Recommendations on the framework conditions for the extraction of non-energy raw materials in the European Union

Report of the Ad Hoc Working Group on

Exchange of best practices on minerals policy and legal framework, information framework, land-use planning and permitting (AHWG)

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This document reflects the view of the Ad Hoc Working Group (AHWG) and is not of binding nature. The AHWG on Exchange of best practices on minerals policy and legal framework, information framework, land-use planning and permitting is a sub-group of the Raw Materials Supply Group (RMSG).

This report has been approved and adopted by the RMSG. These recommendations are not compulsory for Member States.

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Based on:

- 1. REPORT ON NATIONAL MINERALS POLICY INDICATORS FRAMEWORK CONDITIONS FOR THE SUSTAINABLE SUPPLY OF RAW MATERIALS IN THE ${
 m EU}^1$
- 2. STUDY ON EVALUATION AND EXCHANGE OF GOOD PRACTICES FOR THE SUSTAINABLE SUPPLY OF RAW MATERIALS IN THE EU (GOOD PRACTICE PROJECT) 2
- 3. Discussions of the ADWG meetings on February 26, March 27, May 7, 2014
- 4. Discussions of the Raw Materials Supply Group meeting on September 26 2014

¹ http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index_en.htm

² http://ec.europa.eu/enterprise/policies/industrial-competitiveness/monitoring-member-states/good-practice/index en.htm

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1. INTRODUCTION

Minerals are essential to support economic growth and our quality of life. Europe has numerous non-energy non-agricultural raw materials at its disposal and could be self-sufficient for many of them, if access was ensured. The resources are not evenly distributed. For example, Northernmost Europe as well as Southern are producing or have a good potential to supply many of the common raw materials, including critical raw materials. Some regions may have a shortage in raw materials, whilst some will have surpluses. The availability of raw materials in general is not an issue, at least in the short term, as long as imports and exports between regions, EU Member States and countries outside the EU are not restricted.

If Europe is to remain competitive in the global minerals and product markets and provide raw materials to meet its society's needs, it is imperative that it remains attractive for inward investment through a fair and straightforward permitting and/or consenting process. The aim of this report is to compare the existing Member States (MS) raw materials policies and share good practises, in order to identify the gaps, make recommendations and improve these policies where needed.

The starting point of this report is the need to implement the **Raw Materials Initiative**, in particular its second pillar, which relates to fostering a sustainable supply of raw materials within the European Union from domestic resources. This is also taking place in the framework of the implementation phase of the **Strategic Implementation Plan (SIP) of the European Innovation Partnership on Raw Materials**. The latter plan identifies a number of concrete actions, under Action areas "II.1 Minerals Policy Framework"; and "II.2 Access to Mineral Potential in the EU", which relate to the challenges of "policy and legal framework, information framework, land-use planning and permitting".

Action area "II.1 Minerals Policy Framework" aims to "strengthen the exchange of best practices in the area of mineral policies and related regulation among Member States, that may lead to streamlining the permitting procedure along the whole chain of extractive activities (prospecting, exploration, extraction, processing, closure, post closure activities) with regard to the time frame, the regulatory co-authority regime, the financial and administrative conditions, and ensure stable, predictive environment." "Another objective is to increase transparency on raw materials availability in the EU. Information on exploration, mineral production, trade, reserves and resources should be standardised and systematically reported by the EU and Members States, when information is available and without breaching competition rules."

Action area "II.2 Access to Mineral Potential in the EU" aims to "foster access to known and still undiscovered mineral deposits, improve the conditions for sustainable access and supply of raw materials in the EU and safeguard the mineral wealth for future generations by classifying within a regulatory framework, the importance for society of certain mineral deposits. With regard to the land use planning or marine spatial plans, the aim is to ensure that Non-Energy Extractive Industries (NEEI) are considered on equal terms as all other, often competing sectors, such as agriculture, forestry, housing, industrial areas, etc. This

would ensure an appropriate time frame for long term investment into minerals extraction and processing/refining."

This report is the result of 3 meetings of the Ad Hoc Working Group on Exchange of best practices on policy and legal framework, information framework, land-use planning and permitting (AHWG) and of the RMSG Meeting on September 26th. The Group also based its recommendations on two reports: 1/Report on National Minerals Policy Indicators – Framework Conditions for the Sustainable Supply of Raw Materials in the European Union; 2/ Study on the Evaluation and Exchange of Good Practices for the Sustainable Supply of Raw Materials in the European Union (Good practice project – report).

The current AHWG Report on Recommendations on the existing framework conditions for non-energy extractive industry in the European Union is structured around the following chapters: 1. Policy and legal framework, 2. Information framework, 3. Land-use planning and 4. Permitting and authorisation.

Each chapter covers a short description of the topic, the state of play and challenges, the main results of the Indicators report, some examples of best practices and the recommendations of the Ad Hoc Working Group on the related topic.

2. POLICY AND LEGAL FRAMEWORK

2.1 Description

The legal provisions with regard to the management of raw materials in a broad sense are enshrined in distinct national and sometimes regional sectorial legislation of Member States, namely the legislation/codes for extractive activities. Upon adoption of EU environmental legislation, areas such as waste, air or water management needs to be transposed into the national legislation and thereby impacting extractive activities.

Minerals are traditionally considered as national natural assets for which access is governed by subsidiarity principle and therefore has been governed by national or regional, sometimes local provisions, which should be documented in policies and reflect national sustainable raw materials supply and strategies.

Two major mining accidents (1998 Aznalcóllar (Spain) and 2000 Baia Mare (Romania) raised the question of the adequacy of a number of regional and national regulations in the environmental and safety area implementation and lead to the inclusion of aspects of the extractive industries waste management into EU directives, such as, the Directive on the Management of Waste from the Extractive Industry, the Seveso II and III Directives, and two EU Communications on the Sustainability of the EU's non-energy Extractive Industry and the Safe Operation of Mines, and, as the latest example, the Environmental Impact Assessment (EIA) Directive.

The early initiatives of the raw material policy of the Community were formulated in 2000³ (COM 2000 (265) final) stressing that "conditions for land access for the industry have been increasingly influenced by other competing land uses". The following series of European Commission Communications called for the review of legislative practices and implementation in the Member States. Several studies were carried out on the situation of the Minerals Policies, their legislative frameworks and best practices (British Geological Survey, EC Staff working paper, University of Leoben Study⁴).

The 2010 report made available by this thematic Ad hoc working group⁵ focused on nonenergy minerals and national and regional land use planning policies. Due to the rather complex existing legislation in Member States, and in view of the regional and local aspects of some of the existing regulatory framework, a comprehensive description of the framework conditions for mining in all 28 Member States however is difficult. This study therefore rather focuses on highlighting good examples and best practices in Member States.

