CIRAN

D3.1 - Fitness-for-Purpose Assessment of Regulatory Frameworks

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Prepared by	Checked by	Verified by	Approved by
Sybil Berne	Jerry Barnes	W. Eberhard Falck	Vitor Correia

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	Contributors	**Organisation**
Austria	Ludwig Hermann	Proman Consulting (PRM)
England	Malika Moussaid-Hilton Julian Hilton	Telos Aleff (TAL)
Finland	Nike Luodes Toni Eerola Hannu Panttila Nikolas Ovaskainen	Geologian tutkimuskeskus (GTK)
France	Sybil Berne	MacCabe Durney Barnes
Ireland	Jerry Barnes Sybil Berne	MacCabe Durney Barnes
Italy	Christian Marasmi	Regione Emilia-Romagna (RER)
Norway	Sigurd Heiberg	Petronavitas (PN)
Portugal	Vitor Correia	International Raw Materials Observatory (INTRAW)
Sweden	Ronald Arvidsson	Sveriges Geologiska Undersökning (SGU)
Spain	Luis Lopes Marco Konrat	La Palma Research Centre

Acronyms

AA	Appropriate Assessment
ABP	An Bord Pleanála
ADEME	French Environment and Energy Management Agency
AMRP	Austrian Mineral Resource Plan
ANI	Areas of National Interest
AONB	Areas of Outstanding Natural Beauty
APA	Agência Portuguesa do Ambiente
ASCI	Areas of Special Conservation Interest
AVG	Allgemeines Verwaltungsverfahrensgesetz
AVIs	Regional State Administrative Agencies
BAT	Best Available Techniques
BEP	Best Environmental Practice
BGS	British Geological Survey
BMF	Federal Ministry of Finance
BMK	Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology
BRGM	Bureau de Recherche Géologiques et Minières
CAB	County Administrative Board
CCDR	Regional Coordination and Development Commission
CDDA	Nationally Environmentally Protected Sites
CRIRSCO	Committee for Mineral Reserves International Reporting Standards
CRM	Critical Raw Materials
CRMA	Critical Raw Materials Act
CSDD	Directive on Corporate Sustainable Due Diligence
CSR	Corporate Social Responsibility
DECC	Department for Environment, Climate and Communication
DEFRA	Department for Environment, Food and Rural Affairs
DESNZ	Department for Energy Security and Net Zero
DGEG	Direção-Geral de Energia e Geologia
DGT	Directorate General of the Territory
DHLGH	Department for Housing, Local Government and Housing
DPSIR	Drivers-Pressures-States-Impact-Responses
DREAL	Regional Division for the Environment, Spatial Planning and Housing
EC	European Commission
ECJ	European Court of Justice
EEA	European Economic Area
EEC	European Economic Community
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EK	Mineral exploitation
EFTA	European Free Trade Association
ELD	Environmental Liability Directive
EMMP	Environmental management and monitoring programme
EPA	Environmental Protection Areas
ERMA	European Raw Material Alliance
ESG	Environmental, social and governance

EU	European Union
EWF	Extractive waste facility
GHG	Greenhouse gas
GOLDMINE	GSI OnLine Documents, Maps and InformatioN Explorer
GSI	Geological Survey Ireland
GSO	Geological Survey Organisations
GSRO	Geoscience Regulation Office
GTK	Geological Survey of Finland
ICNF	Instituto da Conservação da Natureza e das Florestas
IED	Industrial Emissions Directive
IEL	Industrial Emissions Licence
IGME	Instituto Geológico y Minero de España
IGT	Territorial Management Instruments
INSPIRE	Infrastructure for Spatial Information Directive
IPPC	Integrated pollution prevention control
IRIS	Raw Material Information System
IROPI	Imperative reasons of overriding public interest
ISPRA	Istituto Superiore per la Protezione e la Ricerca Ambientale
JNCC	Joint Nature Conservation Committee
KDD	Ministry of Local Government and Regional Development
KSO	Key Strategic Objectives
LA	Local Authorities
LAP	Local Area Plan
LGS	Local Geological Sites
LNR	Local Nature Reserves
LWS	Local Wildlife Sites
MAAC	Ministério do Ambiente e da Ação Climática
MATE	Ministério do Ambiente e Transição Energética
MECC	Minister for Environment, Climate and Communications
MHCLG	Minister for Housing, Communities and Local Government
MinroG	Raw Materials Act
MISE	Minister of Economic Development
MPA	Mineral Planning Authority
MS	Member State(s)
MWEI	Management of Waste from Extractive Industries
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organisation
NNR	National Nature Reserves
NPPF	National Planning Policy Framework
OECD	Organisation for Economic Co-operation and Development
OR	Österreichischer Raumordnungsbericht
PDM	Municipal Master Plans
PER	Exclusive Exploration Permit
PERC	The Pan European Reserves and Resources Reporting Committee
PIAE	Intra-Regional Plan for Extraction Activities
PL	Prospective licence
PLU	Local urban plan
PLUI	Inter-municipal local urban plan
PNGT	National Policy for Territorial Management

PNPOT	Programa Nacional da Política do Ordenamento do Território
PPB	Portugal Participatory Budget
PROT	Planos Regionais de Ordenamento do Território
PTR	Piano Territoriale Regionale
RA	Regional Authorities
REFIT	The Regulatory Fitness and Performance Programme
RMPZ	Raw materials priority zones
ROG	Federal Spatial Planning Act (Raumordnungsgesetz)
SAC	Special Areas of Conservation
SDG	Sustainable Development Goals
SEA	Strategic Environmental Assessment
SGU	Geological Survey of Sweden
SID	Strategic Infrastructure Development
SLO	Social Licence to Operate
SP	Strategic Projects
SPA	Special Protection Areas
SRADDET	Regional schemes for sustainable development, spatial planning and territorial equality
SRM	Strategic Raw Materials
SSDP	State Spatial Development Plan
SwAM	Swedish Agency for Marine and Water Management
TCPA	Town and Country Planning Act
TFEU	Treaty on the Functioning of the European Union
TUKES	Finnish Safety and Chemical Agency
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNFC	United Nations Framework Classification for Resources
WFD	Water Framework Directive
WHC	World Cultural and Natural Heritage
WP	Work Package

Executive Summary

The report presents the findings of the fitness for purpose of regulatory frameworks assessment in the CIRAN countries. As the departure point, this deliverable assumed that a fit for purpose regulatory framework is a framework that:

1. **Protects environmentally sensitive areas**; and
2. **Enables the sustainable extraction of materials**.

