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Minerals Policy Guidance for
Europe

Innovative Exploration and Extraction

Deliverable 3.3

*Innovative legislation and policies in sub-
surface and deep sea mining*

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List of Acronyms

EIA	Environmental Impact Assessment
EIS	Environmental Impact Studies
EU	European Union
IMMS	International Marine Minerals Society
ISA	International Seabed Authority
JPoI	Johannesburg Plan of Implementation
MDG	Millenium Development Goals
MIN-GUIDE	Minerals Policy Guidance for Europe (EU-funded Horizon 2020 project)
UNCLOS	United Nations Convention on the Law of the Sea
WP	Work package



1. Introduction

Rationale, objectives and structure

The Oceans are the dominant element on Planet Earth; they play an important role in its health and equilibrium and have an essential role in humans' life and as a supporting environment. As mentioned by Bibiana Cicin-Sain *et alia* *"Oceans are the quintessential sustainable development issue, essential to all three pillars of sustainable development—economic development, social development, and environmental protection. Oceans perform vital life-sustaining functions for the planet—oceans generate half of the oxygen on Earth, are a vital source of sustenance and livelihood, absorb carbon dioxide, and regulate climate and temperature. Just as one cannot do without a healthy heart, the world cannot do without a healthy ocean."* (Cicin-Sain *et alia*, 2011, p.1).

Agenda 21, an action plan to achieve Sustainable Development, raised from the UN Conference on Environment and Development (1992), mentions in Chapter 17 the *"Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources"* (UNCED, 1992) underscoring the need to new approaches that *"are integrates in content and are precautionary and anticipatory in ambit"* (UNCED, 1992, 17.1). In 2002, at the Johannesburg Earth Summit, the Johannesburg Plan of Action (JPol) emphasizes, in what concerns to oceans, the issues related to the ecosystem approach, integrated management and the global marine assessment, among a set of other aspects. At Rio+20 a new approach to sustainable development linked with oceans emerges, referred to as *"blue economy"* approach, which states that *"(...) oceans, seas and coastal areas form an integrated and essential component of the Earth's ecosystem and are critical to sustaining it, and that international law, as reflected in the United Nations Convention on the Law of the Sea, provides the legal framework for the conservation and sustainable use of the oceans and their resources."* (UN, 2012, p.30). Following the outcomes of the 2012's conference and building on the MDG (Millennium Development Goals), the 2030 Agenda for Sustainable Development (UN, 2015) was adopted. *"This Agenda is a plan of action for people, planet and prosperity."* (UN, 2015, p.1) and includes the concern with oceans in the *"Goal 14 - Conserve and sustainably use the oceans, seas and marine resources for sustainable development"* (UN, 2015, p.14). This year in June at the UN in New York the Ocean Conference took place, where a common concern crosses all the 7 issue points of the discussion agenda - the need for a precautionary approach in the management of the activities that impact the marine environment - due to the fact that *"The ocean is still one of the least known areas of the world. Our understanding of the processes that are taking place is currently not keeping up with the pace of changes in the oceans. There is a need to better understand ecosystem processes and functions and their implications for ecosystem conservation and restoration, ecological limits, tipping points, socio-ecological resilience and ecosystem services. In particular, the effects upon biodiversity and ocean productivity from cumulative impacts as well as socioeconomic impacts are often not well understood in order for the adequate political and business decisions to be made"* (Concept Paper of Partnership dialogue 6: Increasing scientific knowledge, and developing research capacity and transfer of marine technology, ocean conference, 5-9 June 2017, p.5). The EU



(European Union) representative stressed the commitment of the member states to the approved draft resolution “Our Ocean, our future: a call for action, for the implementation of the Goal 14 of the 2030 Agenda for Sustainable Development”. That statement comes in line with the existent EU integrated maritime policy.

Given the scarcity of critical raw materials on land, namely in Europe, taking into account the foreseeable increase in human population which at present is about 7.6 billion but may reach 8.6 billion in 2030 and 9.8 billion in 2050, as well as the expected access of a wider sector of the human population to higher standards of living and access to modern society commodities, the demand for raw materials will increase significantly and it is likely that deep sea mining will become a reality in the near future, since preliminary studies indicate that vast amounts of mineral resources exist at or below the deep seafloor. Deep sea mining for massive sulphides is expected to start soon in Papua New Guinea (Solwara 1 Project), by Nautilus Minerals, and exploitation in several concessions for polymetallic nodules in the Pacific is also expected to start within the next decades. The exploitation of deep sea mineral resources poses serious environmental problems and will certainly have negative impacts on the oceans health. However, these should be minimized, based on the best available scientific knowledge and the most advanced technology developments. For the minimization and mitigation of the impacts of future deep sea mineral exploitation, and given the present lack of knowledge of the deep sea baseline situations, a precautionary approach needs be adopted. Environmental Impact Assessment (EIA) is essential, followed by continuous monitoring during the various exploitation phases so that action can be taken as soon as possible to avoid any irreversible damage. Adequate legislation is necessary as well as its effective enforcement. Innovative approaches for specific deep sea mining harmonized EIA requirements (e.g. ISA, 2011), legislation and standards concerning this issue at regional, European and international level are critical. Pacific states have already taken steps in this sense (SCP-EU, 2012). As pointed out by Moore and Squires (2016), in contrast to the sparse provisions related to deep sea fisheries, UNCLOS establishes a single sectoral institution to manage deep sea mineral resources, as concerns the areas beyond national jurisdiction (legal continental shelf).

The overall view regarding oceans priority concerns and policy approaches at international and European level motivated the approach adopted by this deliverable to focus on EIA (Environmental Impact Assessment) procedures. There is a lack of specific legislation for EIA of deep sea mining activities, the need to frame the opportunities for mining exploration having in mind the vulnerability of the oceans, still to be fully understood and the needs of future generations, as well as the uncertainties regarding deep sea mining activities, especially on environmental impact grounds, requiring strong and coherent EIA procedures both at international levels (under the international seabed authority) and at national levels (on the continental shelves of each country).

The Horizon 2020-funded MIN-GUIDE project aims to support the secure and sustainable supply of minerals in Europe through the development of a major new online repository outlining guidance and the latest in good practice for minerals policy decision makers. The project’s key objectives are (1) to provide guidance for EU and EU Member States minerals policy, (2) to facilitate minerals policy decision making through knowledge co-production for transferability of best practice minerals policy, and (3) to foster community and network building for the co-management of an innovation-catalysing minerals policy framework. MIN-GUIDE will profile relevant policy in Europe, identifying innovation-friendly good practice through quantitative indicators, qualitative analysis of country-



specific framework conditions, and the compilation of minerals statistics and reporting systems. The project is split across 8 work packages (WPs) (Table 1). The content-rich work packages are WPs 2-6: WP2 will produce a comprehensive and well-structured knowledge repository of EU level and EU Member States' mineral policies and governance frameworks; WPs 3-5 will identify, benchmark, and elaborate good practice on policy innovation capacity according to the different activities along the whole mining value chain (permitting, exploration, extraction, cross-border exploitation, processing, waste management, recycling, remediation and mine closure); and WP6 will review the mineral data base and recommend standardisation and systematic reporting requirements for EU Member States

Table 1 - The MIN-GUIDE work packages

Common approach	WP1	Minerals policy guide development and conceptual basis
Core content	WP2	Stock-taking of EU and EU MS mineral policy and legislation
	WP3	Innovative exploration and extraction
	WP4	Innovative processing
	WP5	Innovative waste management and mine closure
	WP6	Raw materials knowledge and information base
Cross-cutting management and engagement	WP7	Stakeholder management, communication and dissemination
	WP8	Project management

This report focuses only on deep sea and sub-surface below the seabed, not on sub-surface on land, which is covered in the other deliverables of WP3.

The report is divided into five chapters: the first chapter presents the framework of the contents of the report, its objectives and structure; the second chapter is dedicated to the presentation and analysis of the EIA legislation for deep sea mining in the EU, based on information gathered by the partners of the project; the third chapter analyses existing Environmental Impact Study (EIS) of deep sea mining cases, since no deep sea exploitation has taken place yet, in order to highlight lessons learned from them; Chapter four focuses on the Code of Mining of International Marine Minerals Society (IMMS) and related International Seabed Authority (ISA) resolutions and chapter five presents the conclusions and contributions regarding deep sea mining legal innovative approaches; the table with the partners inputs is presented in the annex.

Terminology and definitions

Deep Sea Mining: there is no consensus as to what is the depth limit that separates Shallow from Deep Sea and this largely varies, depending on the field of study and/or applications. Both depth and distance from shore are generally assumed as criteria for this definition. Often the term deep sea is assigned to oceanic areas whose depths exceed 200m (e.g. Moore and Squires, 2016), whereas in other contexts only water depths in excess of 500m or even abyssal depths are considered deep sea. In this work, we consider **deep sea mining** as mining exploitation activity that takes place beyond the edge of the geomorphological continental shelf (as opposed to the legal Continental Shelf that derives from the application of UNCLOS), in general below 200m water depth. It therefore includes



mining activity in the continental slope, rise, abyssal plains but also in submarine seamounts that occur beyond the edge of the continental shelf but whose shallower depths may in some rare cases be less than 200m. Sand and gravel exploitation or mining some shallow placer deposits in the continental shelf are therefore not included in this definition.

Shallow Water Mining: in accordance with the definition of Deep Sea adopted in this report and as opposed to it, shallow water mining is mining exploitation that takes place within the geomorphological continental shelf, i.e at depths generally shallower than 200m.

The Area: the seabed and subsoil beyond the limits of national jurisdiction, following UNCLOS.

Environmental Impact Assessment (EIA): According to article 1 of the EIA Directive 2014/52/EU, environmental impact assessment means a process consisting of: (i) the preparation of an environmental impact assessment report by the developer; (ii) the carrying out of consultations as; (iii) the examination by the competent authority of the information presented in the environmental impact assessment report and any supplementary information provided, where necessary, by the developer, and any relevant information received through the consultations; (iv) the reasoned conclusion by the competent authority on the significant effects of the project on the environment, taking into account the results of the examination referred to in point (iii) and, where appropriate, its own supplementary examination; and (v) the integration of the competent authority's reasoned conclusion into any of the decisions.

Environmental Impact Study (EIS): According to article 5 of the EIA Directive 2014/52/EU, environmental impact study consists of the reports that include at least the following items: (a) a description of the project comprising information on the site, design, size and other relevant features of the project; (b) a description of the likely significant effects of the project on the environment; (c) a description of the features of the project and/or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment; (d) a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment; (e) a non-technical summary of the information referred to in points (a) to (d); and (f) any additional information relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.

2. EIA legislation for deep sea mining in the EU and selected member states

Objectives and methodology

MIN-GUIDE'S main aims consist in (a) providing guidance for the minerals policy in the EU and EU Member States; (b) facilitating decision making with regard to the minerals policy by means of



"knowledge co-production for transferability of best practice minerals policy", and (c) fostering "community and network building for the co-management of an innovation - catalysing minerals policy framework". If its true that the three elements are interconnected and cannot be analysed separately, nor can the conclusions of each be considered *per se* the purpose of this deliverable, in particular, concerns item a) (providing guidance for the minerals policy in the EU and EU Member States). The EIA, as the most far-reaching instrument for a sustainable approach to the prospect exploration and exploitation of resources (minerals *in casu*) is the logical starting point for this endeavour.

As such, the methodology chosen was the creation of a set of Tables (Annex 1), containing aspects (broad and specific) of EIA legislation in general¹ and rules and regulations concerning deep sea mining from ISA to be filled at International, European and Member State level. The first step consisted in the collection of data at the International, European and National level (the latter in the scope of the project members), regarding EIA provisions potentially applicable to deep sea mining: *e.g.* incursion into the existing legal framework and supporting/guiding policies; the second step was a comparative analysis of the legislation and other relevant policies, vertically and horizontally; *i.e.* on one hand an assessment of the influence of the international and national regulations in the legal production that was made at the national level, and, on the other hand, a comparison of the development stage of the legal provisions regarding EIA, in particular, those potentially connected to deep sea mining.

Results and discussion

The first aspect that ought to be mentioned and should be present in the spirit of the reader and interpreter of the comparative analysis results presented here (valid for each and every of the three levels under analysis - International, European and Member State level), is that, notwithstanding the fact that EIA is, within the range of instruments in force which allow a sustainable approach, the oldest but as well the most developed and used, the stage of development of the EIA legislation concerning marine spatial planning, and therefore applicable to deep sea mining in particular, either at national level but also at the level of the European Union and of the Area (deep sea areas beyond national jurisdiction), is still embryonic. Therefore, the results of this study should be seen as a contribution for the continuing enriching of the legislation in force and yet to be created.