Furthermore, the non-technology pillar part of the Strategic Implementation Plan of the European Innovation Partnership on Raw Materials provides additional recommendations on how future improvements of the policy and legislative framework and its implementation may be achieved.

³ http://eur-lex.europa.eu/LexUriServ.do?uri=COM:2000:0265:FIN:EN:PDF

⁴ http://ec.europa.eu/enterprise/policies/raw-materials/documents/index_en.htm

⁵ http://ec.europa.eu/enterprise/policies/raw-materials/sustainable-supply/index_en.htm

2.2 The State of play and challenges in the European Union

Differences in the policy area

It has become obvious that some EU Member States do not have National Mineral Policies yet in place. And even where they exist, these policies are not always aligned with the other industrial policies. National Mineral Policies should be developed taking into account the needs and the priorities of the country regarding this sector.

Differences in the legal systems

Relevant national legal frameworks differ widely across Europe, some of which are maybe not as optimal and might hinder the implementation of the national coherent Raw materials policies and a coordinated EU approach in this area.

There are significant differences regarding the legislation and its implementation (including regulatory authority framework) between countries with a federal structure (e.g. Germany, Belgium), a regional structure (e.g. Italy, Spain) and centralised countries where regions and counties are only administrative units of the central state (e.g. France). This administrative structure of Member States has an impact particularly on the aggregates industry, but not only on them. The regulation which governs *the ownership* over mineral commodities at the highest possible hierarchical levels of law is essential (e.g. Civil Code, Act on National Assets). However, there is at least one known exception (Finland) where it is not regulated at all. State ownership is the most general case for countries where minerals are important. Notwithstanding that, in many countries industrial minerals and aggregates are belonging to the land owners. There are landlocked countries (AT, HU, CZ, SK, LU) for which *regulations on marine minerals* did not exist at all until the publication of the Directive 2013/30/EU⁶. But other Member States have references on marine minerals in their codes for extractive activities.

The scenario with regard to "Acts/Codes for extractive activities" is similarly diverse. In almost all EU Member States, there is a major piece of act (or law) in the national legislation dedicated to the management (including permitting) of minerals which is usually called "Act/Code for extractive activities". It is generally accompanied by a set of executive by-laws (governmental and ministerial decrees and orders).

There are Member States with traditional, single, all-material inclusive specific codes for extractive activities (Germany, Austria, Hungary, France, Spain). Elsewhere, hydrocarbons are treated separately (Romania), or geological research has a distinct separate law. In some Member States, aggregates are regulated by land-use planning laws (UK, The Netherlands). In a few new Member States, mining codes have no "mining" in the title, but "subsurface resources", "subsoil" is used instead, and the content covers geo-space utilisation as well (Bulgaria, Estonia, Latvia).

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⁶ http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:178:0066:0106:EN:PDF

<u>3 Good practice examples on the policy and legal framework and highlighted by the</u> Ad Hoc Working Group:

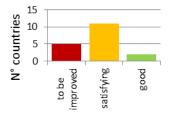
<u>Finland:</u> The original definition of a national strategy has been extended in its compass and an Action plan developed, on the basis of which both government and non-energy extractive industry will implement an agreed programme of change, in order to meet ambitious national objectives. Finland also defined a National Mineral Resources Strategy in 2010, with a view to establishing the country as a global leader in the sustainable utilisation of mineral resources, but an active national debate about various aspects of raw materials extraction had developed in the media and prompted the government in 2012 to convene a high level Round Table, chaired by the Prime Minister, with 160 participants from a range of interest groups (general public, elected representatives, all level of governments...). The discussion at the round table and the subsequent work of 10 expert groups has led to the publication in April 2013 of an Action Plan with targeted measures to be implemented by 2019 and descriptions of long-term objectives up to 2030.

Sweden's Mineral Strategy establishes five key objectives (1. a non-energy extractive industry in harmony with the environment, cultural values and business activities; 2. dialogue to promote innovation and growth; 3. framework conditions and infrastructure for competitiveness and growth; 4. an innovative non-energy extractive industry with an excellent knowledge base; 5. an internationally renowned, active non-energy extractive industry) that are supplemented by eleven action points. A total of nineteen complementary measures have been proposed to help realise the key aims of the strategy. This is a good example of how though an open and interactive process with stakeholders (government, non-energy extractive industry...), a comprehensive strategy has been developed to meet the needs of the non-energy extractive industry and too extend and maintain Sweden's competitive advantage in this field. The Swedish Minerals Strategy takes an integrated approach in order to create beneficial conditions, and identify opportunities and challenges so that the non-energy extractive industry can grow sustainably and keep pace with the opportunities provided by today's strong international demand for metals and minerals.

The Portuguese National Strategy for Geological Resources and Mineral Resources is a comprehensive strategy for the period 2013-2020 approved by law that establishes a framework for the promotion of the Portuguese non-energy extractive industry. The strategy is structured around four main areas of action (1.redefining the role of the State in order to adequate the bases of the sector; 2.development of knowledge and of the potential through the improvement of collection methods systematization of information; 3.dissemination and promotion of the national potential: 4.economic, social, environmental and territorial sustainability) supported by a set of more specific measures and actions (some of them already in progress or completed) that placed mining activities and access to natural resources in parity with other activities balancing economic, social and environmental considerations. It has set the basis for the development of a more effective legal and institutional framework to support the development of the sector.

Indicators on the policy and legal network

Within the legal framework group of indicators, the presence of a national Mineral/Mining Act covering all mineral raw materials and fiscal frameworks for exploration or extraction incentives are welcomed. A new objective would also be access to mineral reserves and resources through their safeguarding mechanisms. These mechanisms would provide efficient access to mineral deposits for future generations. Examples for the conservation of deposits of construction materials already exist on local level. This protection secures the future local and regional supply.



Graph 1. Legal framework group of indicators per Member State

2.3 Recommendations

At European Union level

Whilst respecting the subsidiarity principle and national competence in the field of minerals policy, in view of the diversity of the relevant national legislations and various priorities of Member States, the group invites the Commission to develop an EU initiative in the field of non-energy minerals policy and its national implementation and explore all relevant options.

