation permit is replaced by a notification

- **New framework for fines:** parameterized fining system (fines regarding breaches of the Regulation on Mining and Quarrying activities and illegal exploitation)

THE NEW INFORMATION SYSTEM (<https://notifybusiness.gov.gr>)

The online platform of Notify Business covers all cases where "license" or "approval" has been replaced by "business notification" as an administrative tool

- ✓ Exploration and exploitation of quarry minerals in private areas
- ✓ Installation and operation of electromechanical equipment (E/M) within quarries
- ✓ exploration of metallic minerals mainly with geophysical methods
- ✓ operation of complex E/M within mines

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AN EXAMPLE OF SIMPLIFICATION			MINISTRY OF ENVIRONMENT AND ENERGY
(PRESENTATION "NEW PROVISIONS OF THE LICENSING PROCESS FOR QUARRY MINERALS AND ORES" BY DR D. LAMPOU- REMIX INTERREG EUROPE, DELPHI OCT 2018)			
*			
Relevant legislative actions	MARBLE OR INDUSTRIAL MINERALS QUARRY IN PUBLIC LAND	AGGREGATES QUARRY IN PRIVATE LAND	
BEFORE L4512/2018	32	31	
AFTER L4512/2018	14	12	
FINAL PERMISSION	LEASE AGREEMENT	NOTIFICATION	

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ADMINISTRATIVE TOOLS-ACCESS TO INFORMATION

- 1) Quarrying and Mining activity, annual minerals report (www.latomet.gr)
- 2) Transparency portal (<https://diavgeia.gov.gr/>)
- 3) Environmental Impact Assessment licenses (<http://aepo.ypeka.gr/>)
- 4) Digital environmental registry of quarrying and mining projects (<http://epm.ypeka.gr/>)
- 5) The online platform for "business notification" (<https://notifybusiness.gov.gr>)

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CHALLENGES

- Simple, transparent, stable framework?
- Increase of employment?
- Restriction of bureaucracy?
- Creation of a favorable business environment?
- Public interest issues?
- Environmental protection?
- Social license?

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References

- WORLD MINING DATA [C. REICHL, M. SCHATZ, G. ZSAK] VOL. 33 MINERALS PRODUCTION / VIENNA 2018
- 2016 and 2017 Reports on Mining and Quarrying Activity, Ministry of Environment and Energy
- Presentation "new provisions of the licensing process for quarry minerals and ores" by dr D. Lampou- REMIX INTERREG EUROPE, Delphi October 2018)

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Norsk Industri

Ispra RMIS RS 11-12.06.2019
Norway update

M.Sc., Toxicologist NAV/F, Ass. Dir. Sverre A. Hostmark

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Norsk Industri

Norway: EU vs. EEA

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Norsk Industri

Norway: EU vs. EEA

- Norway are bound by and implement all EEA relevant regulations and directives.
- Nr 4, largest in EU/EEA (km²)
- Larger than Σ of the 3 Baltics, Slovakia, Croatia, Slovenia & Ireland
- Part of Fennoscandian shield and large ocean floor resources
- E.g.: IED, EIA, MWD, WFD, EQD, WD, ETS, AAQ, E-PRTR, SEVESO, EMAS, REACH.....
- Legislation that matches the EU habitat directive (according to WWF)
- Norway has signed ILO 169.....

Norsk Industri

Norway: Energy, water and Ell in EEA:

Installed hydropower capacity in select European countries

Europes largest on metals like: Aluminum, Nickel, Silicon

Europes largest on: Siliciumcarbide, Ferromanganese, Titanium minerals, Carbonate fiber and coating

Significant contributor of: Flake graphite, Mn. fertilizer, Ultrapure quartz, Nepheline, Olivine, Zn, Cu and Co metal

Water abundance

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Norsk Industri

Norway: EU vs EEA (II)

- Norway has been removed from the Raw Materials Scoreboard even if included in eg. Innovation Scoreboard
- Not included in MinLex project by Min Pol.
- EU misses lots of information from us.
- We DO appreciate to be invited to Ispra and JRC
- But better to be recognized by JRC as partner alongside MS's – Norwegian resources are available to all EU on conditions governed by EU internal market.
- However: NGU in 2017 entered an H2020 project (MinLand) to demonstrate mapping mineral resources