The supra mentioned set of Tables in Annex 1 includes the following items:

- a) Legal Framework (Identify the main legal documents - state and regional, if applicable - that establish the EIA procedures and copy the links, starting from the most general to the more particular);
- b) Specific National Guidelines (Identify any national guidelines for the preparation of EIA reports for mining activities and copy the links);

¹ *Vide infra* under Reproduction of the main results achieved: Results and discussion, 1) Main EIA elements for consideration.



- c) EIA authority for mining projects (identify the state agency and related administrative level responsible for conducting the EIA of mining projects);
- d) Screening (identify the types of mining projects mentioned in the legal framework, specifically those of annex I and of annex II of the EIA Directive in selected member states; identify the criteria used to consider other (mining) projects not mentioned in the previous lists);
- e) Scoping (identify any relevant details for the scoping phase relevant to mining activities);
- f) Environmental Impact Study (identify any mining specific details relevant for the mandatory content of the EIS);
- g) Public and institutional consultation (describe the main procedures for public and institutional consultation; identify any specific agencies mandatorily consulted for mining projects);
- h) Decision-making (specify the type and administrative level of the state agency responsible for decision making of mining projects; specify any specific details for the environmental impact statement related to mining; identify and copy the links of EIA data bases);
- i) Monitoring (describe the measures adopted for project post-evaluation and monitoring; identify and copy the links of databases);
- j) Observations

In the following paragraphs we briefly analyse the obtained results. With regard to the framework at the International Law level, two main sources ought to be considered: the rules under the International Seabed Authority (ISA) and the Espoo Convention.

The United Nations Convention on the Law of the Sea (UNCLOS, also known as “the Convention”) established the International Seabed Authority (ISA) and created the Legal and Technical Commission that has, *inter alia*, the obligation of making recommendations on the protection of the marine environment (Articles 156 para1 and 165 para2 (e)). The "Mining Code" was issued by the ISA to regulate prospecting, exploration and exploitation of marine minerals in the international seabed - The Area (defined as the seabed and subsoil beyond the limits of national jurisdiction). Together, these form the fundamental legal framework for the establishment of EIA procedures in the Agreements to be made between the Contractors and ISA, for exploration. Table 1 summarizes this information.

The ISA has issued Regulations on Prospecting and Exploration for Polymetallic Nodules (published in 2000 with an Amendment in 2013), for Polymetallic Sulphides (published in 2010) and for Cobalt-Rich Ferromanganese Crusts in the Area (published in 2012).

With regard to the data and information to be submitted for approval of the plan of work for exploration by each applicant of the workplan for exploration in the form of a contract and in relation to each of the regulations approved by the ISA, the applicant has to provide specific information, depending on the exploration/exploitation target and according to the specific regulations for each deep sea mineral resource: (I) the *Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area* require: a description of the programme for oceanographic and



environmental baseline studies that would enable an assessment of the potential environmental impact of the proposed exploration activities (Regulation 18, b) and c) and Annex 2); (II) the *Regulations on prospecting and exploration for polymetallic sulphides in the Area*, require a description of the programme for oceanographic and environmental baseline studies that would enable an assessment of the impact on biodiversity of the proposed exploration activities, taking into account any recommendations issued by the Legal and Technical Commission (Regulation 20 b) and c) and Annex 2); (III) the *Regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area*– require a description of the programme for oceanographic and environmental baseline studies, that would enable an assessment of the potential environmental impact including, but not restricted to, the impact on biodiversity, of the proposed exploration activities, taking into account any recommendations issued by the Legal and Technical Commission (Regulation 20 b) and c) and Annex 2). Table 2 summarizes this information.

According to the Convention on Environmental Impact Assessment in a Transboundary Context (UN ECE), prior to the approval of the projects listed on the Annex I of the Convention in the Parties of the Convention, an EIA shall be conducted (Art. 2, para 3). The Convention urges the Parties to assess the environmental impact of certain activities at an early stage of planning and subject to EIA major mining, on-site extraction and processing of metal ores or coal (vide Appendix I, para 14.). The Convention mentions that concerned Parties shall, at the initiative of any such Party, enter into discussions on whether one or more proposed activities not listed in Appendix I is or are likely to cause a significant adverse transboundary impact and thus should be treated as if it or they were so listed (Art. 2 para 5.) See table 3.

At the level of the European Union, the Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment, amended by the Directive 2014/52/EU of the European Parliament and the Council sets the basic Framework for the EIA within the European Union context. The Directive imposes on Member States the obligation of adopting all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue, *inter alia*, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects (Art. 2, para 1 of the Directive). General provision of the Directive makes mandatorily subject to an assessment the projects listed in Annex I. These include: Crude-oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day; Thermal power stations and other combustion installations with a heat output of 300 megawatts or more; Nuclear power stations and other nuclear reactors; Integrated works for the initial smelting of cast iron and steel, etc. (Art. 4. para. 1.). For other projects, Member States shall determine whether the project shall be made subject to an assessment on a case-by-case examination, thresholds or criteria set by the Member State (Art. 4, para 2), but no specific provision related to exploration and exploitation of activities in deep sea mining is mentioned.



Table 2 – EIA elements in the Code

Rules under the Seabed Authority (UAV)	
legal framework	<p>I) UNCLOS - United Nations Convention on the Law of the Sea established the International Seabed Authority (ISA) and created the Legal and Technical Commission that has the obligation of making recommendations on the protection of the marine environment, Articles 156 para 1 and 165 para 2 (e) and</p> <p>II) The "Mining Code", a comprehensive set of rules, regulations and procedures issued by the ISA to regulate prospecting, exploration and exploitation of marine minerals in the Area. These UNCLOS and the Mining Code form together the fundamental legal framework for the establishment of EIA procedures in the Agreements to be made between the Contractors and ISA for exploration/exploitation of deep sea mineral resources in areas beyond national jurisdiction.</p>
specific national guidelines	<p>I) The Report of the Secretary-General, issued by the Council of the International Seabed Authority (18th Session) contains a set of Laws, regulations and administrative measures adopted by sponsoring States and other members of the ISA, with respect to the activities in the Area, including Environmental Laws (vide ISBA/19/LTC/8)</p>
EIA authority for mining projects	N/A
screening	<p>I) The ISA has issued Regulations on Prospecting and Exploration for Polymetallic Nodules, for Polymetallic Sulphides and for Cobalt-Rich Crusts in the Area</p>
scoping	<p>Regarding the data and information to be submitted for approval of the exploration plan of work, by each applicant, with a view to receiving that approval in the form of a contract and in relation to each of the regulations approved by the ISA the applicant has to provide, depending on the target:</p> <p>I) A description of the programme for oceanographic and environmental baseline studies that would enable an assessment of the potential environmental impact of the proposed exploration activities (<i>Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area</i> - Regulation 18, b) and c) and Annex 2);</p> <p>II) A description of the programme for oceanographic and environmental baseline studies that would enable an assessment of the impact on biodiversity of the proposed exploration activities, taking into account any recommendations issued by the Legal and Technical Commission (<i>Regulations on prospecting and exploration for polymetallic sulphides in the Area</i> - Regulation 20 b) and c) and Annex 2);</p> <p>III) A description of the programme for oceanographic and environmental baseline studies, that would enable an assessment of the potential environmental impact including, but not restricted to, the impact on biodiversity, of the proposed exploration activities, taking into account any recommendations issued by the Legal and Technical Commission (<i>Regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area</i> - Regulation 20 b) and c) and Annex 2).</p>
Environmental Impact Study	N/A
public and institutional consultation	<p>I) Activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction, shall be conducted with due regard to the rights and legitimate interests of any coastal State across whose jurisdiction such deposits lie and consultations, including a system of prior notification, shall be maintained with the State concerned, with a view to avoiding infringement of such rights and interests.</p> <p>II) In cases where activities in the Area may result in the exploitation of resources lying within national jurisdiction, the prior consent of the coastal State concerned shall be required (Art. 142 para 1 and 2 of the UNCLOS).</p>
decision-making	N/A
monitoring	<p>I) The contract is clear in requiring each contractor a programme to monitor and report on effects of its programme of activities under the plan of work for exploration on the marine environment and an additional obligation to the contractor of reporting to the Secretary-General on the implementation and results of the monitoring programme is implemented <i>Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area, Regulation 31, para 4. and 5. and Annex 4, Section 5; Regulations on prospecting and exploration for cobalt-rich ferromanganese crusts in the Area, Regulation 34 and Annex 4, Section 5; Regulations on prospecting and exploration for polymetallic sulphides in the Area, Regulation 34 and Annex 4, Section 5)</i></p>
data	<p>Under the tabs 1) Minerals and 2) Technical Studies and Proceedings of the ISA webpage, a range of documents related to the Establishment of Environmental Baselines and can be found (https://www.isa.org/jm/mineral-resources/55)</p>



Table 3 – Main content of the EIA UN Convention

Main aim	Prior to the approval of the projects listed on the Annex I of the Convention in the Parties of the Convention, an EIA shall be conducted (Art. 2, para 3) According to the Convention on Environmental Impact Assessment in a Transboundary Context (UN ECE),
EIA authority	The Convention on urges the Parties to assess the environmental impact of certain activities at an early stage of planning.
screening	Subject to EIA are major mining, on-site extraction and processing of metal ores or coal (vide Appendix I, para 14.) The Convention mentions that concerned Parties shall, at the initiative of any such Party, enter into discussions on whether one or more proposed activities not listed in Appendix I is or are likely to cause a significant adverse transboundary impact and thus should be treated as if it or they were so listed (Art. 2 para 5.).
scoping	The Convention creates an obligation to a Party that for a proposed activity listed in Appendix I that is likely to cause a significant adverse transboundary impact, the Party of origin shall, for the purposes of ensuring adequate and effective consultations under Article 5, notify any Party which it considers may be an affected Party as early as possible and no later than when informing its own public about that proposed activity. Such a notification ought to contain information on the proposed activity, including any available information on its possible transboundary impact, the nature of the possible decision and an indication of a reasonable time for a response. (Art. 3, para. 1 and 2).
Environmental Impact Study	N/A
public and institutional consultation	The Convention sets the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries and makes it mandatory for the Party of origin to provide, in accordance with the provisions of this Convention, an opportunity to the public in the areas likely to be affected to participate in relevant environmental impact assessment procedures regarding proposed activities and shall ensure that the opportunity provided to the public of the affected Party is equivalent to that provided to the public of the Party of origin (Arts. 2., para 6.; 3 and 5)
decision-making	The Parties shall ensure that, in the final decision on the proposed activity, due account is taken of the outcome of the environmental impact assessment, including the environmental impact assessment documentation (Art. 6. para 1)
monitoring	The Convention envisages the setting up or intensification of, specific research programmes aimed at, inter alia, analysing and monitoring the efficient implementation of decisions on proposed activities with the intention of minimizing or preventing impacts (vide art. 9 c))
	Publications concerning obligations of the parties as defined by the Convention can be found on http://www.unece.org/env/eia/pubs/factsheets.html

At the member state level, with regard to the national legislations included in the matrix², it should be noted that the results presented in the attached matrix and used for this analysis, contain data *qua tale* provided by the partners. First, a thorough analysis of the matrix allows to conclude that all the participating partners do value the EIA in principle and *de facto*. With regard to the application in the main land of the provisions, all the national legislations are in line with the EU legal provisions, e.g. requirements concerning public participation and transparency of the decision and monitoring of the latter, etc. In fact, the legal frameworks are quite advanced in all the member states considered, and flexible with regard to the political differences in the regions, e.g. *vide* the Spanish case, being a federal state, several differences are pointed out with regard to the application in the various regions, whilst, other countries, such as Portugal for example, do not contain such references (Table 4).

² *vide* matrix attached.