Such an EU initiative may cover several political and legal aspects of and EU policy, as follows:

- In line with the Raw Materials Initiative, the **scope** of any EU initiative in this field shall be limited to the non-energy non-agricultural raw materials⁷, i.e, mineral raw materials covering also marine mineral commodities and related activities while ensuring the consistency with the UNCLOS (United Nations Convention on the Law of the Sea) regime. The whole chain of the extractive (prospecting, exploration, extraction, processing, refining, closure, post closure) may be addressed in this scope.
- The initiative shall *define* terms commonly used by the non-energy extractive industry, such as critical minerals, deposits of public importance, aggregates, industrial, construction minerals and metallic minerals, geological exploration (prospection), extraction, processing (treatment), occurrences, mineral deposits, resources, reserves, etc.
- Major principles, such as resource efficiency, sustainability, good governance, competitiveness, stable and predictable legal and regulatory framework, transparency, integrity, undistorted internal market conditions as well as their possible links shall be addressed. Voluntary industry schemes are welcome, but in order to avoid the unjustified burden on the non-energy extractive industry, ones to be widely promoted shall be assessed on their feasibility and their applicability in the sector shall be clarified (e.g. EITI, GRI, Kimberley).
- It should be investigated how an adequate regulatory framework to safeguard
 mineral deposits of public importance that facilitates future investment should be
 developed ensuring that mineral property rights are sufficiently protected.
- The initiative should also consider provisions on the mandatory publication of calls with regard to areas open for exploration and extraction of critical minerals (and mineral deposits of public importance).
- The European institutions should take into account the impacts of other policies such as: the EU competitiveness, reindustrialisation, growth, job creation, environmental, biodiversity, waste management, R&D&I and land use planning policies on mining policies.

At national level

National minerals policies should create the right framework conditions for extracting, as follows:

• Competent authorities should consider streamlining permitting procedures, the application of the *one-stop-shop model*, and the use of *e-government solutions*, such as on-line standard forms.

⁷ Biotic materials should be treated separately.

- Development of National Minerals Policy (strategy) and a resulting action plan and update and disseminate them. Strategies should preferably be national in the member states where raw material policy is a national competence and should ensure coherence between regional and local strategies and cover all no energy mineral resources, whilst the implementation could be at different levels (national, regional, local). An authority responsible for minerals should be clearly designated. A workshop on this topic could be foreseen.
- Where appropriate and when defined the national or regional policy and/or legislations need to include the *concept of mineral deposit of public importance* at local/regional, national and/or EU level and identify the infrastructures necessary to carry out the projects at the relevant level of importance
- Addressing the appropriate length of time and conditions of *confidentiality* of geological, exploration and resource *data* may accelerate the investments into raw materials extraction. In Sweden and Finland companies are obliged to give their exploration data to the government when they finish their exploration activities if they do not proceed to mine project phase.
- It could be also an option to apply for specific financial incentives and fiscal instruments to encourage investment into exploration and access to raw materials, such as tax rebates for research activities including prospecting and exploration. Fiscal incentives (understood widely as financial incentives) are important to stimulate investments (especially with regard to exploration activities). Examples from countries using fiscal incentives (e.g. Australia's and Spain's tax rebate on exploration activities) should be referred to.
- The national and regional policies should take into account the impact of other policies such as: the national competitiveness, reindustrialisation, growth, job creation, environmental, biodiversity, waste management, R&D&I, and land use planning policies on mining policies.

With regard to Raw Materials reporting

Raw Materials reporting should be improved as follows:

- Minerals management at European Union level requires a standardised classification of reserves and resources, with due consideration for existing reporting standards currently used for different purposes (INSPIRE, ESMA).
- Mineral statistical reporting, at EU level is desired on a regular basis (1 to 3 years).

3. INFORMATION FRAMEWORK

3.1 Description

Public information is a public good crucial for: (a) the government and public authorities at national, regional and local level for multiple purposes, (b) non-energy extractive industry and investors, (c) other stakeholder such as academia, research, and (d) NGOs and the general public. Such frameworks include several specific data themes:

- <u>Data on mineral occurrences and deposits</u>, including the data necessary to identify and describe the mineral potential and mineralised occurrences, comprising, inter alia, remote sensing, geological, geophysical, geochemical, mineralogical, petrographic data. This data is generally broadly described as "geological" or "geoscientific" data.
- Economic and technical data on mineral exploration and extraction describing as far as commercially possible resources and reserves, exploration investments, non-energy extractive industry projects in the pipeline, capital expenditure at local and regional level and operation costs, production levels;
- <u>Data on the environmental and social dimensions of extraction:</u> this can be divided into three subsets:
 - <u>Baseline data</u>, qualitatively and quantitatively describing the status, prior to <u>the non-energy extractive industry</u> activities, of water resources (including groundwater), of soils, of fauna and flora; climatological data; protected areas; data needed to identify areas prone to various natural hazards.
 - <u>Data describing the environmental impacts of the extraction</u>; material input/ output data related to the production of minerals and metals in terms of energy, water, chemicals uses and emissions of CO₂, SO_x, NO_x, PM10, waste (quantities and nature of mining, processing and metallurgical waste).
 - <u>Data describing the social dimension impacts of the extraction</u>; on population, schools, infrastructure, workforce.
- Minerals intelligence data: this includes a broad range of data, described in the recommendations section, needed to gain a strategic overview of the issues around mineral raw materials supplies.

Such an information framework should take due account of the specificities of each nonenergy extractive industry segment (metallic minerals, industrial minerals and construction materials).

While these themes are the core of the information framework, much of this data is not directly usable by stakeholders. Human expertise and intelligent data management systems are needed to turn those data assets into information relevant to the specific end users. The information framework is a public good of great value.

3.2 The State of play and challenges in the European Union

The data is nowadays essentially in digital format, organised in large geographic databases and best made available, together with related metadata, via geographic information portals (geoportals) that allow easy visualisation of individual data layers and geographic navigation. Existing, public digital data must be made available to the general public in line with the EC Directive 2007/2/EC establishing an Infrastructure for Spatial Information in the European Community (INSPIRE). This information framework should be considered by European policy makers as an important component of the EU Shared Environmental Information System and the COPERNICUS information and services infrastructure.

Most, if not all, EU Member States have put in place various components of such information frameworks although there is no survey that describes what is existing, where and at what scale. *Geological data* is made available by national or regional Geological Surveys, in many cases via *dedicated geoportals*, which provide various services such as discovery metadata and view or download metadata/data services. Examples of these are from the Geological surveys of Catalonia⁸ (a region of Spain), Czech Republic⁹, Finland¹⁰, France¹¹, Lithuania¹², Portugal¹³, Slovenia¹⁴ or the United Kingdom¹⁵. Also regions like for example the Flemish region¹⁶ have geoportals with an easy accessible and free of charge database and viewer with sub-soil information.