Overall, the appraisal found that most countries were applying a balanced approach to reconciling mining and environmental protection, with some moderately favouring environmental protection. The report gives a representation of the 'AS IS' situation. As of the first half of 2024, no countries have applied the requirements of the Critical Raw Materials Act (CRMA) but also have not been required to apply those derived from the Nature Restoration Law. It is therefore expected that the situation will be exacerbated over the coming years, with increasing requirement to search, identify and mine critical raw materials (CRM), but also to protected environmentally sensitive sites if regulatory frameworks were to remain the same.

The report highlights the areas that are of key concern and those that need to be addressed if all the European Union's (EU) environmental and mineral extraction objectives are to be realised. It reflects the pillars under which the information has been gathered and assessed. These points can be taken as inputs into WP6 with a view to establish how systems can be better streamlined. Any policy recommendations that may be proposed must have regard to the constraints imposed by the EU treaties, the principles of subsidiarity, and the proportionality of the actions as outlined in the working document to support the CRMA (EC, 2023d). The key concerns and barriers identified through this task are framed with those principles in mind.

The Nature Directives are largely coherent internally and with each other and provide opportunities for adequate implementation via close cooperation between different stakeholders. However, the CIRAN case-studies indicate the challenges of bringing forward mining projects in protected areas. The MINLEX study further indicated that the industry has reported implementation problems such as, inter alia, "overly restrictive" approaches in the implementation of the Directives´ provisions by member states (MS), particularly in relation to Natura 2000 sites.

Barriers to faster and more effective balanced decision-making have been identified through impact assessment accompanying the CRMA (EC, 2023e) and through previous studies or projects (MINLEX and MINLAND). The results of the fitness for purpose assessment undertaken in the task confirm many of these barriers, but also reveal others that may hinder the extraction of CRMs, while at the same time ensuring environmental protection. The impact of these barriers is likely to exacerbated with increasing demands on the regulatory systems to deliver greater levels of CRM extraction in shorter timeframes as required by the CRMA. The barriers identified are grouped under themes, as follows:

- Governance frameworks.
- Resource identification, spatial planning and designations, including planning for CRMs in land use planning and mineral planning; the designation of protected areas, issues around Strategic Environmental Assessment (SEA), Habitats Directive Assessment and Water Framework Directive (WFD) and planning for shared use and compensations.
- Streamlining administrative procedures which consider issues of fragmentation, timelines, strategic project definition; environmental assessment procedures, roles and responsibilities, documentation, one-stop-shop, pre-planning and legal challenges.
- Stakeholder engagement and social acceptability; including forms of engagement, securing stakeholder acceptance.
- Spatial data, reporting and expertise.

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1 Introduction

1.1 Background to CIRAN

With the need to cater for decarbonization of the EU's economy as envisaged under *the European Green Deal* (EC, 2024a) and to ensure security of supply to strengthen supply chains, there is an increasing demand for certain raw materials which are deemed critical. These materials, which are known as critical raw materials (CRM), are crucial in the economy and have an important role to play in the achievement of overarching policy objectives. Some CRMs resources are currently known to occur at only a few locations around the world, while commercial recovery of these resources is dominated by a single or small number of countries. Geopolitical tensions threaten supply chains and fragmented regulatory regimes can affect the sustainable extraction of these key resources.

Concomitantly, the EU has wide-ranging objectives in relation to protection of the environment through the application of the principles of precaution, prevention and rectifying pollution at source[1] which is done through a series of environmental assessments of plans and projects at different life cycle stages. A key element of the environmental policy is to ensure the protection of habitats, species and ecological networks under the Biodiversity Strategy 2030 (EC, 2020).

Balancing these policy objectives can be achieved through a coordinated and strengthened policy framework which will ensure the delivery of CRMs and promote the protection of the environment. Streamlining more efficient, effective and transparent permitting procedures throughout the mineral extraction life cycle in environmentally protected areas, would contribute to securing sustainable access to primary raw materials, whilst taking into account and reconciling requirements in environmentally protected areas.

The project will contribute to the exchange of best practices in permitting extraction activities that may affect environmental protection areas (EPAs). There is a need to review these permitting procedures, particularly in relation to legal requirements under the Birds Directive (Directive 2009/147/EC) and Habitats Directive (Council Directive 92/43/EEC), and the emerging objectives of the EU's Biodiversity Strategy 2030. A cross-sectoral policy approach is required to analyse the regulatory and policy frameworks for economic development (extraction of CRMs), and environmental protection (provisions relating to EPAs). A key element in this approach is considering social aspects (societal acceptability) critical to securing the policy objectives. Many EU countries are densely populated with poor mining legacies with a history of adverse environmental impacts which give rise to resistance to new projects.

CIRAN has three Key Strategic Objectives (KSOs):

- KSO1: Define systemic and integrated permitting procedures in environmentally protected areas.
- KSO2: Define a modern policy and social contract framework to reconciliate vulnerabilities.
- KSO3: Develop a community of practice that remains active after the project is completed.

[1] Under articles 11 and 191 to 193 of the Treaty on the Functioning of the European Union (TFEU) the EU is competent to act in all areas of environmental policy, such as air and water pollution, waste management and climate change.

1.2 Work Package 3 – Nexus of Societal Vulnerabilities

1.2.1 Overview

Work package 3 (WP3) (Nexus of societal vulnerabilities) maps and evaluates the alignment of sectoral policies and regulations at the EU and MS level. KSO1 *Define systemic and integrated permitting procedures in environmentally protected areas* is relevant to WP3. The goals of this KSO are to:

a) Benchmark good practice in permitting procedures, enabling factors and performance metrics, based on relevant case studies.
b) Provide a nexus view of cross-sectoral policy coordination and integration, covering economic, environmental and social dimensions, combined with drivers of change (social, political, economic, technological, climate change) and evolving societal needs, expressed in at least four different detailed scenarios for the coming ten years.