Table 4 – Main elements of the EIA Directive

Main aim	<p>The Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment, amended by the Directive 2014/52/EU of the European Parliament and the Council sets the basic Framework for the EIA within the European Union context.</p> <p>The Directive imposes on Member States the obligation of adopting all measures necessary to ensure that, before consent is given, projects likely to have significant effects on the environment by virtue, <i>inter alia</i>, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects (Art. 2, para 1 of the Directive)</p>
EIA authority	N/A
screening	<p>General provision of the Directive makes mandatorily subject to an assessment the projects listed in Annex I. These include Crude-oil refineries (excluding undertakings manufacturing only lubricants from crude oil) and installations for the gasification and liquefaction of 500 tonnes or more of coal or bituminous shale per day; Thermal power stations and other combustion installations with a heat output of 300 megawatts or more; Nuclear power stations and other nuclear reactors; Integrated works for the initial smelting of cast iron and steel, etc. (Art. 4. para. 1.). For other projects, Member States shall determine whether the project shall be made subject to an assessment on a case-by-case examination, a thresholds or criteria set by the Member State (Art. 4, para 2)</p>
scoping	<p>Member States shall adopt the necessary measures to ensure that the developer supplies in an appropriate form, <i>inter alia</i>, a description of the project (description of the physical characteristics of the whole project and the land-use requirements during the construction and operational phases, a description of the main characteristics of the production processes, for instance, the nature and quantity of the materials used; an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc.) resulting from the operation of the proposed project); An outline of the main alternatives studied by the developer and an indication of the main reasons for this choice, taking into account the environmental effects; A description of the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors; A description of the likely significant effects of the proposed project on the environment resulting from: (a) the existence of the project; (b) the use of natural resources; (c) the emission of pollutants, the creation of nuisances and the elimination of waste (Vide Art. 5. and annex IV)</p>
Environmental Impact Study	Article 5 and Annex IV
public and institutional consultation	<p>The Directive imposes on Member States the duty of creating measures necessary to ensure that the authorities likely to be concerned by the project by reason of their specific environmental responsibilities are given an opportunity to express their opinion on the information supplied by the developer and on the request for development consent. Furthermore, members of the public concerned having a sufficient interest, or alternatively maintaining the impairment of a right, where administrative procedural law of a Member State requires this as a precondition have access to a review procedure before a court of law or another independent and impartial body established by law to challenge the substantive or procedural legality of decisions, acts or omissions subject to the public participation provisions of the Directive (Art. 6.).</p>
decision-making	
monitoring	<p>The Directive invites the Member States and the Commission to exchange information on the experience gained in applying this Directive (Art. 12.).</p>
Data base	<p>The EC webportal offers abundant information on the implementation of the Directive (vide http://ec.europa.eu/environment/eia/contacts.htm)</p>



With regard to mining activities specifically subjected to EIA (e.g screening phase of the EIA), Table 5 was prepared with the contributions from the following member states: Austria, Croatia, Portugal, Spain, Sweden and the United Kingdom³.

Table 5 – Mining Activities subject to EIA by country

Countries	Mining activities subjected to EIA provided by the project partners
Austria ⁴	<p>"Annex 1 activities: Z 25 (loose material — excavation or dredging, consolidated rock in open-pit mines hidden from view with slide, pipe conveyors or another materials – handling system with equivalent environmental impact) a) Extraction of mineral raw material in open-cast mining (loose material — excavation or dredging, consolidated rock in open-pit mines hidden from view with slide, pipe conveyors or another materials – handling system with equivalent environmental impact) or peat extraction, where the surface of the site) is 20 ha or more b) Expansion of the extraction of mineral raw material in open-cast mining or Peat extraction, where the surface of the site of the extractions existing or approved within the past ten years and the expansion applied for amounts to 20 ha or more and the additional area amounts to 5 ha or more c) Extraction of mineral raw material in open-cast mining or peat extraction in protected areas of Category A or E or for dredging and peat extraction also category C, where the surface of the site is 10 ha or more; d) Expansion of the extraction of mineral raw material in open-cast mining or peat extraction in protected areas of Category A or E or for dredging and peat extraction also category C, where the surface of the site of the extractions existing or approved within the past ten years and the expansion applied for amounts to 10 ha or more and the additional area amounts to 2,5 ha or more Z 26 (solid rock) a) Extraction of mineral raw material in open - cast mining (solid rock) on an area of 10 ha or more; b) Expansion of the extraction of mineral raw material in open-cast mining (solid rock), if the area covered by extractions existing or approved within the past ten years and the expansion applied for amounts to 13 ha or more and the additional area amounts to 3 ha or more c) Extraction of mineral raw material in open-cast mining (solid rock) in protected areas of Category A or E on an area of 5 ha or more; d) Expansion of the extraction of mineral raw materials in open cast mining (solid rock) in protected areas of Category A or E if the area covered by extractions existing or approved within the past ten years and the expansion applied for amounts to 7.5 ha or more and if the additional area amounts to 1.5 ha or more. Z 27 Underground mining a) Underground mining for which coherent overground installations and operating facilities cover an area of 10 ha or more b) Underground mining in protected areas of Category A for which coherent overground installations and operating facilities cover an area of 5 ha or more. Z 28 Hydraulic fracturing of rock formations a) Hydraulic fracturing of rock formations at unconventional reservoirs of mineral oil or natural gas b) Construction of new deep – drilling installations for depths of 1,000 m or more in protected areas of Category A with the exception of trial and prospecting drillings, unless already covered by a) pit mining for salt and the activities covered by No. 29 and 33. Z 29 on fossil fuel extraction, which is not relevant for MIN-GUIDE"</p>

³ Finish legislation is not included as it is currently under review.

⁴ These requirements concern EIA on land.



Croatia	EIA required for the "exploitation (on surface and underground) of all the mineral resources (raw materials and hydrocarbons). EIA procedure is not needed for the exploration of the raw materials."
Portugal	"(in what would be relevant for deep sea mining, inter alia, EIA is mandatory for mineral extraction, including inert, through sea or river dredging, shell, cement, asbestos and derivatives, glass and glass fibers, mineral fusions and ceramic, depending on the quantities produced (Art. 3º, 1 b), Annex II, 2. and 5., Decree-Law No. 151-B/2013 vide the entire list of projects in Annexes I and II of the Law) "
Spain	<p>"In reality, although there are some differences in form but not specifically in content, Spanish law says that practically any mining operation (which is regulated by the law of mines, sections A, B, C and D) is subject to study of environmental impact of whatever nature (ordinary, simplified, etc.). In the annex 1 apart from the 25h indicated by the eu directive it is also mentioned:</p> <p>3-Exploitations that are carried out below the water table 5 - Visible operations from motorways (...)</p> <p>includes underground mining (which in the European directive is in Annex 2 and not in 1) for certain cases (see Law 21/2013)</p> <p>In Spanish annex 2 are regulated some agregates quarries that are not included in annex 1. In Spain mining projects are divided into A,B,C and D categories. Law 1973 and 1979. http://www.minetad.gob.es/energia/mineria/Mineria/Legislacion/Paginas/OrdenacionMinera.aspx (In Spanish)</p> <p>Only small quarries classified in section A (gravels, etc.) follow a simplified EIA procedure, almost all mining projects should accomplish an ordinary EIA procedure"</p>
Sweden	"Unlike for instance Finland, there does not seem to be any limitation in the applicability of the laws (e.g. regarding max area or max amount of extracted material)"
United Kingdom	"An EIA is required for all of the activities listed here ⁵ ('Schedule 1'). For the activities listed in Schedule 2 ⁷ an EIA is required if the activity exceeds the corresponding threshold in column 2 and the local planning authority considers that the activity is likely to have significant effects on the environment. Projects listed in Schedule 2 which are located in, or partly in a sensitive area also need to be screened, even if they are below the thresholds or do not meet the criteria."

From the sole evaluation of the information presented in the matrix, it appears that EIA provisions in the legislation of the member states analysed are very clear and comprehensive, and subject mining activities to EIA, but there is no specific mention regarding *in particular deep sea mining activities*. Portugal has very recently introduced an amendment to the EIA law, concerning the mandatory nature of EIA for the exploitation of hydrocarbons, including in the continental shelf, Lei n 37/2017 de 2 de junho (<https://dre.pt/application/file/a/107111258>, in Portuguese).

With regard to the legislation applicable to the marine space and the legal Continental Shelf, and thus the deep sea, also under consideration in the matrix, in spite of the above mentioned interesting status of development of EIA with regard to the legislation applicable in the main land, again from the sole analysis of the matrix the same cannot yet be inferred. In fact, Spain and Portugal have provided information regarding the continental shelf; yet, none indicate the existence of particular provisions for EIA. Extra information regarding this absence was provided from Croatia stating that the in force the *Physical Planning Act*, Official Gazette no. 153/13, the law includes Chapter 4.2. Protected Coastal Area, articles 45-49. The Protected Coastal Area is an area of special

⁵ <https://www.gov.uk/guidance/environmental-impact-assessment#Screening-Schedule-2-projects>

⁶ <http://www.legislation.gov.uk/uksi/2011/1824/schedule/1/made>

⁷ <http://www.legislation.gov.uk/uksi/2011/1824/schedule/2/made>



state interest, including the continental belt and islands 1000m in width from shoreline and sea belt 300m in the width from shoreline. The exploration and exploitation of raw materials in Protected Coastal Area is permitted.

The partners that submitted information concerning specific EIA legislation applicable to the marine space and thus to deep sea mining, seem to acknowledge the embryonic stage of development supra mentioned at the start of these considerations, as explained below. The Spanish case mentioned the Law 2/2013, of 29 May, concerning the protection and sustainable use of the coast, amendment of the Law 22/1988, of 28 July, of Coasts (Royal Decree 1471/1989, of 1 December, approved the general regulations for the development and implementation of Law 22/1988, of July 28). Accordingly, "the purpose of this Law is to establish, protect, use and safeguard the maritime-terrestrial public domain and especially the sea shore. The law defines the terrestrial public domain in articles 3, 4 and 5 and the uses of the soils in the different zones near the coast"⁸. Further, referred guidelines for the management of the marine extractions for sand (in Spanish)⁹ and gave examples of the types of mining projects mentioned in the legal framework ("annex 1 includes marine dredging when the extracted volume is more than annual 20000 cubic meters.

Portugal approved the Law N. 17/2014 and the Decree-Law N. 38/2015 that, together, establish the basic framework for marine spatial planning and management, issued in line with the Directive 2014/89/EU of the European Parliament and the Council, establishing a framework for maritime spatial planning. This Law does include the Continental Shelf beyond the 200 nautical miles as part of the national maritime territory (art. 2 para 2 c)) and recognizes the basic principle of the ecosystem based approach in conducting the marine policy (Art. 3 a)). Accordingly, "the Exploration of the marine area in Portugal will be made through 2 phases for the use of the seabed that will have to undergo evaluation regarding the environmental impact of the activities proposed. In the first phase they are considered programs and therefore assessment is made according to the provisions in Decree-Law N. 232/2007 that establishes the Framework for Strategic Environmental Assessment. In the second phase they are considered projects and the regime of the EIA explained previously is applicable (vide arts. 13 and 23 of the Decree-Law N. 38/2015). The Member State mentioned that "Under the authority of the Ministry of the Sea the Office for the Natural Resources, Security and Maritime Services (DGRM) will be responsible for conducting the Environmental Impact Assessment". It was further stressed that "the public is invited to accompany the developments of the plan on the online platform <http://www.psoem.pt/avaliacao-ambiental/>" and observed that "in 2009 Portugal submitted to the Commission on the Limits of the Continental Shelf, in accordance with Article 76, paragraph 8, of the United Nations Convention on the Law of the Sea, information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured and awaits consideration and recommendations"¹⁰.

From the above mentioned, *i.e.* based on the analysis of the content provided by the partners, it can be concluded that the stage of development of the legislation framework at the regional level

⁸ For more information, see the website referred to by the partner http://www.mapama.gob.es/es/agua/legislacion/GRI_aguas.aspx

⁹ http://www.mapama.gob.es/es/costas/publicaciones/Instruccion_Extracciones_Arena_rel2_tcm7-152521.pdf

¹⁰ vide http://www.un.org/depts/los/clcs_new/submissions_files/submission_prt_44_2009.htm and <https://www.emepc.pt/pt/>



(European Union), and especially at the Member state level is quite advanced with regard to the EIA framework applicable to the main land, and subject mining activities to EIA, although none seem to mention in particular deep sea mining activities. Notwithstanding, the same cannot be said for the provisions applicable to marine space and therefore to deep sea mining. In fact, the majority of the partners does not mention the existence of a particular provision for the purpose of regulating EIA with regard to marine spatial planning and those two that mention it, consider it at a much less developed stage, when compared to the provisions existing for mainland.