Public minerals intelligence activities are developed, to various degrees, in EU Member States. Examples are: (a) Austria's Ministry of Economy, Youth and Family publishes "World Mining Data¹⁷", a yearly statistical compendium on the worldwide production of over 50 minerals and metals; (b) The French Geological Survey's, BRGM, Mineralinfo web portal¹⁸, developed and maintained on behalf of the French Ministries for Industrial Renewal and for Ecology, Sustainable Development and Energy. It provides, inter alia, access to several mineral intelligence products, all in French, such as monthly reviews of the global minerals industry and mineral raw material industry (Ecomines) as well as to a series of detailed reports on minerals and metals of high importance to the French economy; (c) Germany, via its German Mineral Resources Agency (DERA¹⁹), part of the German Federal Institute for Geosciences and Natural Resources (BGR, the German Federal Geological Survey) provides statistics on national imports and exports as well as national production, on

⁸ http://siurana.icgc.cat/visorIGC/geotreballs.jsp

http://www.geology.cz/extranet-eng/maps/online

¹⁰ http://hakku.gtk.fi/en/locations/search

http://infoterre.brgm.fr/viewer/MainTileForward.do

http://www.lgt.lt/index.php?option=com_content&view=article&id=161&Itemid=1257&lang=lt

http://www.lneg.pt/servicos/205/

¹⁴ http://www.geo-zs.si/podrocje.aspx?id=111

http://mapapps.bgs.ac.uk/geologyofbritain/home.html

http://dov.vlaanderen.be

¹⁷ http://www.wmc.org.pl/?q=node/49

¹⁸ http://www.mineralinfo.fr

¹⁹ http://www.deutsche-rohstoffagentur.de/DERA/DE/Home/dra node.html

¹⁶ http://www.bgs.ac.uk/mineralsuk/

minerals and metals prices and their volatility, as well as detailed assessments of minerals and metals critical to the German Economy and country reviews describing investment conditions and opportunities; and (d) The United Kingdom's British Geological Survey operates a dedicated web portal, Minerals UK, which provides a wealth of information including mineral and metals factsheets, a list of minerals critical to the UK economy, detailed production and trade statistics for the EU countries as well as a statistical handbook providing the world's minerals and production. Both the EU and the world statistics cover over 70 minerals and metals. (e) The Spanish Mining Statistics, published by the Spanish Ministry of Industry and Tourism, is a census done exploitation by exploitation that covers all subsectors of the extractive industry: energy minerals; metallic minerals; industrial minerals and construction minerals. The information is collected annually and provide information, among others, on the number of mining operations at national, regional or provincial level that are active, the production, the value of production and destination, job creation, energy, water, materials consumption, etc. that are useful for non-energy extractive industry interested parties.

Access to these public information frameworks is generally provided free of charge. Marginal costs may be charged by some Surveys for specific value-added services. However from an EU perspective, these national and regional information frameworks remain very heterogeneous in contents and quality and, more often than not, are produced using respective national / regional data models and languages. To overcome heterogeneity of data and information among Members States, it is important to promote some initiatives such as: (a) Schematic interoperability was developed for geological digital geological and mineral resources related data models, thanks to the work of the Commission for the Management and Application of Geoscience Information (CGI), a subcommittee of the International Union of Geological Sciences. This served as a basis for the INSPIRE Data Specifications for the spatial data themes "Geology" and "Mineral Resources", entailing users to view related data, structured according to heterogeneous national/ regional data models that also varied across time, through the filter of a common data model. This interoperability scheme is well suited for data with a scale of about 1:1,000,000. Further work would be needed to develop this interoperability at larger scales, interoperability has been developed too, to some degree, thanks to EC co-funded projects (geophysical data, 10 EU Member States), e-Water or e-Earth such as GEOMIND (geological borehole data, 6 EU Member States).

3 Good practice examples on the information framework highlighted by the Ad Hoc Working Group:

The Minerals Online-GIS, from the UK²⁰: It is also an information resource for the non-energy extractive industry that has been available for some time. It was developed by the British Geological Survey and went online in 1999. It provides maps and statistics about minerals exploration and extraction and also a wealth of business intelligence with information on production and trade in the UK and abroad. There are similar information resources that exist elsewhere (DERA in Germany, French portal: www.infoterre.fr). The system is compliant with the requirements of the Inspire Directive. It is clear that as well as inspiring those who have yet to develop such resources, the exiting sites are learning from each other.

The Department of Communications Energy and Natural Resources Exploration Data Release Initiative in Ireland²¹: The Exploration and Mining Division (EMD) has been releasing all of its non-confidential exploration data, since 2000. The types of exploration data made available include: Prospecting licence ground status, exploration company reports, drill-hole data, airborne geophysics data, geochemical surveys and a bibliography of Irish publications and selected reports concerning Irish mineral resources (1750-2007). Historical exploration data and reports are also now available for public access through the web. An online GIS system has also been developed for non-energy extractive industry and other interested stakeholders. This system operates on the basis of an open access data policy on surrendered licenses and data which is over six years old. The online information system is transparent and companies and the public can see the Prospecting Status of sites across the country. The location and extent of Mining Lease/Licences can also be viewed.

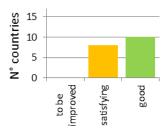
The German Mineral Resource Agency (DERA): was established in 2010, as part of the Federal Institute for Geosciences and Natural Resources (BGR) and was created to address a key issue faced by the German non-energy extractive industry, namely the absence of reliable information on raw materials markets. The objective of DERA is to become a mineral resource competence centre and serve as central information and advisory platform for the German government and industry in the area of mineral and energy raw materials. Services include: a commodity information centre producing reports on specific categories of minerals or specific sectors, a mineral price monitoring system, reports and studies concerning the raw materials situation and potential and the non-energy extractive industry in Germany and in selected countries, reviews of raw materials potential as well as possible alternative or new sources of supply and one-to-one advice to firms in relation to raw material supply risks and diversification strategies taking into account geo-strategy issues of safety and environmental aspects.

²⁰ http://www.bgs.ac.uk/mineralsuk/

²¹ http://www.mineralsireland.ie/

Indicators on the information network

Within the information framework the presence of reliable and relevant statistical data is good, as well as on line data availability to society. Availability of geo-scientific knowledge either in databases or larger systems are welcomed, as well as their territorial coverage to all the mineral raw materials potential areas in sufficient resolution that further detail exploration is expected.



Graph 2. Information framework group of indicators per Member State

3.3 Recommendations

The specificities of national/regional economies need to be carefully considered while designing the structure of their minerals information framework. Some EU Member States, for instance, require a high level of minerals and metals imports while other require less imports; some countries have a high potential for domestic mineral production while some others – due to the nature of their geology – have no economically realistic potential. Improving the compatibility and comparability of national minerals information frameworks would pave the way to establish a European Union Raw Materials Knowledge Base. All these recommendations are oriented to Member States with the exception of the first paragraph, 'Data on mineral occurrences and deposits' which concerns the European level as well.