In addition, this WP will also particularly feed into KSO 2 *Define a modern policy and social contract framework to reconcile vulnerabilities.*

These goals are in turn reflected in the three deliverables under this WP. They are as follows:

- **Task 3.1 Fit-for-purpose assessment of regulatory frameworks –** Provides a review of regulatory frameworks and policy formulation at EU and MS level.
- **Task 3.2 Stocktaking on existing and potential competition between extraction and protected areas –** Reviews and maps existing data to determine the overlap between CRM occurrences and EPAs.
- **Task 3.3 Nexus between policy decisions and drivers of change** – Investigates the relationship between policies, drivers of change and their effects on the environment and society.

1.2.2 Objectives of Task 3.1

This task requires a fitness-for-purpose assessment of regulatory frameworks across the EU. It is based on a review of existing EU and MSs policies and the principal regulations that constitute their respective frameworks. This represents the *current situation* across the EU, but other new policy drivers will generate new regulatory requirements in relation to CRMs and environmental protection, and these are identified as *emerging issues*.

This will facilitate a systematic analysis of how different sectoral policy objectives, societal concerns and stakeholder views are aligned within permitting processes. This includes a review of policy frameworks, specific guidance, regulatory frameworks, and practices and procedures adopted during the plan-making and permitting stage, such as SEA (2001/42/EC), Environmental Impact Assessments (EIA) (Council Directive 214/52/EU), Water Framework Directive (WFD) assessment (Council Directive 2000/60/EC), Appropriate Assessment (AA) also referred to as Habitats Assessment Directive (Council Directive 92/43/EEC; Council Directive 2009/147/EC), and Best Available Techniques (BAT) for the Management of Waste from Extractive Industries (MWEI-BREF) (EC, 2018). The review is based on existing policy and directives relating to previous EC studies and projects (e.g. MINLEX, MIN-GUIDE, MINLAND and SCRREEN) (EC, 2023b; MinLand, 2024; SCRREEN, 2024). In addition, the case-studies of good practice undertaken in WP2 are utilised to inform the overall frameworks.

A comprehensive understanding of existing regulatory regimes pertaining to extraction in protected areas is developed and whether these allow the development of a systemic understanding of risks to protected areas using a source-receptor-pathway paradigm, paying attention to the legal obligations and practices which

ensure compliance with EU nature legislation (Birds and Habitats Directives) and the goals of the EU Biodiversity Strategy for 2030.

Task 3.1 is therefore focused on the fitness for purpose of the regulatory system in reconciling various interests. In this case, the task investigates if the regulatory system at EU and MS level is fit for purpose to reconcile the need for CRMs with the needs to protect the environment. In essence, it will test out the resilience of the regulatory frameworks in resolving this specific type of conflict and attempt to identify how weighting occurs. The assessment explores whether there may be a higher importance allocated to environmental protection. In summary, Task 3.1 will be particularly focused on identifying weaknesses in the regulatory frameworks which impede the development of mining activities across Europe. The EC's regulatory fitness and performance programme (REFIT) for the Nature Directives (EC, 2017d) clearly identified a level of disconnect between its intent, being the protection of Natura 2000 sites, and unexpected outcomes, such as a / the blanket ban for the exploration/exploitation of minerals in Natura 2000 sites in certain countries. There could be other 'unintended' consequences because of the regulatory framework that CIRAN needs to identify.

1.3 Relationship with Other Tasks

Table 1 illustrates the relationship with other WPs in terms of 'input from' and 'output to'. Some of the WP inputs are from other completed WPs at the time of drafting (e.g. D2.1). Other WP inputs are from WPs that are ongoing, and these inputs are preliminary (e.g. D3.2, 3.3). WP5 (Inclusion and knowledge co-creation) and WP 6 (Towards efficient policymaking) are the principal work packages into which the output of D3.1 will feed into. However, the outputs may also feed into D2.2 (Criteria for good practices in permitting). There may also be inputs from and outputs to another deliverable (e.g. for D3.2)

Table 1: Relationship with other Deliverables by Themes

Theme	WP2	WP3	WP5	WP6
Governance & Regulatory Framework	Input from D2.1 (case-studies). Output to D2.2 (criteria for good practices in permitting)	Input from D3.3 (drivers of change)	Output to D5.1 (narratives in public debate) and D5.3 (engagement for knowledge co-creation)	Output to D6.1 (policy framework) and D6.2 (policy recommendations for permitting, social contract)
Plan Preparation & Designation Processes	Input from D2.1 (case-studies).			Output to D6.1 (policy framework) and D6.2 (policy recommendations for permitting, social contract)
Permitting Processes	Input from D2.1 (case-studies). Output to D2.2 (criteria for good practices in permitting)			Output to D6.1 (policy framework) and D6.2 (policy recommendations for permitting, social contract)
Stakeholder Engagement & Social acceptability	Input from D2.1 (case-studies). Output to D2.2 (criteria for good practices in permitting)	Input from D3.3 (drivers of change)	Output to D5.1 (narratives in public debate) and D5.3 (engagement for knowledge co-creation)	Output to D6.1 (policy framework) and D6.2 (policy recommendations for permitting, social contract)

Theme	WP2	WP3	WP5	WP6
Data & Digital Tools	Output to D2.2 (criteria for good practices in permitting)	Input from D3.2 (data and mapping of CRMs & EPAs)		Output to D6.1 (policy framework) and D6.2 (policy recommendations for permitting, social contract)

In addition, the outputs of other EC projects have been reviewed and integrated into this task as required.

1.4 Structure of the Report

The report's structure seeks to integrate all relevant thematic strands, reflecting the methodology adopted and the appropriate presentation of outputs and information.