3. Existing cases of deep sea mining environmental impact studies

Although deep sea mining has not started yet, an Environmental Impact Statement has already been produced by Nautilus Minerals for the Solwara 1 Project, for the recovery of high-grade polymetallic Seafloor Massive Sulphides (SMS), located at approximately 1600m water depth on the floor of the Bismarc Sea, offshore Papua New Guinea (PNG) (Nautilus Minerals, 2008). This is a Level 3 activity under the Environmental Act 2000 (Sub-Category 17) from Papua New Guinea (certified in 2001), which requires that an Environmental Impact Statement is submitted to the Department of Environment and Conservation. This Environmental Impact Statement was prepared in accordance with the Environmental Act 2000, for approval by the PNG Government to construct and commission the 1st phase of the project, with acceptance of the residual impacts described and commitment to the mitigation measures outlined by Nautilus Minerals and its main topics (as stated in Nautilus Minerals, 2008) are summarized below.

The Environmental Impact Statement includes a description of the proposed development activity and its objectives, the project development timetable, setting, issues, mitigation and residual impacts, social setting and impacts, greenhouse gas and climate change, public consultation, cumulative and associated impacts, and management and monitoring. Nautilus recognizes the need to understand the biology and potential impacts of mining on the hydrothermal vent communities and the surrounding seafloor, where knowledge of the dynamics of recruitment, growth, diversity and geographic interrelationships is still under development, as one of the key environmental issues for this project. They describe the offshore environmental studies that include the following physical, chemical and biological baseline studies of the offshore environment, carried out by various well reputed universities and research institutions: Macrofauna of hard seafloor areas ; macrofauna and meiofauna of sediments; abyssal meiofauna; sediment geology; sediment geochemistry – elutriate and toxicity testing; biomass, biodiversity and bioaccumulation (hydrobiology); water quality (CSIRO and Coffey Natural Systems); natural hazards; oceanography; underwater acoustic modelling; and discharged water and sediment dispersion modelling.

Studies to characterise the seafloor environmental communities focused heavily on the actively venting environments but a substantial effort was also directed at sampling all seafloor habitats potentially affected by the project. Vent activity variability was also monitored. Also impacts on coastal and shallow/mid-water environments were assessed, in particular given concern from local



populations on the quality of the marine environments and the protection of the reefs and fisheries upon which they depend, as well as on the well-being of the larger animals that are present such as whales, sharks and turtles.

The project must demonstrate that shallow water animals are not exposed to the mineralised materials of the seafloor to which they have not adapted, so that there is no risk to daily subsistence and traditional local activities, such as shark calling. Toxicity tests of elutriate water prepared to represent conditions in water and sediments discharged after dewatering were undertaken to determine potential effects if these were to be discharged in shallow or mid-water depths. While these showed some toxicity to surface test organisms (and at surface temperatures), the findings are not relevant given that the return water will be discharged close to the seafloor, where fluids discharged from vents are naturally elevated in metals and the resident animals are tolerant of these highly mineralised areas. Currents were also measured in the water column and near the seafloor. Impacts on the seafloor and its biological communities were recognized to arise from a number of sources, which include: the removal of seafloor substrate, including active and inactive areas, causing loss of habitat and associated animals, but mitigation measures were proposed to protect biodiversity; disturbance to the seafloor and sedimentation which will result from mining and from the removal and relocation of the surface layers of unconsolidated sediment (and some competent waste material) to the outer margins of Solwara 1; water containing elevated concentrations of metals and some retained sediments from the dewatering of ore will be discharged 25 to 50 m above the seafloor; the most significant source of underwater noise is predicted to be from cavitation noise produced by the thrusters on the Mining Support Vessel (MSV), although this will not be substantially different from the underwater noise from the vessels involved in exploration and research. If unplanned events were to occur, additional issues could arise from loss of material from abnormal conditions, ranging from minor leaks of hydraulic fluids, pump and rise pipeline failures, spillage of ore during transfer, to ship collisions (unlikely).

Finally, Nautilus also had to propose mitigation approaches; some of which they propose will include the natural recovery of the systems once mining activity stops. They state that the active venting field will remain and therefore chimney structures will reform and the underlying hydrothermal energy basis will still exist for the potential re-establishment of vent-dependent and associated communities. The time sequence for the recovery of fauna is not known precisely but it is expected, from observations during research surveys, that within a few years, the major faunal elements will have re-established. It is also evident that animals living in such a highly mineralised area are tolerant to the naturally elevated levels of metals in ambient water and sediments compared with those from mid water or shallower and less naturally contaminated environments. The project also includes an area for control just 2km up from Solwara 1 that will remain unmined until completion of mining and confirmation of rehabilitation techniques are effective in Solwara 1. Mining is also programmed to proceed in a way that the last areas to be mined may act as undisturbed “temporary refuge areas” and as undisturbed sources of parent fauna and larvae supply to Solwara 1. Finally, considering that the loss of animals is partially avoidable and therefore, measures such as removal of large clumps of rock substrate with Remotely Operated Vehicles (ROV) with its biology intact and their initial relocation to unmined areas for preservation and ultimately to venting areas where mining is complete will be taken.



Concerning plumes from dewatering discharge, results of elutriate tests indicate that, at the point of discharge, concentrations of some metals contained in water released to the environment will be above ANZECC/ARMCANZ (2000) guidelines for 95% protection. A 600-fold dilution will be required before guidelines for metals are met. Hydrodynamic modelling indicates that the required number of dilutions will be achieved 85 m from the point of discharge. Plumes of suspended sediment formed from material entrained in the return water discharge will require a 5,000-fold discharge to meet ANZECC/ARMCANZ (2000) guidelines for 95% protection levels for total suspended solids (TSS). On average (i.e., for 183 days per year), plumes will not extend more than 900 m beyond the point of discharge (and cover an area of 0.81 km²) before meeting the target TSS concentration protection levels. Additionally, plumes will not rise above 1,300 m water depth and will generally occur above Solwara 1 and to the northwest. Suspended sediment will flocculate and settle on the seafloor approximately 5 to 10 km to the west and northwest of Solwara 1. Maximum depositional thicknesses will not exceed 0.1 mm and rates of settling are less than existing deep-sea sedimentation rates as measured at Solwara 1.

4. The Code and its contributions for the environmental management of marine mining – drivers and potential conflicts

The *Code for Environmental Management of Marine Mining* (hereinafter the Code) was adopted by the International Marine Minerals Society¹¹ on 2 November 2001¹² and its latest version dates 16 September 2011 (amendment). According to its own introduction, this innovative instrument introduces a statement of *Environmental Principles* for marine mining and a set of *Operating Guidelines* for application as appropriate at specific mining sites (IMMS, 2011). With regards to the former, they were created to serve the industry, regulatory agencies, scientists and other stakeholders, as benchmarks for development, implementation and assessment of environmental management plans and as advice on best fit-for-purpose practices at sites targeted for marine minerals research, exploration and extraction (IMMS, 2011).

The main purpose of the Code is to "*anticipate and integrate environmental considerations for responsible marine mining in adaptive guidelines that are responsive to experience with their implementation, improvements in best environmental practices, technological developments and regulatory changes*" (ISBA/16/LTC/2, III. A.) The Code assumes itself as *combined product, that is*

¹¹ The IMMS - International Marine Minerals Society is a professional society with objectives are: (a) To promote and improve the understanding of marine mineral deposits in the global ocean; (b) To aid in exchanging information among members through networking and formal symposiums; (c) To encourage the prudent and environmentally responsible development of marine mineral resources; (d) To encourage research in all aspects of marine minerals. ISBA/16/LTC/2, 2011, pages 1 and 2

¹² Development of the Code was approved in the International Marine Minerals Society Annual General Meeting, January 2000. This event was followed by a proposal made at the 2000 Underwater Mining Institute (UMI 2000) by Julian Malnic, founder and first Chief Executive Officer (CEO) of Nautilus Minerals Corporation (PNG).



upon creation has made use of existing marine mining environmental statements, guidelines, policies, and codes issued by industry, governments, intergovernmental and non-governmental organizations, as well as on the experience of industry personnel, marine scientists, marine environmental scientists, engineers and lawyers.

With regard to its nature the Code presents a rather revolutionary approach as its principles and guidelines, instead of prescribing specific practices, it opts for setting "*broad directions in a context of shared values*" (IMMS, 2011, p.1)¹³. Therefore one should note that this is code is of a **voluntary nature**¹⁴, that incentivates marine mineral companies/entities/other stakeholders to seek and put in practice its prescriptions.

In its development, it took into account and aimed to comply with and implement legal binding instruments of international law, *e.g.* the United Nations Convention on the Law of the Sea (UNCLOS), Montego Bay, Jamaica, 1982¹⁵ and the Agreement implementing UNCLOS Part XI, 1994 and the relevant instruments adopted in view of safer and more "environmentally responsible" shipping (IMMS, 2011, p.2). Concerning the element of applicability it is important to note that the Code sets a broad group of addressees, *i.e.* addressing its provisions to entities with an interest or activity in marine mining governments¹⁶, local communities and stakeholders, intergovernmental and non-governmental organizations, scientists, and other groups with an interest in or affected by marine mining research, exploration and/or activities.

The Code: Its implementation and Revision

In the action of the Code as mentioned *supra* it is noteworthy its *complementary* nature aiming not at replacing, but instead, (i) assisting national and international binding legal documents that seek the protection of the marine environment and, in particular, marine mining, when in place; (ii) filling in the gaps in the subject of principles and Guidelines; (iii) creating an incentive for the entities to improve when the standards set are higher than the legally required.

The act of *reporting* is clearly extremely important for the Code. As such, in the event of an entity adopting the Code (in addition to the compliance with national and international regulation), it is also committing to transparency, as, by means of demonstrating the entity's commitment to, and implementation of, the Code (in relation to the Principles and Operating Guidelines), a regular reporting of environmental planning, monitoring, assessment and other actions relating to protecting and preserving the marine environment, will be expected and made public. Further, the Operating Guidelines create *benchmarks* that assist an entity in setting its environmental program for a marine exploration or extraction site: "*Site stakeholders, including government agencies, intergovernmental and non-governmental organizations, scientists and local communities can also*

¹³ Important to better understand what these *shared values* are is the ISBA/16/LTC/2, C.

¹⁴ No membership of International Marine Minerals Society is required.

¹⁵ Articles 192.º and 194.º, 1 and 5, set a clear obligation to States to "protect and preserve the marine environment", to "prevent, reduce and control pollution of the marine environment from any source" and to take measures in order to "protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life". (ISBA/16/LTC/2,7).

¹⁶ In fact it was the marine mining industry's concern for the marine environment that led to the development of the Code itself. (ISBA/16/LTC/2, 6)



use the Guidelines as benchmarks for checking the company/entity's environmental management plans and their implementation." (IMMS, 2011, p.3).

Furthermore, with regard to Implementation, there is an incentive given to the users of the Code to inform the IMMS on the matter of effectiveness and existing problems of the Code, as well as action required in order to facilitate implementation ("Implementation and Feedback Form", IMMS, 2011, Annex 1). This process is a key element in order to keep track of users, to conclude on the success of the Code and to assist in later revisions.

As a "living, adaptive document, responsive to, for example, experience with its implementation, improvements in best fit-for-purpose environmental practices, technological developments, and changes in applicable regulations" (IMMS, 2011, p.3), the Code is subject to periodic reviews (every five years), following consultations with the marine mining industry and other stakeholders in marine mining operations. As explained by the Legal and Technical Commission, International Seabed Authority, in ISBA/16/LTC/2 the "the Code provides for a periodic review in light of experience gained with its implementation and developments in the field of marine mining and associated environmental practices" (ISBA/16/LTC/2, 2010, 4, p.2).