Data on mineral potential and deposits

- To engage in a *delineation* of EU areas with *geological features of current interest* for metalliferous mineralisations and other concentrations of mineral raw materials.
- To describe, for the delineated areas, the existing thematic data coverage, its scales and age. For geochemical sampling, coverage sampling densities (samples per km²) and the elements analysed should be indicated. For geophysics, the methods should be indicated as well as the main characteristics of the survey (e.g. for airborne geophysics, line spacing and altitude above the soil).
- To identify data gaps resulting from above analysis.

- The geographic scale (or resolution) of such data is of high importance. Larger scales
 (at least 1:100,000 or, preferably, 1:50,000 scale is required for geological and
 environmental data, as the information needs to be sufficiently detailed and precise to
 base policy and investment decisions.
- The **development of a 3-dimensional data infrastructure** assessing the mineral potential of favourable zones throughout the EU **until a depth of 1.5 km**, at minimum (knowing that is nowadays feasible to mine down to a depth of 3 km).
- Increase *investment* in early stages of exploration, i.e. geophysics (airborne radiometry, magnetics, electromagnetics, in situ micro-gravimetry, magnetotellurics²², seismic reflection tomography...), in scientific deep drill-holes, and in geostatistical 3D modelling and promoting the public availability of field data.

Economic and technical data on mineral exploration and production

- It is of essence that *public authorities* receive *economic and technical data generated by exploration* and, where appropriate, mining and/or metallurgical production activities on their territory.
- Unless there are valid reasons to secure confidentiality of this data and information, it should be made public, ensuring that all stakeholders have simultaneous and equal information on exploration and mining activities.

Data on the environmental, social and governance dimensions of mining

- Public reporting of the environmental, social and governance performances of enterprises, along with their economic performances, should be actively encouraged by the national/regional authorities
- Reporting should be based on existing indicators frameworks such as the Global Reporting Initiative reporting guidelines (Mining and Metals supplement²³) or other national schemes such as for example the Spanish voluntary sustainability reporting framework.

Minerals intelligence data

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 Members States are invited to exchange practises and further develop mineral intelligence data in a coordinated way at the European level in collaboration with the Commission.

²² There is a track record of the successful use of that method in Canada, leading inter alia to the discovery of a nickel deposit at a depth of 1750 m in the Sudbury region (Ontario).

https://www.globalreporting.org/reporting/sector-guidance/sector-guidance/mining-and-metals/Pages/default.aspx In 2012, 156 companies, essentially large- to medium-scale in size have reported their Sustainable Development Performance using these reporting guidelines, including 20 European companies, including Russian ones, and none is from China.

- Minerals intelligence data and information needs to describe as far as commercially
 possible the national and global extractive and primary metallurgical production,
 its locations, ownership and control; extractive projects, production, employment created,
 composition of produced ores where publically available; trade; description of main uses,
 of the supply and demand trends and their main drivers (technological, regulatory...),
 etc. And the continuous updating of the data needs to be taken into account.
- It should also include the key supply chains and related criticality issues; of
 indicators describing governance, material inputs/ outputs all along the lifecycle of
 individual minerals and metals, geopolitical risks and transparency at national/ regional
 levels.
- Secondary production (from recycling of production waste and, separately, from end-of life products) should also be included. C&D waste recycling (close-loop or open loop) should be taken into account in EUROSTAT data.

4. LAND-USE PLANNING

4.1 Description

Considering the pressure on land-use by various activities in the Member States and the need to facilitate *the* access to mineral resources for the future (e.g. deeper civil works, subsurface radioactive waste disposal, gas storage (incl. CO2), energy production from geothermal systems, groundwater management, military applications), there is a need *to develop a greater compatibility of national minerals policies and land-use planning* in every single Member State. This also implies a change of the 2D land-use planning legislation and practices into 3D spatial planning, as it was highlighted in the EIP SIP non-technology pillar.

However, unlike other forms of land-use, it is important to acknowledge that minerals can only be extracted where they are found. Furthermore, minerals extraction should be regarded as a temporary use of the land. Moreover, in many instances, the development of minerals enables enhanced and beneficial after-uses for the land often including significant opportunities for enhancing or restoring biodiversity.

In many countries within the EU, access to mineral deposits through the permitting, consenting or licencing processes lacks clarity and certainty, adding further burdens to the already expensive and risky mineral resources exploration and extraction of resources business. A transparent and clear framework setting the framework of requirements to be fulfilled to obtain an exploration license and, in case of success, the right to mine, is a minimum requirement.

Conflict of land use and land-use planning is caused by the competing interests of different activities and interests with economic requirements, the need to protect life supporting environmental assets, cultural heritage and administrative rules. A strategic national land-use planning policy requires reliable geological information on the known or potential deposits in order to safeguard resources and their environments from unnecessary sterilisation. The exploitation of those deposits may or may not take place in the near future or by future generations. However, their accessibility should remain unimpeded. Designation of certain preference areas reserved for mining activities should remain flexible. New knowledge or information, advancements in technology and changing economic criteria can change the basics on which a certain land use was earmarked for an area. Sterilisation of mineral deposits should be avoided keeping in mind that raw material extraction is a temporary activity allowing other land uses after extraction takes place. Minerals development is a temporary use of the land and enables a wide range of after-uses.

4.2 The State of play and challenges in the European Union

Land-use planning falls under the subsidiarity of the Member States and is managed by the public authorities at different levels, such as national, regional (incl. county), or local levels. Despite the fact that a significant part of the Community financial scheme is allocated to infrastructure development in Member States, there is no Community legislation on the common principles of land-use and spatial planning. A few initiatives of strategic nature at EU level provide scope for developing a more integrated approach. In that regard, the European Spatial Development Perspective (ESDP) intended to promote co-operation between Member States in pursuit of sustainable development through a more balanced

spatial use of EU territory. Land-use and spatial planning policies directly affect sustainable development strategies for the non-energy extractive industry. Land access is an essential pre-requisite for the further development of the extractive industry. However, the guiding principles of CEMAT (Council of Europe Conference of Ministers Responsible for Spatial/Regional Planning) do not cover mineral raw materials among natural resources.

The European Raw Materials Initiative of 2008, renewed in 2011, has launched a series of actions aimed at the establishment of favourable framework conditions for the extraction of raw materials within Europe to secure the needs of the European non-energy extractive Industry and society as a whole.