Norsk Industri

News: Cu, Fe and Ti mines on their way:

- Nussir:** Permit 14.02.2019. Copper mine to start in 2 years. Known reserves 72 mill tons ore at avg. 1.1% Cu content, equals 25 kT Cu/yf
- Sydvaranger Gruve:** Permit 19.03.2019. Magnetic mine, reopens 2020. 1+ MT 68% Fe-concentrate/yr
- Nordic Mining, Engesøe:** Expected permit fall 2019. Titanium (titanite) and Garnet mine, to open 2022? At 3% cutoff 98MT ore at 3.97% TiO₂ and 44.4% garnets.
- All 3 projects involve Sea Tailings Deposition following environmental permits from 2016 and 2017. The conditions are extremely strict - in the Engesøe case after more than 50 environmental related studies forming the base of the Env. And Soc. Impact Assessments

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Norsk Industri

Nussir sedimentary copper deposit – the largest copper deposit found in Norway

Mining concession awarded February 14th 2019

- Norway's largest base metal resource
- High-quality concentrate without deleterious elements
- Payable content of silver and gold
- Deposit located next to deep-sea port

Deposit	Resource class (JORC)	Tonnage (Mt)	Grade (% Cu)
	Indicated	Inferrred	
Nussir	18	47	1.21 / 1.16
Uverggen	4	4	0.63 / 0.79

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Norsk Industri

Sydvaranger Iron

Mining concession awarded and accepted March 2019

Mined 2019/2020 iron 2210 to 10000 t/y yielding 40% Fe-concentrate, 100 Mt of ore

Mined 2021 to 2024 iron 30074 to 20074 2019 yielding 20 Mt of ore

Open pit in Vardø, Optimal high-grade product 2019-2024. Full completion 2020-21

Resource Class	Tonnage (Mt)	Grade (%)
Indicated	75	42
Inferrred	12	35

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Engebø Ti deposit
Rutte in e-geologi

Feasibility stage project – application for mining concession submitted 2019

- One of the World's largest deposits of natural rutile
- Significant content of high quality garnet
- Located next to deep-sea port and close to European markets

Resource Class (JORC)	Tonnage (Mt)	Total TiO ₂ (%)	Garnet (%)
Measured and indicated	82.6	3.89	43.7
Inferred	138.4	3.86	43.5

Norsk Industri

More news:

- The present Mineral Law from 2010 is under evaluation. To be evaluated against environmental law this year.
- Govt. declaration Jan 2019: No new Sea Tailings Deposition (STD) permits until 2021.
- Tailing disposal in general is an «fact resistant» issue
 - However- environmental NGO Belona supports the newest STDs as alternative to land deposits. to preserve land and reduce pollution! They also support mining for minerals to alleviate energy and transport transition
 - NYKOS: 5 yr Research project finished. New knowledge on STD
- 22.03.2019: New law for minerals on the ocean floor
- Promising investigations at Fens field: 2 holes at 1 km distance:
 - REE ore all the way down to resp. 700 and 1000 m.
- Roadmaps for a.o. decarbonized Metal production in 2050

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ROADMAP for the processing ind:

Timeline: 2010 - 2050
2010 - 2014: Min. exploration
2015 - 2019: Min. development
2020 - 2024: Min. implementation
2025 - 2030: Min. operation
2031 - 2050: Min. expansion

Area interests are completely mapped for all Norway, easy interest conflict identification

www.dirmin.no

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<http://www.dirmin.no>

Minerals on Norwegian shelf:
We spend millions of € to obtain data
High content of Cu, Zn & Co

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Thank you!

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* 2500 members with 130 000 employees, covering all exporting industrial sectors of Norway

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**Minerals Policy Governance
fostering an effective policy
framework**

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3rd INT. WORKSHOP ON THE EUROPEAN UNION RAW MATERIALS INFORMATION SYSTEM, 11-12 June, Ispra, IT

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MIN GUIDE

Setting the course for effective minerals policy governance

I. MIN-GUIDE Approach for Good Governance

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Mining, Innovation, Sustainable Development
Means & Ends

...EU discourse on mining
Saving Society & Environment

EU Member State Mining Policy and Innovation

Minlex, 2017

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Minerals policy framework
Major building blocks