The Code as a Declaration of Principles

The Code introduces six basic environmental principles that ought to be perceived as a commitment for those entities adopting the Environmental Code, *i.e.* the entities that adopt the Environmental Code shall assume an engagement with an environmental friendly and responsible attitude whilst conducting their activities, as follows:

- 1) To observe the laws and policies and respect the aspirations of sovereign states and their regional sub-divisions, and of international law, as appropriate to underwater mineral developments.*
- 2) To apply best practical and fit-for-purpose procedures for environmental and resource protection, considering future activities and developments within the area that might be affected.*
- 3) To consider environmental implications and observe the precautionary approach, from initiating a project through all stages from exploration through development and operations, including waste disposal, to eventual closure, and post-closure monitoring.*
- 4) To consult with stakeholders and facilitate community partnerships on environmental matters throughout the project's life cycle.*
- 5) To maintain an environmental quality review program and deliver on commitments.*
- 6) To report publicly on environmental performance and implementation of the Code."* (IMMS, 2011, p.3)

As can be easily perceived, the Code offers a comprehensive set of basic environmental principles: 1) notwithstanding its international vocation (also covered), given the transboundary nature of the problems addressed, the Code notes the primarily importance of observing the laws and



policies and respecting the aspirations of sovereign states and their regional sub-divisions; 2) the Code sets an incentive to the constant search for the best practices and technical solutions for the future activities and developments within the area that might be affected; 3) lists the fundamental precautionary approach that ought to be present in all stages of the projects to be implemented, 4) refers to the importance of public participation in view of introducing a sense of equal partnership in the communities involved; 5) stresses the importance of monitoring, and lastly 6) states the key role played by transparency and publicity of procedures.

The Operating Guidelines

In addition to the six principles explained *supra* and intimately connected with them, the Code introduces and carefully develops *Operating Guidelines* that focus on 1) Responsible and Sustainable Development; 2) Environmentally Responsible Company/Entity Ethic; 3) Community Partnership; 4) Environmental Risk Management; 5) Integrated Environmental Management; 6) Company/Entity Environmental Performance Targets; 7) Review, Improvement and Updating of Environmental Policies and Standards; 8) Rehabilitation and Decommissioning; 9) Reporting and Documentation; 10) Environmental Data Collection, Exchange and Archiving 11) Performance Reviews.

Despite its relative youth and its openness to adaptation and review, the Code is already seen as a fundamental instrument for the present and for the future of marine mining. Firstly it is hugely important in the present given its ability to complement and better implement the international and national binding legal documents (it is important to note that national environmental regulation of marine mining is not yet abundant and complete, as *e.g.* only focus on territorial sea). On the other hand it ought to be perceived as an auspicious instrument to be used for future national and international legislation for it is, "*...only instrument designed specifically to guide environmentally responsible marine mining as a whole.*", (ISBA/16/LTC/2, 2010, 6, p. as the Legal and Technical Commission of International Seabed Authority concludes, the first comprehensive document providing guidance to environmentally responsible marine mining. Lastly, the Code presents an admirable initiative taken by the industry, in what can be seen as a good example of best practices in the domain of corporate social responsibility, that will tackle the meeting of the requirements for the regulatory predictability and minimization of risk, including environmental regulations and risks, by the marine mining industry (ISBA/16/LTC/2, 2010, 5).

5. Fostering innovative approaches for sustainable deep sea mining activities – contributions on legal and technical approaches

For all the above mentioned, it appears clear that notwithstanding the quite advanced stage of development of the EIA legislation in general that appears quite clear and comprehensive, and that



subjects to EIA mining activities, with regard to the particular aspect of deep sea mining activities, the EIA legislation at the European level and at the level of the Member States seems still *embryonic*.

Also not quite developed yet seems to be the legislation created by the European Union and the Member States for conducting economic activities in the Continental Shelves in a sustainable manner, when it comes to specifically mention EIA procedures. In this regard, the legislator, both at the European level and at the national level, seems to adopt the referral to the EIA general provisions, instead of specifically make mandatory the procedure of EIA for deep sea mining activities in the Continental Shelf and specifically create an EIA procedure applicable to deep sea mining. A first attempt to define a template of the desirable content of an Environmental Impact Assessment has been made (ISA Technical Study No.10, 2011), targeted at the ISA requirements for the Area, but also intended to be applicable for deep sea mining inside areas under national jurisdiction. This template was designed with three main types of deep sea mining in mind: polymetallic nodules, seafloor massive sulphides and cobalt-rich ferromanganese crusts.

Therefore, the authors of this deliverable recommend the production, at the European Union level, of a harmonized process, taking into consideration the *Code for Environmental Management of Marine Mining* supra analysed, regarding EIA for deep sea mining activities in particular.

Since, the Directive 2011/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment, amended by the Directive 2014/52/EU of the European Parliament and the Council is already in force, issuing a new and separate Directive would not appear a desirable step and therefore it is proposed *revisiting the existing directive* in order to include a provision for an harmonized EIA provision and procedure, at the member state level, specifically for deep sea mining activities.

Another step would include *revisiting the Directive 2014/89/EU* of the European Parliament and the Council, establishing a framework for maritime spatial planning, in order to provide a specific provision regarding EIA for activities conducted in the maritime area, including the continental shelf of the member states and thus aiming an harmonized exploration and exploitation of deep sea mining activities.

It is essential that national legislation for deep sea exploration and exploitation require standards as high as or higher than those set by ISA for the Area. The adoption of regional common standards will be a major breakthrough. An integrated Regional Legislative and Regulatory framework for deep sea minerals exploration and exploitation has already been prepared for the Pacific – African Caribbean Pacific (P-ACP) States, in the scope of the SPC-EU EDF10 Deep Sea Minerals Project (SPC, 2012). A similar innovative approach for a common integrated legislative and regulatory specific framework for deep sea mining activities should maybe also be pursued at European level.



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ANNEXES

EIA Data Base - Countries

AUSTRIA

		Main Land
legal framework	<i>Identify the main legal documents (state and regional, if applicable) that establish the EIA procedures and copy the links. Start by the most general and then the more particular</i>	<p>Environmental Impact Assessment Act (UVP-G 2000): includes a list of 88 types of projects for which an EIA is mandatory if certain provisions apply. These are projects that are expected to have a substantially adverse impact on the environment.</p> <p><i>ENGLISH: https://www.ris.bka.gv.at/Dokumente/Erv/ERV_1993_697/ERV_1993_697.pdf</i></p> <p><i>Synthesis/Overview: http://www.mop.gov.si/fileadmin/mop.gov.si/pageuploads/podrocja/cpvo/izobrazevanje/eia_screening_austria_5jun15.pdf</i></p>
specific national guidelines	<i>identify any national guidelines for the preparation of EIA reports for mining activities and copy the links</i>	<p>EIA Guidance document for mining (Leitfaden UVP für Bergbauvorhaben)http://www.umweltbundesamt.at/fileadmin/site/umweltthemen/UVP_SUP_EMAS/uvp-leitfaeden/Bergbau_Leitfaden.pdf</p> <p>Guidance document for climate and energy concept in the framework of EIA procedures - chapter mining (Leitfaden für das Klima- und Energiekonzept im Rahmen von UVP-Verfahren - Spezialteil Bergbau) http://www.umweltbundesamt.at/fileadmin/site/umweltthemen/UVP_SUP_EMAS/uvp-leitfaeden/Bergbau_LF_KlimaEnergiekonzept.pdf</p>
EIA authority for mining projects	<i>identify the state agency and related administrative level responsible for conducting the EIA of mining projects</i>	Province Governments (Länder) for Annex I projects (including extractive industries)
screening	<i>identify the types of mining projects mentioned in the legal framework. Specify those of annex I and of annex II in national cases.</i>	<p>Annex 1 activities:</p> <p>Z 25 (loose material — excavation or dredging, consolidated rock in open-pit mines hidden from view with slide, pipe conveyors or another materials – handling system with equivalent environmental impact)a) Extraction of mineral raw material in open-cast mining (loose material — excavation or dredging, consolidated rock in open-pit mines hidden from view with slide, pipe conveyors or another materials – handling system with equivalent environmental impact) or Peat extraction, where the surface of the site) is 20 ha or more</p> <p>b) Expansion of the extraction of mineral raw material in open-cast mining or Peat extraction, where the surface of the site of the extractions existing or approved within the past ten years and the expansion applied for amounts to 20 ha or more and the additional area amounts to 5 ha or more</p> <p>c) Extraction of mineral raw material in open-cast mining or peat extraction in protected areas of Category A or E or for dredging and peat extraction also category C, where the surface of the site is 10 ha or more;</p> <p>d) Expansion of the extraction of mineral raw material in open-cast mining or peat extraction in protected areas of Category A or E or for dredging and peat extraction also category C, where the surface of the site5 of the extractions existing or approved within the past ten years and the expansion applied for amounts to 10 ha or more and the additional area amounts to 2,5ha or more</p> <p>Z 26 (solid rock)</p> <p>a) Extraction of mineral raw material in open - cast mining (solid rock) on an area of 10 ha or more;</p> <p>b) Expansion of the extraction of mineral raw material in open-cast mining (solid rock), if the area covered by extractions existing or approved within the past ten years and the expansion</p>



		<p>applied for amounts to 13 ha or more and the additional area amounts to 3 ha or more</p> <p>c) Extraction of mineral raw material in open-cast mining (solid rock) in protected areas of Category A or E on an area of 5 ha or more;</p> <p>d) Expansion of the extraction of mineral raw materials in open cast mining (solid rock) in protected areas of Category A or E if the area covered by extractions existing or approved within the past ten years and the expansion applied for amounts to 7.5 ha or more and if the additional area amounts to 1.5 ha or more.</p> <p>Z 27 Underground mining</p> <p>a) Underground mining for which coherent overground installations and operating facilities cover an area of 10 ha or more</p> <p>b) Underground mining in protected areas of Category A for which coherent overground installations and operating facilities cover an area of 5 ha or more.</p> <p>Z 28 Hydraulic fracturing of rock formations</p> <p>a) Hydraulic fracturing of rock formations at unconventional reservoirs of mineral oil or natural gas</p> <p>b) Construction of new deep – drilling installations for depths of 1,000 m or more in protected areas of Category A with the exception of trial and prospecting drillings, unless already covered by a) pit mining for salt and the activities covered by No. 29 and 33.</p> <p>Z 29 on fossil fuel extraction, which is not relevant for MIN-GUIDE</p>
	<i>identify the criteria used to subject other (mining) projects not mentioned in the previous lists</i>	<p>Annex 1</p> <p>activities with project types subject to specific thresholds and criteria as well as a case by case examination; mandatory EIA: new projects and major modifications (expansions to projects); reaching of thresholds /criteria (Annex 1, column 1 and 2)</p> <p>Case-by-case examination :</p> <p>a) other modifications, b) projects in certain protected areas (Annex 1; column 3); Z 25: c,d; Z 26: c,d; Z 27 b; Z 28: b); c) projects with cumulative impacts;</p>
scoping	<i>identify any relevant details for the scoping phase relevant to mining activities</i>	<p>Screening Criteria</p> <ol style="list-style-type: none"> 1. Characteristics of the project (size of the project, cumulation with other projects, use of natural resources, production of waste, environmental pollution and nuisances, risk of accidents) 2. Location of the project (environmental sensitivity taking into account existing land use, abundance, quality and regenerative capacity of natural resources in the area, absorption capacity of the natural environment, historically, culturally or architecturally important landscapes), 3. Characteristics of the potential impact of the project on the environment (extent of the impact, transboundary nature of the impact, magnitude and complexity of the impact, probability of the impact, duration, frequency and reversibility of the impact) as well as the change in the environmental impact resulting from the implementation of the project as compared with the situation without the implementation of the project. In case of projects falling under Column 3 of Annex 1, the changed impact shall be assessed with regard to the protected area.
Environmental Impact Study	<i>identify any (mining) specific details relevant for the mandatory content of the EIS</i>	<p>two types of procedures for EIA depending on project type:</p> <p>IES simplified procedure --> Annex 1, column 2,3</p> <p>Standart IES --> Annex 1, column 1</p>
public and institutional consultation	<i>describe the main procedures for public and institutional consultation</i>	<ol style="list-style-type: none"> 1) Examination of the EIA authority with regard to the likelihood of significant adverse effects 2) Appeal against the decision may be filed by parties within four weeks to the Federal Administrative Court Locus standi: project developer, co-operating authority or the ombudsman for the environment, the host municipality 3) if no EIA: environmental organisations recognised in accordance with EIA law may file an application for reviewing compliance
	<i>identify any specific agencies mandatorily consulted for mining projects</i>	<p>Province Governments: applicaiton body; EIA authority</p> <p>Federal Administrative Court: Appeal body</p> <p>Examination of the EIA authority: hearing of the co-operating authorities, the host municipality, the ombudsman for the environment and the water management planning body: "rough screening"</p>