As many EU Member States still do not have a clearly defined National Minerals Policy, there is generally no strategic planning for access to mineral resources at the national level. This in turn affects the operative (regional/local) planning process (i.e. securing the access to local resources). A National Minerals Policy therefore first has to provide a "Mineral Statement" including two crucial issues: raising the awareness of society's needs for raw materials, including access to raw materials and setting a balanced approach in the assessment of exploration and development of extractive activities within the land-use procedures.

The National Minerals Policy should take into account the predicted medium to long-term demand for raw materials, ensuring that there is a sufficient stock of local reserves with access, which is an inherent part of local spatial planning. Some will argue that, for prudence, designated areas should be up to three times that required to supply current local market demand. The planning horizon shall be both mid-term and long-term to make sure that access to resources is really secured. It would also be appropriate in the longer term for a National Minerals Policy to consider further post extraction development opportunities.

<u>3 Good practice examples on land-use planning highlighted by the Ad Hoc Working</u> Group:

The European Commission final report on "Evaluation and Exchange of Good Practice for the Sustainable Supply of Raw Materials within the EU - Annex A – Good Practice Cases" provides in total 25 examples. On land-use planning, the following three national cases are, in principle, considered as good practice.

Mineral Resources Plan, Austria

Austrian national minerals policy is based on 3 pillars which are inspired by the EU RMI. The Mineral Resources Plan was published in 2012 and carried out in two phases:

- -Phase 1: The main purpose was to draw up a baseline survey. To achieve the objective the authorities created 4 working groups: WG1: Geology and Resources; WG2: Mineral Economic; WG3: GIS Implementation; WG4: Supply Security.
- -Phase 2: The main purpose was to identify areas for raw material exploitation, by adopting a strategy of conflict elimination. An innovative evaluation assessment was carried out taking into account 3 dimensions: 1/ the number and operating status of sand and gravel pits in an area; 2/ information from the pit operator regarding the use of the material; 3/ the importance of the pit for regional and local raw materials supply.

The data are accessible through the Interactive Raw Material Information System (IRIS).

The next stage was to compare the geological potential with the economic significance of the raw materials at a regional level (taking into account factors such as transport distances, population density...). The maps for metal ore, industrial minerals and coals were overlaid on the prohibition zone (those areas which the extraction of mineral raw materials is forbidden by federal or State law). However, when there is a conflict zone (those areas in which there are obstacles to extraction, including Natura 2000) there is a systematic process of discussion with the officials of the federal states to determine where these conflicts are manageable and where conflicts cannot be resolved.

The Raw Material Plan has been used as the basis for the regional development programme (Salzburg, Carinthia, Upper Austria...).

Increase the capacity and effectiveness of Land use planning, Portugal

The objective of the Portuguese initiative, started in 2004, is to demarcate areas allocated to geological resources, to facilitate and expedite the mineral licences process and to help avoid or mitigate land use conflicts. It provides a consistent framework for demarcating existing deposits and areas of potential interest and ensures coordination among the different levels of land use planning (national, regional and local). There are often conflicts with other economic activities, inappropriate demarcations of the different land uses and often inconsistencies between the land use plan and neighbouring municipalities. That is the reason for the Portuguese mining Authority (DGEG) to ensure that exploration and exploitation permit areas and areas with potential mineral resources interest are demarcated in land use plans and mining and quarrying activities are always considered in land use planning policies.

The Plan included 3 levels – national, regional and municipal. Land uses are defined in 3 categories: 1/ Potential areas; 2/ Conservation areas; 3/ Areas for exploration.

The municipality plans of 203 out of 278 municipalities in the country have updated. While only in the initial stages of this implementation, the new measure is recognised by the non-energy extractive industry a particularly positive step towards a much needed clarification of the situation concerning land uses and providing greater certainty in relation to future exploration potential. It also ensures that mineral resources are recognised and considered in parity with other natural resources and also that the local use plans integrate the most up-to-date information available in geological surveys. A key element is the coordination and supervising role of the responsible entity.

Departmental Quarry Scheme, France

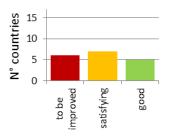
The Initiative was launched in 1992. Departmental quarry schemes are an instrument to assist the prefect's decision. These schemes determine the conditions in which quarries are built, taking into account economic, regional and national interests as well as the availability of different type of resources, raw materials needs. Only industrial minerals (talc, quartz) and aggregates are covered by this initiative. The main purpose of this scheme is to define the areas and optimal scope of extraction operations as well as anticipate the development of operations in order to determine the future of the site once operations have been completed.

The spirit of the 1993 Act is to minimise the visual impacts of quarry extraction activities in an effort to preserve natural habitats and to avoid the relocation of residents.

Departments are required to produce plans for quarried minerals. These schemes must include: an inventory of known resources, the impact of existing quarries on the environment, an evaluation of future local needs, an examination of transport networks, environmentally protected areas. The strategic objectives of the schemes are: guarantee security of supply for departments, avoid imbalances in the supply of aggregates, ensure access to resources of national importance, intensifying efforts to preserve the environment in quarrying activities. There is a reform of the Initiative at the beginning of 2014 and future schemes include the resourcing of marine aggregate and recycled materials from construction waste. And it has been extended to the regional level in order to better take into account raw material flow and to improve coordination with land use planning activities. This reformed initiative has also include the promotion resource conservation and managing environmental and landscape aspects, merging elements of quarry scheme management with the use of construction waste.

Indicators on land-use planning

The indicators dealing with land use planning do not represent the whole picture of raw materials sector and land use planning. The indicators cover partly the issues (see chapter 5), however information obtained shows desired trends (a digital geological database compliant with the INSPIRE Directive, suitability of maps obligatory for land use planning, and structure or tool for identifying future needs for different sectors, including the raw materials one).