- **Executive Summary:** Provides an outline of the review and key findings of the assessment.
- **Section 1 – Introduction**: This section outlines the background to the project and this task deliverable.
- **Section 2 – Methodology and Data**: Outlines the overall methodology for appraising the regulatory fitness-for-purpose review, which adopts a qualitative and cross-sectoral approach to the appraisal.
- **Section 3 – Policy and Regulatory Context:** Sets out the EU legal and policy context in relation to protected areas and the extraction of CRMs. It further sets out the extent of overlap between CRM occurrences and EPAs. The issue is then defined.
- **Section 4 – Country Review:** Provides a profile of the countries selected and considers them in the context of the themes and topics identified.
- **Section 5 – Overall Review:** Provides a review of regulatory systems on a thematic basis and makes conclusions on overall fitness-for-purpose of existing regulatory frameworks.
- **Section 6 – Emerging Issues for Streamlining Decision-making:** The implications of new EU regulations in environmental and CRM extraction are considered.

2 Methodology and Data

2.1 Introduction

This section outlines the methodology adopted in this D3.1. The following principles have been used to assist in the development of the methodology:

- Comprehensive to consider effectiveness, efficiency, relevance, coherence and added value.
- Proportional so that the methodology is tailored to the time and data available.
- Objective and independent to deliver robust conclusions.
- Ensure an evidence-based approach in as far as possible.
- Transparent where judgement is involved.

The following elements help apply the principles which underpin the methodology adopted in the fitness for purpose assessment.

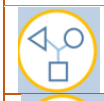
	**Problem Identification – Identify and define scope of the issue to be addressed.**
	**Mapping –** Draw on relevant expertise to assist in scoping.
	**Collection** – Identify the sources, approaches and methods, using a variety of methods and approaches. Draw on knowledge of different disciplines. Give preference to FAIR evidence[2].
	**Analysis** – Identify and establish a relevant framework to allow for comparison of fitness for purpose of different systems and provide a basis for analysis.
	**Interpretation –** Review the analysis and confirm that the results support the conclusions. Validation through review is important to ensure robust findings.
	**Presentation** – Present findings, being transparent about the purpose and acknowledging limitations, ensuring evidence availability and traceability.

Figure 1: Applying Principles

The CIRAN project utilises the DPSIR (Drivers-Pressures-States-Impact-Responses) analysis framework (European Environment Agency, 2020). Of relevance to this stage of the project is a consideration of the *drivers* in terms of policy (e.g. the Green Deal and energy transition), the *pressures* arising (e.g. in relation to the need for CRMs) and current *states* of existing regulatory regimes and their capacity to deliver. Other WPs will consider these and other key elements of DPSIR analysis.

A system in equilibrium allows environmental and mining objectives to be reconciled so that none outweighs the other. Ultimately, this is a political process seeking to reconcile competing societal demands and requirements. See Figure 2 below.

[2] Findable, accessible, interoperable and reusable.

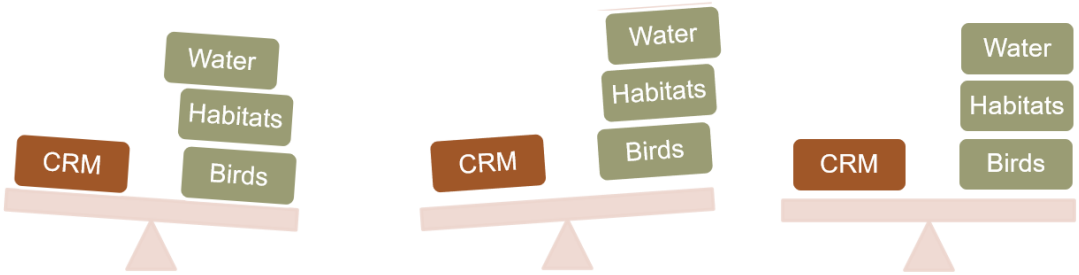


Figure 2: Balancing environmental and mineral extraction objectives

Traditionally, land-use planning and designation of protected areas are carried out as relatively isolated procedures based on sectoral policies and regulations. As has been shown in the H2020 MINATURA and MINLAND projects, there may be little interaction either between government departments responsible for the various permitting tasks such as land-use planning, environmental protection, water resources and mineral resources or between these departments, stakeholders and affected communities.

While the regulatory frameworks of individual countries are reviewed and considered against certain criteria, this is done to gain an understanding of the key issues for the EU as a whole and to provide transferrable lessons relating to good practice, in addition to identifying key common challenges in extracting CRM in environmentally protected areas.

2.2 Methodology

2.2.1 Overview

Balancing the environmental factors with the requirement for CRMs effectively involves a series of inputs, trade-offs and stakeholder inputs. This systematic approach can be expressed in a *bow-tie* format where the aim is to develop regulatory policy frameworks that provide an appropriate balance between environmental protection and the need to mine CRMs. The various factors for both environmental protection and CRM extraction at an EU, national and regional/local level is illustrated in Figure 3 below.