decision-making	<i>specify the type and administrative level of the state agency responsible for decision making of mining projects</i>	Province/ regional: application Federal: Appeal ENVIRONMENTAL COUNCIL: 1) demand information and reports from the competent bodies on questions related to environmental impact assessment or consolidated development consent procedures performed in accordance with this or other federal acts 2) observe the effects of implementing this Federal Act or the provisions on environmental impact assessment contained in other federal acts on environmental protection and to attach the results of these observations to the report submitted by the Federal Minister of Agriculture and Forestry, Environment and Water Management 3) make proposals on possible improvements of environmental protection to legislative and executive bodies
	<i>specify any specific details for the environmental impact statement related to mining</i>	- describe any activities functionally related to the mining activity during development, exploitation, post-mine, and after-use phase - measures against illegal exploitation - outline potential expansion areas - i.a. outline potential risks/scenarios of accidents - UVP-G-Novelle 2009: outline climate and energy concept - Outlining impacts on the environment: compiling an influence matrix for respective phases of mining activities (all subjects under protection and against land changes, resource use, and emissions) - describing prevention, mitigation and adaptation, compensation measures (therein general concepts, and concrete planning steps)
	<i>identify and copy the links of EIA data bases</i>	EIA procedures: http://www.umweltbundesamt.at/umweltsituation/uvpsup/uvpoesterreich1/uvpdatenbank/uvp_online/?cgiproxy_url=http%3A%2F%2Fwww5.umweltbundesamt.at%2Fuvpdb%2Fpz10list.pl%3Ftiny%3D1%26session%3Dh0KxfxVDvA7Jn0Fr00HNR5oS%26set%3D1 EIA - prior-screening evaluation: http://www.umweltbundesamt.at/umweltsituation/uvpsup/uvpoesterreich1/uvpdatenbank/uvp_fest_online/ EIA procedures monitoring: http://www.umweltbundesamt.at/umweltsituation/uvpsup/uvpoesterreich1/verfahrensmonitoring/
Monitoring	<i>describe the measures adopted for project post-evaluation and monitoring</i>	Post-project analysis: Three years at the earliest and five years at the latest after notification of completion in accordance with Article 20 (1) or at a date specified in the development consent order in accordance with Article 20 (6), the authorities in accordance with Article 21 shall jointly inspect, on the initiative of the authority pursuant to Article 39, projects listed in Column 1 of Annex 1 for compliance with the development consent order and to verify whether the assumptions and forecasts of the environmental impact assessment correspond to the actual effects of the project on the environment. The authority according to Article 39 and the co-operating authorities shall be involved therein at any rate. Post-project analysis shall be carried out by the date indicated in the administrative acceptance order in accordance with Article 20 (5). (2) The authorities shall communicate the results of post - project analysis to the authority according to Article 39 and to the Federal Minister of Agriculture and Forestry, Environment and Water Management. (3) The competent authorities shall call for the remedy of deficiencies and divergences observed within the framework of post-project analysis Controls and obligations to tolerate: Article 23. (1) To the extent necessary for the implementation of the legal provisions applicable to a specific project, the authorities as well as the experts and officials employed by them shall be entitled to enter and inspect premises, buildings and installations, to take samples in a quantity required for the investigations without any compensation, to perform measurements and to inspect documents. Disturbances and obstructions of operation shall be avoided as far as possible. The owner of the premises and/or the operator or the representative of those persons shall be informed, at the latest, upon entry into the premises or the installation. In case of imminent danger, or if neither the owner of the premises nor the holder of the development consent nor their representative can be contacted, it shall suffice to inform them afterwards



		(2) The owners of the premises, the operators or their representatives shall tolerate the controls in accordance with paragraph 1, provide the information required for the performance of the controls and make available the necessary documents.
Links and databases	<i>identify and copy the links of databases</i>	only evaluation of post project analysis procedures and implementation but not on the actual post project analysis reports: http://www.rechnungshof.gv.at/fileadmin/downloads/2012/berichte/teilberichte/bund/Bund_2012_12/BUND_2012_12_1.pdf Monitoring on the EIA procedures: http://www.umweltbundesamt.at/umweltsituation/uvpsup/uvpoesterreich1/verfahrensmonitoring/
observations		



PORTUGAL

		Main Land	Continental Shelf
legal framework	<i>Identify the main legal documents (state and regional, if applicable) that establish the EIA procedures and copy the links. Start by the most general and then the more particular</i>	Decree-Law No. 151-B/2013, establishes the regulatory framework for Environmental Impact Assessment, amended by Decree-Law No. 47/2014 and Decree-Law No. 179/2015, via Art. 27º, 2, Law No. 54/2015	In line with the Directive 2014/89/EU of the European Parliament and the Council, establishing a framework for maritime spatial planning, Portugal issued the Law N. 17/2014 and the Decree-Law N. 38/2015 that together establish the basic framework for marine spatial planning and management. This Law does include the Continental Shelf beyond the 200 nautical miles as part of the national maritime territory (art. 2 para 2 c)) and recognizes the basic principle of the ecosystem based approach in conducting the marine policy (Art. 3 a)).
specific national guidelines	<i>identify any national guidelines for the preparation of EIA reports for mining activities and copy the links</i>	National guidelines for the preparation of EIA reports, e.g. for mining activities, include, inter alia, characterization of geological framework, identification of patrimony to be conserved. <i>Vide</i> EA.G.02.01.00 , 2013 pp. 16 and 17 (https://www.apambiente.pt/_zdata/Divulgacao/Documentos%20Referencia/2%20GUIA%20AIA.pdf)	The Exploration of the marine area in Portugal will be made through plans (planos de situação (i) and planos de afectação (ii)) that will have to undergo evaluation regarding the environmental impact of the activities proposed. For this purpose (i) are considered programs and therefore assessment is made according to the provisions in Decree-Law N. 232/2007, that establishes the Framework for Strategic Environmental Assessment and (ii) are considered projects and the regime of the EIA explained previously (in Column "Portugal Mainland") is entirely applicable to them (vide arts. 13 and 23 of the Decree-Law N. 38/2015). At the moment the first Plan (plano de situação (i)) is at an early stage.
EIA authority for mining projects	<i>identify the state agency and related administrative level responsible for conducting the EIA of mining projects</i>	The State Agencies responsible for conducting the EIA of mining projects and others are the Ministry of the Environment, Territory Management and Energy and the National Environmental Institutions: Portuguese Environmental Agency (APA) and Commissions for Regional Coordination and Development (CCDR) (Art. 8.º, Decree-Law No. 151-B/2013)	Under the authority of the Ministry of the Sea the Office for the Natural Resources, Security and Maritime Services (DGRM) will be responsible for conducting the Environmental Impact Assessment of the 1st <i>plano de situação</i> .
screening	<i>identify the types of mining projects mentioned in the legal framework. Specify those of annex I and of annex II in national cases.</i>	(in what would be relevant for deep sea mining, inter alia), EIA is mandatory for mineral extraction, including inert, through sea or river dredging, shell, cement, asbestos and derivatives, glass and glass fibers, mineral fusions and ceramic, depending on the quantities produced (Art. 3º, 1 b), Annex II, 2. and 5., Decree-Law No. 151-B/2013)	N/A
	<i>identify the criteria used to subject other (mining) projects not mentioned in the previous lists</i>	Certain projects due to specific characteristics (e.g. dimension, expected effects/damages, etc) and/or location require EIA although not part of List of Annex II Decree-Law N. 151-B/2013 (Art. 1.º, 3 c) Decree-Law No. 151-B/2013)	N/A
scoping	<i>identify any relevant details for the scoping phase relevant to mining</i>	Relevant details for the scoping phase relevant to mining activities are, e.g. identify potential altering of stability of the structure; assessment of the increase	N/A



	<i>activities</i>	in erosion process, etc. Vide, EA.G.02.01.00, 2013 pp. 28 (https://www.apambiente.pt/_zdata/Divulgacao/Documentos%20Referencia/2%20GUIA%20AIA.pdf)	
Environmental Impact Study	<i>identify any (mining) specific details relevant for the mandatory content of the EIS</i>	The Environmental Impact Study national legal provisions strictly follow the Annex III of the Directive 2011/92/EU, as they impose a description and characterization of the project as well as of the solutions considered for the project (including the solution not to undertake the envisaged project) taking into consideration the location, the nature and the potential damages associated with the project and the techniques to be used for the prevention of damages and the monitoring of the project (Art. 13, 14.º and Annex V Decree-Law N. 151-B/2013)	N/A
public and institutional consultation	<i>describe the main procedures for public and institutional consultation</i>	Access to information and Public consultation are key elements during the entire process of EIA, with a particular relevant moment (prior to the EIS) for the consultation of stakeholders to take place and the inputs to be considered in the final decision (art. 15.º, 28.º and 29.º Decree-Law No. 151-B/2013)	N/A
	<i>identify any specific agencies mandatorily consulted for mining projects</i>	Depends of location/dimension of specific project.	N/A
decision-making	<i>specify the type and administrative level of the state agency responsible for decision making of mining projects</i>	The State Agencies responsible for conducting the EIA of mining projects and others are the Ministry of the Environment, Territory Management and Energy and the National Environmental Institutions: Portuguese Environmental Agency (APA) and Commissions for Regional Coordination and Development (CCDR) , Art. 8.º, DL 151-B/2013)	N/A
	<i>specify any specific details for the environmental impact statement related to mining</i>	EIS might be favourable, unfavourable or favourable under certain circumstances to the project to be implemented, contains an evaluation of the environmental impacts and details the reasons that justify the decision	N/A
	<i>identify and copy the links of EIA databases</i>	Databases containing EIS - National Authority - APA (http://siaia.apambiente.pt/AIA_Todos.aspx); Regional Authorities - Example- CCDR - Algarve Region Repository (https://www.ccdr-alg.pt/site/info/dda-	The public is invited to accompany the developments of the plan on the online platform http://www.psoem.pt/avaliacao-ambiental/



		<i>dia-e-dcape (pt)</i>	
Monitoring	<i>describe the measures adopted for project post-evaluation and monitoring</i>	State agency responsible for conducting EIA will accompany the project throughout entire process until deactivated, carrying out audits, visits to the project and monitoring reports (Art. 26.º, 2 a), b) c) Decree-Law No. 151-B/2013)	N/A
Links and databases	<i>identify and copy the links of databases</i>	Databases containing monitoring cases - National Authority - APA http://siaia.apambiente.pt/PPA_Todos.aspx (pt); Regional Authorities - Example- CCDR - Centro - <i>Examples of monitoring reports in display</i> http://www.ccdrc.pt/index.php?option=com_content&view=article&id=133:pos-avaliacao&catid=127&Itemid=110 (pt)	N/A
observations		Website exclusively dedicated to promote Public Participation in an effective manner where consultations currently being held are available (http://www.participa.pt (pt))	In 2009 Portugal submitted to the Commission on the Limits of the Continental Shelf, in accordance with Article 76, paragraph 8, of the United Nations Convention on the Law of the Sea, information on the limits of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured and awaits consideration and recommendations (vide http://www.un.org/depts/los/clcs_new/submissions_files/submission_prt_44_2009.htm and https://www.emepc.pt/pt/)



CROATIA

		Main Land
legal framework	<i>Identify the main legal documents (state and regional, if applicable) that establish the EIA procedures and copy the links. Start by the most general and then the more particular</i>	Environmental Protection Act, Official Gazette no. 80/13, 153/13, 78/15 Regulations on the Environmental Impact Assessment, Official Gazette no. 61/14, 3/17 http://www.mzoip.hr/hr/okolis.html Nature Protection Act, Official Gazette no. 61/14, 3/17 Ecological Net Impact Assessment Regulations, Official Gazette no. 146/14 http://www.mzoip.hr/hr/priroda.html
specific national guidelines	<i>identify any national guidelines for the preparation of EIA reports for mining activities and copy the links</i>	Regulations on the Environmental Impact Assessment, Official Gazette no. 61/14, 3/17
EIA authority for mining projects	<i>identify the state agency and related administrative level responsible for conducting the EIA of mining projects</i>	Ministry of Environmental Protection and Energetics, http://www.mzoip.hr/hr/ministarstvo.html
screening	<i>identify the types of mining projects mentioned in the legal framework. Specify those of annex I and of annex II in national cases.</i>	EIA procedure is legally binding for the exploitation (on surface and underground) of all the mineral resources (raw materials and hydrocarbons) - vide list provided in appendix I EIA procedure is not needed for the exploration of the raw materials.
	<i>identify the criteria used to subject other (mining) projects not mentioned in the previous lists</i>	N/A
scoping	<i>identify any relevant details for the scoping phase relevant to mining activities</i>	N/A
Environmental Impact Study	<i>identify any (mining) specific details relevant for the mandatory content of the EIS</i>	The contents of the Environmental Impact Study are legally binding, according to the regulations of the Environmental Impact Assessment (Official Gazette no. 61/14, 3/17) and they include: - spatial, technical and technological description and characterization of the mining project, - a proof that the mining project (exploitation field) is planned within the spatial plans of a county and municipality, - the data on any contents in the vicinity of the exploitation field (mining project), - possible harmful impacts of mining activities on the environment and nature, - a list of measures to prevent or diminish damages to the environment and nature, - a list of monitoring activities during the execution of extraction (measuring the quality of air, water pollution, etc.)