Graph 3. Land use planning group of indicators per Member State

4.3 Recommendations

Gaps and challenges in land-use planning practices were identified as well as good practice examples. National, regional and local land-use planning should apply the following minimum standards:

- Appropriate geological knowledge on the potential deposits should be collected from a wide variety of sources and maintained. It should develop an appropriate mapping framework with the detailed definition and qualifying conditions of the concept of mineral deposits of public importance, covering all minerals with stress on the occurrence of critical minerals and defining deposits of local, regional, national or EU interest and importance and their safeguarding. Implement a system by which the access to mineral deposits of public importance is more firmly taken into account in the land-use planning process at the appropriate level.
- Providing suitable INSPIRE Directive compliant maps of needed quality (including the usability/accuracy of the maps in terms of their scale) and easy access to and updating of is highly desirable.
- There is a need to improve practices on land use-planning. It should be **more digitalised**. Digitalisation is a vital part in streamlining the authority processes.
- In the land-use planning, the distances between the urban, highly populated or industrial areas and mineral deposits should be taken into account on the basis of national / regional mineral strategies. Where transportation of raw materials is needed, it should only be provided if there is adequate land surface area over and near (for access routes) these deposits. This means the safeguarding of existing or the provision of suitable road, rail or waterway infrastructure for transporting the raw materials from the extraction to usage or processing location.
- A <u>widely</u> informed and balanced assessment of the different options to determine
 the extractive sites. These options should also include otherwise protected areas in
 case the respective special law does allow this, in order to guarantee fair and equal
 considerations of all potential uses of land, at all places.
- There should be **no automatic exclusion of raw-material extraction activities** in and around potentially sensitive areas (e.g., Natura 2000). Instead, extractive activities shall ensure that these activities do not adversely affect the values of such sites (e.g., by following the European Commission Guidance on Non-energy mineral extraction and Natura 2000).
- Capacity building and co-operation of authorities in charge of minerals extraction
 and land-use planning is needed. It would allow, among other things, to consult
 widely and to identify, classify and safeguard mineral deposits. It should be based on
 an improved raw materials knowledge base as well as on agreed and recognised
 national / regional safeguarding criteria.

5. PERMITTING

5. 1 Description

Nowadays, geological and economic criteria are not the only factors taken into consideration for the exploration and assessment of mineral resources. Environmental, governance and social criteria are also important.

Companies may be examining deposits located in different countries and continents. Regions/countries with favourable and stable political economies provide more secure and attractive investment opportunities.

Another criterion, which is important to investors, is the national/regional policy on access to raw materials. As start-up investments for the extraction of raw materials are high, planning reliability and legal certainty for a long time period are of major importance. In this context, the availability of the information needed when considering making an application for exploration (if required) is necessary. This information should include geology, mineral potential and environmental baseline data

The nature, reliability, and the time frame of the permitting or consenting process, as well as the public perception and an estimation of the start-up costs are also principal considerations. Clarity, predictability, transparency and legal certainty of what needs to be provided in order to obtain authorisation for minerals exploration or extraction is essential.

5.2 The State of play and challenges in the European Union

Most of the Member States provide a checklist to guide applicants through the application procedure for the exploration or extraction permitting.²⁴ This is managed by the ministry or authority in charge of extractive activities. The preparation of an application includes at least two main components.

One such component is the *screening* and/or *scoping* of the project development, to determine whether or not the proposal should be subject to an Environmental Impact Assessment (EIA, <u>2011/92/EU</u>). In general, an EIA *check-list* is available online or on request to the responsible authority. This is managed by the ministry or authority in charge of the environment. An EIA is requested for the projects described in the annexes of the EIA Directive. There is a distinction between large extractive activities (>25ha), and small extractive activities (<25ha) in terms of environmental impact assessment requirements by the Member States.

Once the EIA is finalised, the production of an *Environmental Statement* will accompany the permitting procedure. It is good practice to administer these two procedures in parallel.

It is not uncommon that the assessment related to extractive activities exceeds 10 years. Since there is no timeline or time restriction embedded in the EIA Directive or any other rules applicable to permitting, the exact *timeframe* is *highly variable* between different Member States. In particular, the entire permitting process can last for many years depending upon

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²⁴ Report on National Minerals Policy Indicators – Framework conditions for the sustainable supply of raw materials in the EU, European Commission – Enterprise and Industry Directorate-General, February 2014.

the size and complexity of the extractive site and the nature of the environmental considerations. Delays are often inevitable if a land-use planning decision triggers another EIA and permitting process, say for example for water, emissions to air or when dealing with protected species or habitat licence issues. The absence of a defined timeframe for *consultation* can be, and is, used as a way to delay the process and the whole project. The timeframe of the permitting procedure also varies, mostly because the *processes differ* depending upon the *nature of the materials* (e.g. metals, construction materials, etc.) or the issues involved.

In the revision of the EIA Directive adopted on 14 April 2014, some time limits are included, to improve the predictability of the duration for the EIA process. Considerations are also being given to the «one-stop shop» or the joint procedure.

Although between 80 and 85% of the applications succeed²⁵, appeals do happen and are delaying the application process or even cancelling it after years of procedure. Cases involve mostly general environmental concerns, Not In My Back Yard (NIMBY) effect, occurrence of protected species and/or habitats and health and safety concerns.

The occurrence of resources within or close by *Natura 2000 areas* also extends the time for the consenting or permitting process. Contrary to some quarters' understanding these areas are not forbidden or "no go" areas for extraction of resources, as explained in the Guidance document for Non-energy mineral extraction and Natura 2000²⁶. In practice, however, the time frame will be longer and it is considered more difficult to obtain permission to extract, even if the impacts will be minimal and properly managed by the developer.

The EIA and the consenting or permitting process inevitably result in incurring **costs** for the **project developer**, which strongly depend on the **project size and complexity**. However, data about the costs are mostly unknown but could be extrapolated from currently operating companies.

http://ec.europa.eu/environment/nature/natura2000/management/docs/neei_n2000_guidance.pdf

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²⁵ Report on National Minerals Policy Indicators – Framework conditions for the sustainable supply of raw materials in the EU, European Commission – Enterprise and Industry Directorate-General, February 2014.

3 Good practice examples on permitting highlighted by the AHWG:

MINERALS DEVELOPMENT, IRELAND

The Minerals Development Act governs mineral exploration and development in Ireland. In this context, minerals exclude stone, sand, gravel and clay, peat and petroleum. This Act provides for flexibility of exploration activity for a diversity of minerals. This is done through a prospective licence (PL) which is issued within four months of application. There are currently 659 Prospecting Licenses issued. A PL covers 35km² and is normally issued for six years with an option for renewal if requirements are met. The promotion of the exploration sector for metals and minerals is considered to be strategically important in terms of employment creation and in attracting and maintaining inward investment in Ireland.

The reasons for highlighting this project are that it shows the advantage of putting in place a robust legislative system that is transparent and efficient. These advantages are, because of the significant amount of permits issued, a significant increase of exploration activity which leads to increasing potential for new mineral discoveries. This is reducing Europe's dependency on third countries, enhancing the State's provision of benefits from taxes and royalties.

PARALLEL PROCESSING OF APPLICATIONS, DENMARK

Under section 8 of the Danish Raw Material Act, the municipality to which the application for a raw materials extraction permit is submitted has a duty to present the application to other relevant authorities, responsible for issuing separate permits in case this is required according to other legislation, so that the information provided can be assessed in parallel. This is known as the municipalities' «coordination obligation» (samordningsplicht). This system enables the permits to be issued faster.