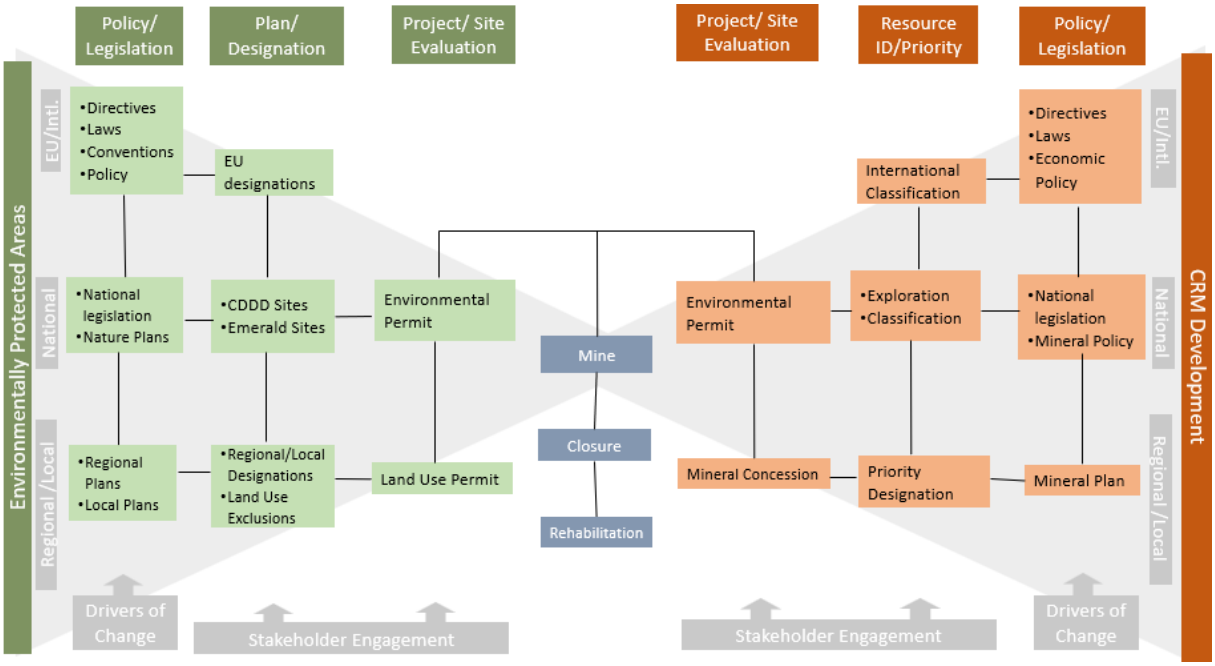


Figure 3: Bow-tie of decision-making

A key consideration in streamlining is the stage in the process when the effective decision to mine is made. The earlier the substantive decision (i.e. the decision knot), the more effective the decision-making process is. It will be seen from the review section of this report, that the CRMA will seek to bring forward that decision

in the process, ensuring certainty for investment decisions, and allowing all stakeholders to engage effectively in the process and to avail of benefits.

A systemic, cross-sectoral approach enables a balanced and integrated risk and impacts assessment during the approval, permitting and ensuing strategic resource management processes. The central resolution of this balancing of often different objectives is the *decision to mine.* The corollary of it is that there may also be a decision *not to mine* for environmental or other reasons.

A high-level risk assessment approach has been developed for the purposes of this deliverable. It considers the overall balance of risks in relation to the two key objectives of protecting designated areas and ensuring the extraction of CRMs. The approach is summarised in Figure 4 below.

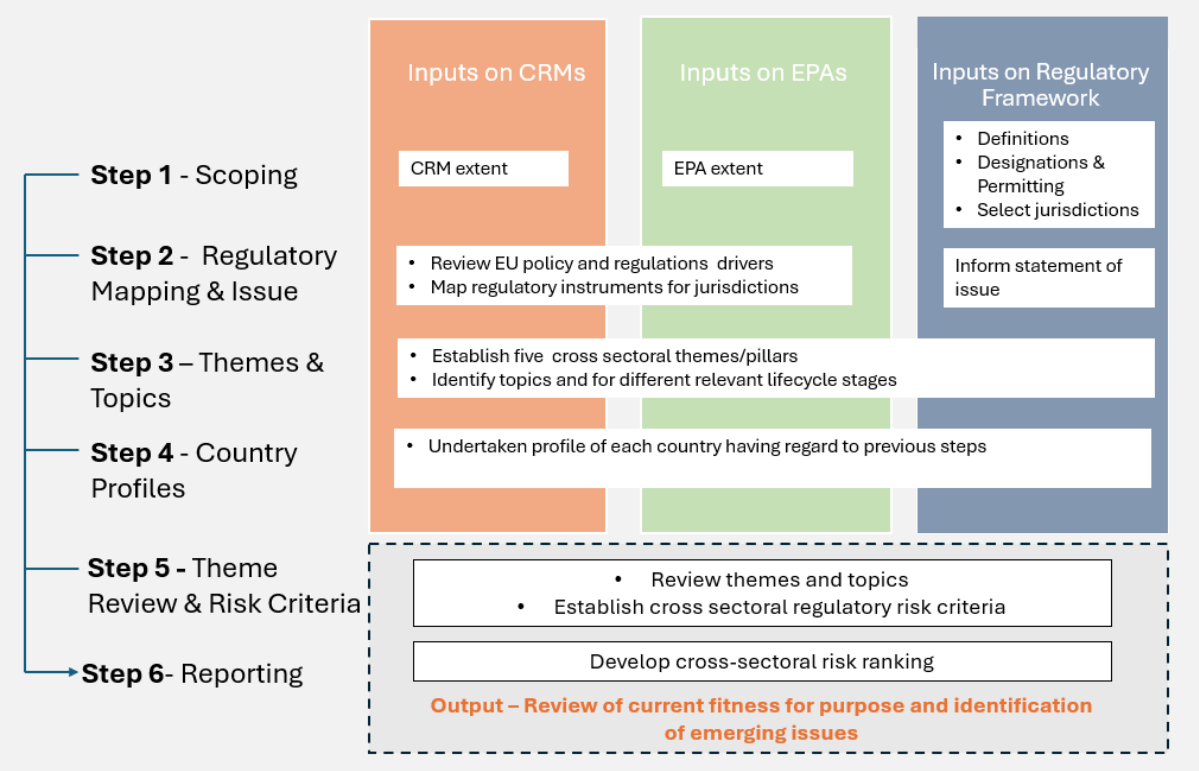


Figure 4: Outline of methodology for cross-sectoral regulatory risk assessment[3]

2.2.2 Step 1 – Scoping

Prior to carrying out the assessment, it is necessary to clearly define the meaning of 'fitness for purpose' in the context of the project. Given that the project effectively seeks to reconcile seemingly disparate and/or conflicting policies, due consideration was given to REFIT. A fitness check, first introduced as part of the EU's smarter regulation initiative, is a comprehensive evaluation of two or more interventions usually in the same policy area that are related in some way (normally by sharing the same objectives or specific procedures, e.g. reporting), thus justifying a joint analysis (EC, 2021). It assesses whether a set of interventions is fit for purpose by assessing its performance against its policy objectives. In particular, it should determine the coherence of the various measures and seek to quantify any synergies (e.g. improved performance, simplification, lower costs, reduced burdens) or inefficiencies (e.g. excessive burdens, overlaps, gaps, inconsistencies, implementation problems, and/or obsolete measures) over time (EC, 2021).