- Policy Governance**
 - Political Commitment & long-term orientation
 - Collaboration of different actors
 - Stakeholder involvement
 - Review & adapt policy
- Policy instrument framework**
 - Apply policy mixes
 - Avoid policy duplication
 - Consistent legal provisions
- Permitting & Licensing**
 - Responsible authorities
 - Availability of information
 - Short time frames & length

Innovation-friendly minerals policy framework
MIN-GUIDE Research Questions & Narratives

A policy framework facilitating innovation needs to address certain challenges

- Public Policy Governance challenges** – integrative policy-making, transparency/legitimacy
 - Narrative 1** What are mechanisms facilitating good governance in public policy?
 - Industry sector challenges** – more sustainable exploration, extraction, processing, waste management & mine closure
 - Narrative 2** What policies are facilitating industry innovation?

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**Not only policy instruments...
The role of EU MS public sector governance**

Innovation driving or inhibiting forces for companies are **not only dependent on the content** of policies or **individual instruments**...
...but **underlying capacity** of a system of public sector governance to provide...

- > **Long-term** orientation and **stable** framework conditions
- > An **effective** policy instrument mix
- > **Cohesive** / non-conflicting
- > Framework and plan for implementation (actors & resources)
- > Change/adapt according to new realities
- > **Effective institutions** (transparent & fast process of permitting)

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**Minerals policy governance
Status of EU MS public sector**

1. Challenge: **No planning horizon and political commitment**
 2. Challenge: **Silo-thinking & Inconsistent/conflicting policy**
 3. Challenge: **Resistance & incapacity, ineffective implementation**
 4. Challenge: **Lack of societal relevance and legitimacy for policy**
 5. Challenge: **Duplication, incoherent & not up-to-date**

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**Long-term oriented & committed
National Mineral Strategies**

Re-active, ad-hoc planning	No long-term outlook, no clear objectives for future development, no framework for action
<ul style="list-style-type: none"> > Co-creative design and development: Keeping stakeholders constantly informed about progresses Recognizing the societal need for minerals Government Commitment and action for implementation: "Two-way" communication model. > Cooperation & shared responsibility: government, municipalities, the business sector and Interest groups creates framework for action > Contested topics: Transparent and open way 	1/2

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**Cross-sectoral collaboration...
Horizontal Policy Integration**

Silo-thinking & Inconsistent, conflicting policy	Minerals policy is linked to other policy sectors. Dispersed responsibilities & compartmentalisation
<ul style="list-style-type: none"> > Effective mechanisms for collaboration among different ministries & public authorities > Different qualities <ul style="list-style-type: none"> > Institutionalised VS ad-hoc > Technical knowledge VS political mandates > Single stage VS accompanying policy design 	3/4

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 **Make policy implementation work**
Vertical policy integration

Resistance & Incapacity Ineffective implementation	Dispersed responsibility for policy design and policy implementation & incoherence
<ul style="list-style-type: none"> ➢ Effective mechanisms for collaboration among different national to regional/local (mining) authorities ➢ Different qualities <ul style="list-style-type: none"> > institutionalised VS ad-hoc > Technical knowledge VS political mandates > Ex-ante / process design VS ex-post consultation 	

1/2

 **The manifold interests... Stakeholder involvement**

Social licence to operate & Inadequate knowledge	Knowledge is dispersed in society, lack of societal relevance and legitimacy for policy
<ul style="list-style-type: none"> ➢ Effective mechanisms for stakeholder involvement during various stages in policy-making ➢ Different qualities <ul style="list-style-type: none"> > Institutionallised VS ad-hoc > Public consultation VS working group/committee > „right mix“ VS specific representation > Ex-post legitimisation VS ex-ante co-creation 	

1/2

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 **Reflexive for change and adaptation**
Policy learning

Duplication, Incoherent & not updated	Institutional „inertia“, lack of formal tools, political mandate for change
<ul style="list-style-type: none"> ➢ Effective mechanisms for evaluation, assessment & monitoring to revise policy ➢ Different qualities <ul style="list-style-type: none"> > Evaluation VS monitoring > Internal VS external („objective“) > Policy revision VS „tracking progress“ 	

1/3



Download here: <https://www.min-guide.eu/project-results>



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Thank you for listening

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