Last July, the responsibility for granting the procedures moved back to the regions. This was decided because an evaluation found out that certain municipalities could have some interest in refusing permits given local concerns, such as nuisance that extraction works might cause for their inhabitants in terms of noise, dust and heavy traffic. Under the new system, cooperation between the different authorities with permit responsibilities will remain in place.

The reasons for highlighting this project are only for the parallel assessment. Based on experience, giving the possibility to grant a permit to local communities can cause problems, and especially the NIMBY effect.

MODEL AGREEMENT BETWEEN SUPPORT COMMITTEES AND RESIDENTS, BELGIUM

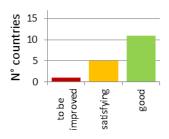
The purpose of support communities involving local residents is periodically to gather representatives of the three parties concerned by extraction activity (public authority, local residents and the company) in order to negotiate solutions to environmental problems caused by the on-energy extractive industry. Prior to the establishment of a support committee, the regional advisory committee on quarrying (CRAEC: Commission Régionale d'Avis pour l'Exploitation des Carrières) publishes a model agreement or charter that companies and local residents agree to, with local authorities being responsible for ensuring that its principles are observed by both parties if the authorisation is granted.

Model agreements (also known as charters) are based on the principle of mutual commitments and are the reference document on which support committees involving local residents are established. The interests of the different stakeholders groups at a local level are articulated around a model agreement of charter, a key document which is drafted prior to the granting of permits and authorisations.

The practices which have developed in recent years whereby quarrying companies seek to foster a dialogue with local communities. Companies have understood the importance of fostering a dialogue as early as possible so as to settle a conflict which will only be more difficult to resolve at a later stage.

Indicators on permitting

If land use planning indicators should be considered with caution, indicators on authorisation and permitting are purely informative data. Not enough information is collected and consequently, many details are missing. The desired status would be a stable, predictable, permitting process with sufficient information to avoid obstacles and time delays for exploration and extraction. On the one hand, this includes baseline data and information on environmental constraints. On the other hand, stable permitting process reduces court challenges on decision. These indicators need more clarification.



Graph 4. Authorisation and permitting group of indicators per Member State

5. 2 Recommendations

- The relevant *checklists* for the permitting minimum requirements including the EIA checklist should be as *precise* as possible and be the less burdensome as possible for the entities applying for a permit (e.g., a series of checklist modules to be applied according to requirements applying to different levels of development)..
- A straightforward procedure should reduce the average permitting to at least half
 of the time needed for exploration/extraction permits (Good examples can be found
 in Québec or Australia).
- A timeframe would improve the predictability of the duration for permitting procedures where timeframes can be applied. The new provisions of the EIA Directive lean in the right direction but are not sufficient to eliminate the risk of unlimited time required to complete permit applications. It is important not to only make recommendations on the timeframe but also on the level (technical or political) at which the decision is to be taken, as this is often the uncertainty that causes delays.
- The granted *permit* has to be of legal certainty and should be *valid* for a preferably long time period.
- To ensure a level-playing field, competitiveness and in the interest of social welfare, protection of employees and environment, more efforts should be undertaken to apply accurately existing EU and national legislation and in the area of law enforcement.
- Data sources providing capital expenditures and operating costs exist and should be used to estimate the future cost for the whole permitting process.
- Regional and local administration should provide data to national level on extraction within or close by Natura 2000 sites.
- There should be no automatic exclusion of raw material extraction activities in and around Natura 2000. Instead, extractive activities shall follow the provisions outlined in Article 6 of the Habitats Directive to ensure that these activities do not adversely affect the integrity of Natura 2000 sites. Full application of the European Commission Guidance on Non-energy mineral extraction and Natura 2000 is necessary.

6. CONCLUSIONS AND NEXT STEPS

The recommendations of the Ad Hoc Working Group will be taken into account in the implementation of the Raw Materials Initiative and the European Innovation Partnership on Raw Materials. For instance, with regard to the recommendation to have mineral strategies preferably at national level and cover all mineral resources, a workshop could be foreseen. As far as the recommendation on the implementation of Natura 2000 legislation and minerals extraction, a guidance letter from the European Commission to responsible national Ministers, to request adequate application of European legislation on these sites, could be sent.

The implementation of the recommendations will carefully be followed up by the Raw Materials Supply Group. The group recommends that a review of the current report should be carried out every three years.

ANNEXES

- 1. Members of the Ad Hoc Working Group
- 2. Recommendations from the AHWG for the next Indicator report

Annex 1- Members of the Ad Hoc Working Group 2

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Annex 2 – Recommendations from the AHWG for the next Indicator report

With the "Report on National Minerals Policy Indicators", a significant step was made that will facilitate discussions on national mineral policies in the near future among Member States within the Raw Materials Supply Group. It provides a first insight, clearly reveals the current state of play and trends, and highlights some practices worthwhile exchanging.

The indicator set (developed and populated for the first time) is still at an early stage, and modifications (clarification, changes of indicators, etc.) should be carried out in the future.

After collecting the last round of replies and their analysis, elements of monitoring the performance of Member States are in place. Based on the findings in this report, the indicators should be refined, still ensuring compatibility with the original set of indicators, and following enquiries should be carried out on a three-year basis.

Finding of the first round should facilitate the roadmap of Work Package 3 "Improving EU's raw materials regulatory framework, knowledge and infrastructure base" of the European Innovation Partnership on Raw Materials.

More specifically, the Ad Hoc Working Group made recommendations for the next Indicators report.

With regard to *land-use planning* in particular, in full respect of the subsidiarity principle, the European Commission developed a number of indicators which should provide an insight into which kind of policies contribute to a fast, clear and reliable land-use planning and permitting process. Indicators 6-9 have a focus on land-use planning.

Indicator 6 shows that a digital geological knowledge base following the INSPIRE Directive is more present in the Western part of Europe. Where Member States can provide such maps, the coverage is 100% in most cases, although the scales vary.

Most have thematic maps for land use planning (*Indicator 7*). These maps cover 100 % of the territory in scales from 10.000 to 1 million. The maps available also vary, covering metals, minerals, aggregates, quality, thickness, overburden, ground water and other thematic maps. For aggregates higher resolutions are used than for metals and industrial minerals.

10 Member States indicate that land-use planning responds to national needs (*Indicator 8*), but only 6 Member States report that EU projects support national land-use planning needs. In many Member States, land-use planning responds to the demographic and societal changes and to the population density. In most cases, they have the tools or structures for identifying future needs for raw materials in land use plans. These tools or structure are in place mainly for construction materials.

As far as **permitting** is concerned, *Indicator 15* on costs should be removed or seriously changed. *Indicator 14* is obvious and should be removed or refined.