In this case, a fit for purpose regulatory framework is a framework that:

[3] Adapted from Hawchar et al, 2020.

1. **Protects environmentally sensitive areas**; and
2. **Enables the sustainable extraction of materials**.

The methodology developed for this CIRAN deliverable also has due regard for all aspects of the policy framework and supporting regulatory requirements to support CRM throughout the extractive life cycle from *exploration* to *project planning*, *operation*, *decommissioning* and *rehabilitation*. There are two principal components to the framework:

- **Plan preparation and designation** – This can relate to the preparation of higher-level policy at the EU and national level, and environmental designations, spatial plans and mineral plans at the regional and local level.
- **Permitting regulatory stage** – This relates principally to permitting prior to exploration and extraction. Permitting relating to operation, decommissioning and rehabilitation are effectively tied to permitting processes for extraction.

Given the above parameters, this task focuses on **primary critical raw materials**. The CRMs are as defined in 2023 by the fifth list of CRMs published in *Annex II of the Regulation proposal COM (2023)* (EC, 2023c), which is based on *the Study on the Critical Raw Materials* for the EU 2023 (EC, 2023h).

For the purposes of CIRAN, environmentally protected areas include European Sites, designated as Natura 2000 sites, and national/local biodiversity designations, cultural heritage areas and protected landscapes. There are other international designations (e.g. RAMSAR sites), but as these often duplicate and overlap with European or national designations, they do not specifically form part of the data review of the mapping exercise undertaken in Task 3.2.

Streamlining must consider the policy formulation and permitting frameworks. Policy development can have long lead-in times, and permitting procedures can be cumbersome, complex and uncoordinated. These can vary significantly in terms of duration and impact upon the delivery of CRMs, particularly when combined with the challenges of developing underneath or close to environmentally sensitive areas. The operational phase, decommissioning and rehabilitation phases generally will be less impacted by policy and regulatory frameworks, other than where operations give rise to significant adverse effects on the environment or where policy changes impact upon ongoing operations or plans for expansion.

In reviewing the fitness for purpose of regulatory regimes across Europe, due consideration was given to the focus of the CIRAN project, in so far as it relates to streamlining of policy and permitting processes for CRMs in environmentally protected areas. Previous studies (e.g. MINLEX, MINLAND) considered a broad legislative framework to include services, concession and transparency directives, in addition to health and safety at work regulations (EC, 2017). This report focuses on spatial planning and designation, and the environmental and associated permits required to facilitate CRM exploration and exploitation.

The scoping stage has involved considering the methodology to be adopted, the nature of the assessment framework to be adopted, timeframes for each stage and the definitions. Input from the work of other deliverables and ongoing workshops has been key in defining this scope.

2.2.3 Step 2: Regulatory Mapping and Issue Identification

This step involves a review of the international and EU policy framework which underpins the exploration and extraction of CRMs and protection of the environment. At the EU level, policy is now being developed to be cross-sectoral and integrated. The prime example of this is the EU's Green Deal which provides an overarching framework for the decarbonisation of the EU economy up to 2050. It is increasingly recognised that mineral, industrial and environmental policies are interwoven and must be streamlined and aligned to ensure delivery of all relevant objectives (EC, 2024). In addition, EC directives and regulations set the legal and regulatory provisions that must be implemented throughout the EU. This provides a policy basis for the project at the EU level.

At this stage, a consideration of the extent of the overlap between CRM occurrences and protected areas is undertaken under *Sensitivity maps of potential conflicts over natural resources usage* (Ovaskainen et al., forthcoming). This provides an indication of the nature and extent of the issue to be considered by the project and in the context of the regulatory fitness for purpose review.

2.2.4 Step 3: Theme Identification

Following the review of key regulatory instruments, and the identification of the issues to be considered, five key pillars were formulated to assist in the cross-sectoral assessment. These can be summarised as follows:

- **Governance & Regulatory Frameworks:** This pillar reviews governance frameworks for mineral planning, environmental protection and spatial planning at the EU, national, regional and local levels. There is an examination of the horizontal and vertical governance mechanisms in place across the national frameworks.
- **Plan Preparation and Designation Processes:** This pillar includes consideration of the processes involved in environmental protection and designations (e.g. Natura 2000 sites, local protected areas), mineral identification/planning and spatial plans.
- **Permitting Processes:** The number of permits required, the mechanisms for coordination and the alignment of environmental assessments for individual countries are reviewed to allow for consideration of the fitness for purpose. The review covers all elements of the lifecycle from exploration, planning, operation, decommissioning to rehabilitation. However, the emphasis is on exploration and extraction permits.
- **Stakeholder engagement and Societal acceptability:** This pillar is key to delivering sustainable development of CRM exploration and extraction and avoiding challenges and lengthy delays.
- **Data and Digital Tools:** Ensuring robust consistent EU data for CRM occurrences and classification, and relevant environmental constraints, is critical to provide a base for strategic reserve calculations and spatial planning purposes. The use of digital tools in terms of mapping, and online platforms are required to support different lifecycle stages.

Governance and regulatory frameworks are unique to each country and reflect the administrative systems that have evolved over time. Some countries have strong regional/federal government systems (e.g. Germany, Italy, Spain), while others concentrate many of the principal functions at local level (e.g. Ireland, Norway). The means of vertical coordination between different levels of government is important in contributing to the effective translation of higher-level policies in terms of environmental protection, mineral identification and resolution of spatial conflicts. Other studies have demonstrated the need for horizontal coordination of sectors/activities at each level of government to ensure appropriate outcomes (e.g. MinLand). Generally, changes to systems of national, regional or local governance are a matter for MSs, except where there is a requirement to comply with EU directives or regulations. Given that these need to be complied with in any event, a review to which extent and how successfully the EU regulations have been transposed into national law is beyond the scope of CIRAN. *Plan preparation*, particularly mineral and spatial plans, require the careful identification and classification of CRMs through the use of appropriate classification mechanisms (see 3.5.1. below). The extent of environmentally designated areas is important in determining the extent of these potential restricted areas. This can be expressed as a percentage of a country's land area that is covered by protected areas. Key in streamlining processes during the plan and policy preparation stage is how assessments are integrated, particularly with reference to the Habitats Directive Assessment, SEA and the assessments under the WFD. *Environmental designation* processes and the number and type of designations are a further aspect that need to be reviewed for the overall fitness for purpose assessment.