public and institutional consultation	<i>describe the main procedures for public and institutional consultation</i>	During the EIA procedure, the municipality where the mining project will take place should organize a public debate about the project, with a public presentation on the Environmental Impact Study, according to the regulations of the Environmental Impact Assessment (Official Gazette no. 61/14, 3/17). The Environmental Impact Study should be made available to the public one month before the public debate. The information about the EIA procedure and integral contents of the Environmental Impact Study are published on the web pages of the Ministry of Environmental Protection and Energetics.
	<i>identify any specific agencies mandatorily consulted for mining projects</i>	state agencies and institutions (ministries) are consulted, depending on characteristic of location for excavation. For example state companies as „Croatian Waters“, „Croatian Woods“, „Croatian roads“ etc.
decision-making	<i>specify the type and administrative level of the state agency responsible for decision making of mining projects</i>	The State Authority responsible for conducting the EIA procedure of mining as well as other projects is the Ministry of Environmental Protection and Energetics, http://www.mzoip.hr
	<i>specify any specific details for the environmental impact statement related to mining</i>	According to the regulations in the Environmental Impact Assessment (Official Gazette no. 61/14, 3/17), any mining project must get an environment protection licence from the state authority (the Ministry of Environmental Protection and Energetics). Otherwise, the mining project cannot be executed. The environment protection licence includes a list of measures for the protection of the environment and a list of monitoring activities during the execution of the mining project. , the Ministry of Environmental Protection and Energetics establish commission for leading EIA procedure. On the end of EIA procedure commission bring the Opinion about acceptability of mining project on environment (according to articles 15-17, Official Gazette no. 61/14, 3/17)
	<i>identify and copy the links of EIA data bases</i>	On the web pages of the Ministry of Environmental Protection and Energetics there is a database of EIA procedures classified by the year. Every case has the information about its status in the EIA's procedure, including the integral contents of the Environmental Impact Study (PDF format). Link http://www.mzoip.hr/hr/okolis.html
Monitoring	<i>describe the measures adopted for project post-evaluation and monitoring</i>	The Directorate for Inspectional Affairs of the Ministry of Environmental Protection and Energetics is responsible for the inspectional supervision of the environmental protection and the inspectional supervision of nature protection. The mining company must do some measures (monitoring) which are foreseen in the environmental protection licence (the decision about acceptability of mining project for environment). According to Environmental Protection Act, chapter VII, articles 141-147, Official Gazette no. 80/13, 153/13, 78/15, the mining company must deliver measuring data to Croatian Environment Agency. http://www.mzoip.hr/en/inspection.html
Links and databases	<i>identify and copy the links of databases</i>	On the website (Link http://www.mzoip.hr/hr/okolis.html) of the Ministry of Environmental Protection and Energetics there is a database of EIA in procedures classified by the year. After finishing the EIA procedures there is no information on website about development of the projects.
observations		



SPAIN

		Main Land	Continental Shelf
legal framework	<i>Identify the main legal documents (state and regional, if applicable) that establish the EIA procedures and copy the links. Start by the most general and then the more particular</i>	<p>In Spain there are national laws, but also the 17 Spanish Autonomus Regions have their own legislation and could have more restrictions in environmental aspects than the national legislation or the EU directive, specially regarding the Nature 2000 network</p> <p>Law 21/2013 of 9th December of Environmental Assessment https://www.boe.es/buscar/doc.php?id=BOE-A-2013-12913 https://www.boe.es/diario_boe/txt.php?id=BOE-A-2013-12913 .</p> <p>"Autonomous regions legislation. Follow some of the most relevant regarding EIA and mining vs environment: Autonomic Government of Andalusia Law 7/2007 of integrated management of environmental quality. BOE 190, de 9-8-2007. Autonomic Government of Andalusia Law 12/1981, of 24th December 1981, establishing additional regulations to protect natural spaces of special interest affected by mining activities. Order 06/06/1988 that partially develops the decree 343/1983, of 15/07/1983, about environmental protection regulations applied to mining activities Order 06/06/1988 that partially develops the decree 343/1983, of 15/07/1983, about environmental protection regulations applied to mining activities Order TES/421/2012, of 12/12/2012, establishing technical specifications of the annual revision of the amounts of the financial guarantees of the reclamation programs of mining activities Aragon: Decree 45/1994, of 4 March, of evaluation of impact assessment of Aragon. BOA 35, de 18-03-1994 cantabria: Law 17/2006, of 11 December, of integrated environmental control in Cantabria. BOE 15, de 17-1-2007. Balearic Islands: Decree 4/1986, of 23 January, of implementation and regulation of EIA studies. BOIB 24-1-1986. Modified by decree 85/2004, of 1st October. "Castile La Mancha</p>	<p>Law 2/2013, of 29 May, on the protection and sustainable use of the coast and amendment of Law 22/1988, of 28 July, of Coasts. The purpose of this Law is to establish, protect, use and safeguard the maritime-terrestrial public domain and especially the sea shore.</p> <p>Defining the terrestrial public domain in articles 3, 4 and 5 and the uses of the soils in the different zones near the coast.</p> <p>Royal Decree 1471/1989, of 1 December, approving the general regulations for the development and implementation of Law 22/1988, of July 28, Costas. see: http://www.mapama.gob.es/es/agua/legislacion/GRI_aguas.aspx</p>



		<p>Law 4/2007, of 8th March, of EIA in Castile-La Mancha. BOE 118, of 17-5-2007</p> <p>Castile Leon: Legislative Decree 1/2000, of 18th May, passing the integrated text of the EIA Law and Environmental Auditing in Castile-Leon. BOCyL of 27-10-2000 y C.e BOCyL 214, of 6-11-2000.</p> <p>Catalonia Law 20/2009, of 4th December, on prevention and environmental control of activities BOE 12, of 14-1-2010</p> <p>Navarra Regional Law 4/2005, of 22th March, of intervention for environmental protection. BOE 108, de 6-5-2005. Regional Decree 93/2006, of 28th December, approving the Regulations developing Regional Law 4/2005. BON 8, de 17-1-2007</p> <p>Valencia: Law 2/1989, of 3rd March, of EI Studies. DOGV 1021, de 1-3-1989</p> <p>Galicia: Law 1/1995, of 2 January, of environmental protection of Galicia. DOG 29, de 10-02-95 & C.e DOG 72, de 12-04-95</p> <p>Canary Islands Law 11/1990, of 13th July, of prevention of the ecological impact. BOCA 92, de 23-07-1990</p> <p>La Rioja Law 5/2002, of 8th October, of Environmental protection in La Rioja. BOR 253, de 22-10-2002</p> <p>Madrid Law 2/2002, of 19th June, of Environmental Assessment of the Community of Madrid. (Partially modified by Law 2/2004, 31st May). BOE 176, de 24-07-2002</p> <p>MURcia Law 1/1995, of protection of the environmental of the Region of Murcia. BOM 78, de 3-4-1995 & C.e BOM 83, de 08-04-1995</p> <p>Basque Country Law 3/1998, of 27th February, General of Environmental Protection. BOPV 59, de 27-3-98 partially modified by the Constitutional Court sentence 101/2006, BOE de 4-5-2006.</p>	
<p>specific national guidelines</p>	<p><i>identify any national guidelines for the preparation of EIA reports for</i></p>	<p>Ministry of Agriculture, Fisheries, Food and Environment - guidelines for eia preparation (in spanish): http://www.mapama.gob.es/es/calidad-y-</p>	<p>guidelines for the management of the marine extractions for sand (in Spanish): http://www.mapama.gob.es/es/costas/publicaciones/Instruccion_Extracciones_Arena_rel</p>



	<i>mining activities and copy the links</i>	<i>evaluacion-ambiental/temas/evaluacion-ambiental/guias-directrices/</i>	<i>2_tcm7-152521.pdf</i> see also other guidelines for actuations in the coast: http://www.mapama.gob.es/es/costas/publicaciones/
EIA authority for mining projects	<i>identify the state agency and related administrative level responsible for conducting the EIA of mining projects</i>	The Spanish law Ley 21/2013, of December 9, on environmental assessment, attributes to the State exclusive competence over basic legislation for environmental protection, without prejudice to the autonomous communities' powers to establish additional protection standards. That is to say that the autonomous communities can establish more restrictive norms. In Spain the EIA authority for mining projects is the autonomous community, (17 in Spain), for example in the Castile Leon community the Environment Council "Consejería de Medio Ambiente de la Junta de Castilla y León" should emit a favourable DIA (declaración de impacto ambiental) declaration of environment assessment favourable to the project submitted by the mining authority. Article 18: the EIA strategic ordinary procedure must be presented to the substantive authority- Substantive authority (organismo sustantivo in Spanish) is autonomous or local public administration competent to authorize or approve projects that must be submitted to an environmental impact assessment. http://www.mapama.gob.es/es/calidad-y-evaluacion-ambiental/glosario.aspx	
screening	<i>identify the types of mining projects mentioned in the legal framework. Specify those of annex I and of annex II in national cases.</i>	In reality, although there are some differences in form but not specifically in content, Spanish law says that practically any mining operation (which is regulated by the law of mines, sections A, B, C and D) is subject to study of environmental impact of whatever nature (ordinary, simplified, etc.) in the annex 1 apart from the 25h indicated by the EU directive it is also mentioned: 3-Exploitations that are carried out below the water table 5 - Visible operations from motorways (...) includes underground mining (which in the European directive is in Annex 2 and not in 1) for certain cases (see Law 21/2013) In Spanish annex 2 are regulated some aggregates quarries that are not included in annex 1. In Spain mining projects are divided	annex 1 include marine dredging when the extracted volume is more than annual 20000 cubic meters Regarding the extraction or storage of petroleum and natural gas, in annex 1 when the activity is in the sea environment In Spain, exploration using marine seismic is included in annex 2 of the EIA simplified eia (annex 2) applies to: Extraction of materials by means of marine dredging, except when the purpose of the project is to maintain hydrodynamic or navigability conditions.