The main area that has potential for streamlining processes is in relation to *exploration* and *extraction permitting*. Most permitting requirements occur prior to the construction and operation of the mine and as such, the focus of the assessment is on the exploration and planning/design lifecycle stages. While closure and after-closure require more elaborate planning, this is usually done when the first permit is issued. The concept of "design for closure" implies that the closure of an extractive waste facility (EWF) is already taken

into account in the feasibility study for a new EWF and closure planning is then continuously updated during the life cycle of the EWF, taking into consideration the monitoring results.[4] There are other requirements during operation and closure stages relating to monitoring, compensation and rehabilitation which are factors taken into account in the original permitting and enforced by way of conditions of any permit issued. The topics that have been identified as being important for streamlining permitting processes are the number of permits, timeframes for those initial permits, sequencing of processes, streamlining of assessment processes and use of derogation procedures.

Stakeholder engagement and *societal acceptability* have been key barriers to developing mining projects. Within the EU, administrative and permitting systems are required to comply with requirements under the Aarhus Convention (UN, 1998) and the EU Directive on Public Participation (EC, 2003). However, it is often the measures that go beyond normal regulatory requirements that contribute to the success of the projects. The focus of the assessment in this WP is on these other measures. Examples of good practice and issues in relation to community gain programmes[5], stakeholder engagement, non-statutory consultations, community ownership and corporate responsibility are reviewed. Securing societal acceptability by local communities reduces permitting risks and the potential for legal challenges. *Data management* and *resource/reserve reporting* is an essential aspect to planning mineral development. It underpins the integration of mineral and spatial planning and assists in providing an evidence-base for the assessment of CRMs. The CRMA seeks to move towards the use of the United Nations Framework Classification for Resources (UNFC) classification to allow for EU wide assessment of resource potential (UNECE, 2019; 2021; 2021a). Coordinating data sets for mineral resources and environmental sensitivities will support streamlining and appropriate decision making, particularly at the plan preparation stage. The proper management and collection of data assists in the EIAs and AAs required during permitting stage. There is also a requirement to coordinate permitting processes through *online* and *digital* platforms.

Identification of Key Topics for themes

The next component is the identification of key topics for each of the themes. These topics, or questions are considered for each of the countries and inform the assessment of fitness for purpose. The topics for themes have been identified through a review of the literature, previous projects, inputs from other WPs, workshops and questionnaires. The experiences of other sectors with similar challenges, (e.g. onshore and offshore renewable energy) are also taken into account (EC, 2023; Energy Transition Commission, 2023). The key topics for comparative analysis are provided in the tables in Section 5.

2.2.5 Step 4: Country Profiles

The countries to be studied in depth were selected to support the analysis of fitness-for-purpose. Those countries which were represented in the consortium were selected for in-depth review of systems. As part of the mapping exercise, references for EU and individual countries were collated into a single spreadsheet database. Profiles for the countries detailed in Section 4 of this report were compiled. This has involved reviewing case-studies prepared as part of Deliverable 2.1, reviewing previous reports (e.g. for MINLAND and the MINLEX-study) and preparing preliminary country profiles. This step allowed for the identification of gaps in information to complete the regulatory profiles. This was an iterative process in conjunction with the development of the assessment framework that focused on key questions to be addressed. In addition, regulatory frameworks that evolved over the duration of the project must be reflected in final country profiles. Initial country profiles have been validated by relevant country experts. An analysis of the information was undertaken to identify gaps in information that was required to complete the assessment.

[4] Refer to Management of Tailings and Waste-Rock in Mining Activities MWEI-BREF (EC, 2018).

[5] In this context, a community gain programme is defined as a programme which commits a company to finance a service and/or facility for the local community as part of the permitting process. As these form part of permitting, they, by law, are agreed upon with the permitting authority and are to be provided.

2.2.6 Step 5: Review and Assessment

Theme and Topic Review

Information is gathered on each of the topics for the countries reviewed. This information is presented in table format in relation to the themes considered. This in combination with the country profiles facilitates an overall appraisal of each country and allows for an assessment of the overall balance of decision-making in relation to CRM extraction/exploitation on the one hand, and protection of the environment on the other. This information is brought forward to inform the next stage of the assessment, which considers the *balance within the regulatory framework*.

Cross-sectoral Assessment

The CIRAN project seeks to evaluate on a cross-sectoral basis the risks associated with having an unbalanced regulatory framework with regard to the objectives relating to CRM extraction and environmental protection through the designation of protected areas. If individual assessments of each sector are undertaken in isolation, there is a danger that the overall costs and benefits to society and the wider good will be lost, particularly in the event that there are competing societal and policy objectives. A cross-sectoral assessment seeks to take a holistic approach. The methodology has been developed based in reference to other cross-sectoral approaches particularly in relation to climate change and infrastructure (Hawchar et al., 2020; Dawson et al., 2018)

The two sectors that are the focus of this appraisal are: ensuring the *preservation of protected areas*, and: *promoting the accessibility of CRMs*. There are challenges at different planning and life cycle stages which give rise to systemic risks for the individual sector. Selection of the criteria for each sector reflects the key stages and drivers for protection and extraction in terms of establishing a knowledge baseline, evaluation, designation, permitting and ongoing monitoring. Other factors integrated into the framework include cross-sectoral environmental considerations, including the management of cultural heritage and water resources management. Developing the information matrix necessitates a review of national reports and sources of evidence to identify priority risks and relationship levels. The assessment matrix is informed by the preceding stages. In addition, expert judgment is utilised in the process to ensure the rigorousness of this assessment (Mach et al., 2017). This then provides the basis for a multi-criteria cross-sectoral assessment. It is important to note that identification of the risk can be difficult and is country specific. The final step is to provide a cross-sectoral qualitative view on the balance within a regulatory framework. However, it is only a tool to indicate that balance within the framework, and should not be taken as a scoring system for a particular country. The objective is to obtain a view on the overall fitness for purpose of regulatory systems of a number of countries to help identify the extent of the need for changes and reform to realise policy objectives.