		<p>into A,B,C and D categories. Law 1973 and 1979.</p> <p>http://www.minetad.gob.es/energia/mineria/Mineria/Legislacion/Paginas/OrdenacionMinera.aspx (In Spanish)</p> <p>Only small quarries classified in section A (gravels, etc.) follow a simplified EIA procedure, almost all mining projects should accomplish an ordinary EIA procedure</p>	
	<p><i>identify the criteria used to subject other (mining) projects not mentioned in the previous lists</i></p>	<p>in some autonomous communities are some differences with the state law, and some are very similar, for instance:</p> <ul style="list-style-type: none"> • The Community of Castilla La Mancha envisages in its law4 / 2007 substantially the same as the state. • some clarification, such as salt-flats, which in Law 7/2007, of July 9, on Integrated Management of Environmental Quality. Of Andalusia would be included in section 13.14 (Annex I) while in the state law of 2013 would be in Annex II Group 8g2, 10c (if it did not fulfill the conditions of volume of operation and others of the annex 1). There is not a list of examples available, the differences (minors) are included in the annex of each community legislation as the national is a basic legislation, AC can include other scopes. We have just highlighted as an example: salt flats in Andalusia 	
scoping	<p><i>identify any relevant details for the scoping phase relevant to mining activities</i></p>	<p>In Spain there is a long tradition of identifying the relevant aspects in the mining projects that relates or interact with environment, since mining industry had already in</p> <ul style="list-style-type: none"> • Royal Decree 2994/1982, of October 15, on restoration of natural space affected by mining activities. • Royal Decree 975/2009, of June 12, on the management of waste from extractive industries and protection and rehabilitation of the space affected by mining activities. 	
Environmental Impact Study	<p><i>identify any (mining) specific details relevant for the mandatory content of the EIS</i></p>	<p>the kind-scope of mining activity is important to consider a ordinary or simplified EIA (annex 1 or annex2)</p>	
public and institutional consultation	<p><i>describe the main procedures for public and institutional consultation</i></p>	<p>the whole process is well described for example in Castilla La Mancha: (In Spanish) http://mineriactm.castillalamancha.es/sites/mineriactm.castillalamancha.es/files/documentos/pdf/20150120/guias_organos_sustantivos.pdf</p>	



	<i>identify any specific agencies mandatorily consulted for mining projects</i>	it depends on the location and kind of mining project (open pit, quarry, underground, salt solution drilling, etc) for example: Authorities responsible for water management ("Confederaciones Hidrográficas"), archaeology, etc	
decision-making	<i>specify the type and administrative level of the state agency responsible for decision making of mining projects</i>	the competent council of the autonomous community- For instance in the case of Madrid is called: Directorate-General for Industry, Energy and Mines, In each Autonomous community there are normally more than one province. In each province there is a Mining Service – Directorate through which the process has to be done- In addition to this: The State reserves areas of land for research or exploitation of resources of strategic or economic interest	
	<i>specify any specific details for the environmental impact statement related to mining</i>	In Spain it is important to consider the existence of the: Royal Decree 975/2009, of 12 June, on the management of waste from extractive industries and protection and rehabilitation of the affected area by mining activities, it include among other instructions, the "Restoration PPlan". It is too broad the EIA aspects related to mining, depends on the project All the law 21/2013 relates to the EIS. I don't understand very well the question. The process of the EIS is described in Chapter I, beginning with article 7	
	<i>identify and copy the links of EIA data bases</i>	EIA in mining (in spanish) university courses: https://previa.uclm.es/users/higuera/MAM/MMAM11.htm general eia: SABIA Project: Information System for the telematic processing of environmental assessment procedures, consultation of Environmental Assessment files. EIA Assessment in Mining (In Spanish) http://extremambiente.gobex.es/files/biblioteca_digital/Guia%20Tramitacion%20Ambienta%20Actividades%20Mineras_peq.p autonomous communities legislation: http://www.eia.es/nueva/legislacion_autonomica.html	
Monitoring	<i>describe the measures adopted for project post-</i>	According to the legislation the PVA (Programa de Vigilancia Ambiental) Environmental monitoring program is part of	



	<i>evaluation and monitoring</i>	<p>the EIA. In this program is indicated the task to check whether the protective, corrective and compensatory measures set out in the environmental impact statement are adequate. Environmental Monitoring and surveillance Program is described in annex VI item 7</p> <p>Also see for mining monitoring regarding wastes and environment affected 2 royal decrees 2009 and 2012 in: http://www.minetad.gob.es/energia/mineria/Mineria/Legislacion/Paginas/Medioambiente.aspx (Inn Spanish)</p>	
Links and databases	<i>identify and copy the links of databases</i>	<p>Monitoring in mining faces direct environmental challenges such as dust, noise etc as well as indirect problems like geotechnical feasibility of waste disposals during the mine activity as well as mine closure process</p> <p>Example (in English) uranium deposits: http://www.enusa.es/en/areas-de-negocio/medioambiental/restauracion-de-antiguas-instalaciones-mineras/ coal open pit (in Spanish): https://www.endesa.com/es/proyectos/a201610-mineria-restauracion-minera.html</p>	
observations			



SWEDEN

		Main Land	Continental Shelf
legal framework	<i>Identify the main legal documents (state and regional, if applicable) that establish the EIA procedures and copy the links. Start by the most general and then the more particular</i>	<p>Miljöbalken (MB 1998:808) https://lagen.nu/1998:808, Plan- och bygglagen (PBL 2010:900) https://lagen.nu/2010:900, Minerallagen (1991:45 and 2016:994) http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/minerallag-199145_sfs-1991-45 https://www.lagboken.se/dokument/andring-s-sfs/2852396/sfs-2016_994-lag-om-andring-i-minerallagen-1991_45?pageid=321582, Kulturmiljölagen (KML 1988:950 and 2016:1150) http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/kulturmiljolag-1988950_sfs-1988-950</p>	Unknown
specific national guidelines	<i>Identify any national guidelines for the preparation of EIA reports for mining activities and copy the links</i>	<p>Miljöprövningsföreläggningen SFS2013:251 http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/miljoprovningforordning-2013251_sfs-2013-251, Föreläggningen om Miljökonsekvensbeskrivningar SFS1998:905 http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/forordning-1998905-om_sfs-1998-905, Föreläggningar om miljö kvalitetsnormer (MKN) - many different ones</p>	Sweden is member of ISA, but there doesn't seem to be any national legislation and guidelines for deep sea mining.
EIA authority for mining projects	<i>Identify the state agency and related administrative level responsible for conducting the EIA of mining projects</i>	<p>Bergsstaten (exploration permit and work plan, mining concession, land use issues) - all these parts are regulated by Minerallagen above. Environmental permitting (regulated by Miljöbalken above) decided in Mark och miljödomstolen also involving Naturvårdsverket, Bergsstaten, Länsstyrelsen (regional authority) and local authorities. Construction permit (regulated by Plan och Bygglagen above) with the local municipality as the main regulatory authority.</p>	
screening	<i>Identify the types of mining projects mentioned in the legal framework. Specify those of annex I and of annex II in national</i>	<p>Unlike for instance Finland, there doesn't seem to be any limitation in the applicability of the laws (e.g. regarding max area or max amount of extracted material)</p>	



	<i>cases.</i>		
	<i>identify the criteria used to subject other (mining) projects not mentioned in the previous lists</i>	See above	
scoping	<i>identify any relevant details for the scoping phase relevant to mining activities</i>		
Environmental Impact Study	<i>identify any (mining) specific details relevant for the mandatory content of the EIS</i>	See above	
public and institutional consultation	<i>describe the main procedures for public and institutional consultation</i>		
	<i>identify any specific agencies mandatorily consulted for mining projects</i>	Bergsstaten (exploration permit and work plan, mining concession, land use issues) - all this parts are regulated by Minerallagen above. Environmental permitting (regulated by Miljöbalken above) decided in Mark och miljödomstolen also involving Naturvårdsverket, Bergsstaten, Länsstyrelsen (regional authority) and local authorities. Construction permit (regulated by Plan och Bygglagen above) with the local municipality as the main regulatory authority.	
decision-making	<i>specify the type and administrative level of the state agency responsible for decision making of mining projects</i>		
	<i>specify any specific details for the environmental impact statement related to mining</i>		
	<i>identify and copy the links of EIA data bases</i>		



Monitoring	<i>describe the measures adopted for project post-evaluation and monitoring</i>	Usually the limitations/conditions (e.g. emissions, dust etc) are specified with the issue of the environmental permit. The company is then obligated to monitor and report to the authorities, who might also carry out their own measurements or auditing of procedures.	
Links and databases	<i>identify and copy the links of databases</i>		
observations			



UNITED KINGDOM

		Main Land	Continental Shelf
legal framework	<i>Identify the main legal documents (state and regional, if applicable) that establish the EIA procedures and copy the links. Start by the most general and then the more particular</i>	Town and Country Planning (Environmental Impact Assessment) Regulations 2011 http://www.legislation.gov.uk/uksi/2011/1824/contents/made	
specific national guidelines	<i>identify any national guidelines for the preparation of EIA reports for mining activities and copy the links</i>	https://www.gov.uk/guidance/environmental-impact-assessment	
EIA authority for mining projects	<i>identify the state agency and related administrative level responsible for conducting the EIA of mining projects</i>	The applicant is responsible for conducting the EIA. The decision-maker is the relevant local planning authority: The mineral planning authority is the county council (in 2-tier parts of the country), the unitary authority, or the national park authority. Statutory regulators (Natural England and the Environment Agency) must be consulted as part of the Environmental Impact Assessment process. <i>(https://www.gov.uk/guidance/minerals)</i>	
screening	<i>identify the types of mining projects mentioned in the legal framework. Specify those of annex I and of annex II in national cases.</i>	<i>(https://www.gov.uk/guidance/environmental-impact-assessment#Screening-Schedule-2-projects)</i> An EIA is required for all of the activities listed here ('Schedule 1'): <i>(http://www.legislation.gov.uk/uksi/2011/1824/schedule/1/made)</i> For the activities listed in Schedule 2 (here: <i>(http://www.legislation.gov.uk/uksi/2011/1824/schedule/2/made)</i>), an EIA is required if the activity exceeds the corresponding threshold in column 2 AND the local planning authority considers that the activity is likely to have significant effects on the environment. Projects listed in Schedule 2 which are located in, or partly in, a sensitive area also need to be screened, even if they are below the thresholds or do not meet the criteria.	
	<i>identify the criteria used to subject other (mining) projects not mentioned in the previous lists</i>	"Projects which are wholly outside of sensitive areas and do not exceed the screening thresholds are not Schedule 2 development and should not be screened by the local planning authority." <i>(https://www.gov.uk/guidance/environmental-impact-assessment)</i>	
scoping	<i>identify any relevant details for the scoping phase relevant to mining</i>	N/A	



	<i>activities</i>		
Environmental Impact Study	<i>identify any (mining) specific details relevant for the mandatory content of the EIS</i>	<p>This is called the Environmental Statement.</p> <p>"There is no statutory provision as to the form of an Environmental Statement. However, it must contain the information specified in Part 2 of Schedule 4 (http://www.legislation.gov.uk/uksi/2011/1824/schedule/4/part/2/made), and such of the relevant information in Part 1 of Schedule 4 (http://www.legislation.gov.uk/uksi/2011/1824/schedule/4/part/1/made) as is reasonably required to assess the effects of the project and which the applicant can reasonably be required to compile." (https://www.gov.uk/guidance/environmental-impact-assessment#Preparing-an-Environmental-Statement1)</p>	
public and institutional consultation	<i>describe the main procedures for public and institutional consultation</i>	<p>After a local planning authority has received a planning application, it will undertake a period of consultation where views on the proposed development can be expressed. The formal consultation period will normally last for 21 days, and the local planning authority will identify and consult a number of different groups.</p> <p>The main types of local planning authority consultation are:</p> <p>Public consultation – including consultation with neighbouring residents and community groups.</p> <p>Statutory consultees – where there is a requirement set out in law to consult a specific body, who are then under a duty to respond providing advice on the proposal in question.</p> <p>Any consultation required by a direction – where there are further, locally specific, statutory consultation requirements as set out in a consultation direction.</p> <p>Non statutory consultees where there are planning policy reasons to engage other consultees who – whilst not designated in law – are likely to have an interest in a proposed development.</p> <p>Following the initial period of consultation, it may be that further additional consultation on changes submitted by an applicant, prior to any decision being made, is considered necessary.</p> <p>Finally, once consultation has concluded, the local planning authority will consider the representations made by consultees, and proceed to decide the application.</p> <p>(For more information see: https://www.gov.uk/guidance/consultation-and-pre-decision-matters)</p>	
	<i>identify any specific agencies mandatorily consulted for mining projects</i>	Natural England' and the 'Environment Agency'	



decision-making	<i>specify the type and administrative level of the state agency responsible for decision making of mining projects</i>	The mineral planning authority is the county council (in 2-tier parts of the country), the unitary authority, or the national park authority. (https://www.gov.uk/guidance/minerals)	
	<i>specify any specific details for the environmental impact statement related to mining</i>	Specific details are in the linked section on this page: (section on "Assessing Environmental Impacts from Minerals Extraction" https://www.gov.uk/guidance/minerals#Assessing-environmental-impacts-from-minerals-extraction)	
	<i>identify and copy the links of EIA data bases</i>	Not available (or not easy to find!) There used to be a database held by the Environmental Impact Assessment Centre at the University of Manchester, but the centre doesn't exist anymore. (see: http://www.eldis.org/go/home&id=2852&type=Organisation&more=yes#.WQByk1KZNo4) Instead, it looks possible that local planning authorities each hold their own register of EIAs. (e.g. http://www.richmond.gov.uk/environmental_impact_assessments)	
Monitoring	<i>describe the measures adopted for project post-evaluation and monitoring</i>	Mitigation measures can be secured through planning obligations which are enforceable by the local planning authority. Planning obligations may be entered into unilaterally by a developer or by agreement between a developer and the local planning authority. (from https://www.gov.uk/guidance/environmental-impact-assessment#decision-making-subject-to-EIA)	
Links and databases	<i>identify and copy the links of databases</i>	(None found)	
observations			