Table 2: Summary of Assessment Criteria (Illustrative)

	Protected Area Criteria				**CRM Criteria**				**Overall Balance**
	Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5	Criterion 6	Criterion 7	Criterion 8	Total
Country 1	2	1	4	5	6	2	5	6	3.9
Country 2	4	1	1	2	1	1	1	1	1.5
Country 3	2	4	3	3	3	3	4	3	3.5
Country 4	6	6	6	1	7	6	7	6	5.5
Country 5	1	4	2	1	4	5	5	7	3.6

Score	**Meaning**	**Range**
1	Very strongly favours mining	1.0-1.4

2	Strongly favours mining	1.5-2.4
3	Moderately favours mining	2.5-3.4
4	Balanced environmental protection & mining	3.5-4.4
5	Moderately favours environmental protection	4.5-5.4
6	Strongly favours environmental protection	5.5-6.4
>7	Very strongly favours environmental protection	6.5-8.0

As this is a high-level exercise, the criteria are given equal weighting, and there is no judgement made in relation to whether one criterion is more important than another. The criteria are assessed in relation to whether they favour environmental protection or mining. A yellow box (Table 2) illustrates "balanced environmental protection and mining", with gradient increasing to dark brown which indicates a criterion that "very strongly favours mining". At the other end of the range are criteria where dark green illustrates a criterion which "very strongly favours environmental protection".

2.2.7 Step 6: Reporting

This stage involves drafting the report, including the identification of key barriers for the effective streamlining of the policy and decision-making framework and bringing forward the decision to mine as early in the process as possible. The report is the subject of an internal peer review. This provides an input into WP5 and 6.

2.3 Data Collection and Validation

The research is based on Luodes et al. (2024) and work has been undertaken as part of this report as illustrated in Table 1 above. The case-studies in WP2 follow a descriptive qualitative research approach combining questionnaires and local policy and procedures mapping and analysis (Yin, 2013). The cases for detailed scrutiny within the CIRAN project were selected in order to understand the legislative framework of the countries addressed in the cases, and the practices adopted during implementation and operations. Luodes et al. (2024) also highlight enablers of successful projects and some elements of best practice.

WP3.2 also provides important inputs into fitness-for-purpose assessment. It maps the occurrence of CRMs within or near environmentally protected areas using MIN4EU datasets. This allows for an assessment of the spatial extent of the issue on a country-by-country basis.

Data collected from WP2 and WP3.1 were reviewed between January and April 2024. Data provided were cross-checked with data from EC (2017). Individual country profiles were compiled for the purposes of this task as detailed in step 2 of the methodology. The information and data gaps identified between steps 2 and 3 were filled by way of a questionnaire to partners and external experts.

Two online workshops with the members of the CIRAN consortium were held in November 2023 to validate the approach and the assessment framework with consortium partners.

3 Policy and Regulatory Context

3.1 Introduction

In order to assess the fitness for purpose of regulatory instruments, it is necessary to understand whether they are adequate for balancing the societal needs of CRMs supply and environmental protection.

Policies and regulations, insofar as they relate to two broad topics were particularly considered:

- Mineral development and economic impacts.
- Environmental considerations, particularly in relation protected areas.

The principal aim is to understand whether there are synergies or conflicts between the thematic policy areas.

3.2 International Environmental Policy Context

3.2.1 Sustainable Development Goals

The applications of CRMs are so wide across the economy, society and industries that they are closely related to almost all *United Nations Sustainable Development Goals* (UN-Energy, 2023). The UN SDGs set out an international framework for securing global sustainable development. There are 17 SDGs which were identified through the 2030 Agenda for Sustainable Development (UN General Assembly, 2015) and were adopted by the Member States of the UN in 2015. The SDGs cover a broad range of thematic actions including water, energy, transport, sciences and technology.

Figure 5: The UN SDGs

As the MSs are signatories individually and through membership of the EU, they also work individually and collectively toward the achievement of the SDGs. The UN publishes on a yearly basis the SDG Reports which provide an overview of progress under each of the themes. The 2023 edition recognises the need to leverage environment-human well-being synergies and to achieve the objectives of the Paris Agreement. It also seeks to accelerate access to energy for all along with the shift to renewables.

3.2.2 COP 21

The Paris Agreement (UNFCCC, 2015) is a legally binding international treaty on climate change adapted by 195 parties at the *UN Climate Change Conference* (COP 21) in Paris in December 2015. It came into force in November 2016. The overarching goals are:

- To hold *'the increase in global temperature to well below 2°C above pre-industrial levels'.*
- To pursue efforts to *'limit the temperature increase to 1.5°C above pre-industrial levels'*.
- To make finance flow consistent creating a pathway to lower greenhouse gas (GHG) emissions and climate-resilient development.

The Paris Agreement set out Nationally Determined Contributions (NDCs), which includes the signatories' commitments to reducing GHG emissions, the implementation of adaptation actions, finance and capacity building. The MSs contribute together under the European Union NDCs targets which are based on the EU's 2030 emissions reductions targets and commit to at least 30% effort to meet the target as governed by the Emissions Trading System regulations, the Effort Sharing Regulation and the Land Use, Land Use Change and Forestry Regulation.

3.3 EU Policy

3.3.1 Overarching Policy

In December 2019, the European Commission published the ***European Green Deal*** (EC, 2024a), which is a set of policy initiatives. It reiterates the Commission's commitment to tackle climate and environmental-related challenges. The Green Deal is a concerted strategy with the ambitions for a climate-neutral, resource-efficient and competitive Union.

The Green Deal is a growth strategy which aims to *'transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gas in 2050 and where economic growth is decoupled from resource use'*. In parallel, the Green Deal seeks to '*protect, conserve and enhance the EU's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts. At the same time, this transition must be just and inclusive'*.

Figure 6 below shows the elements on which the Green Deal is founded.

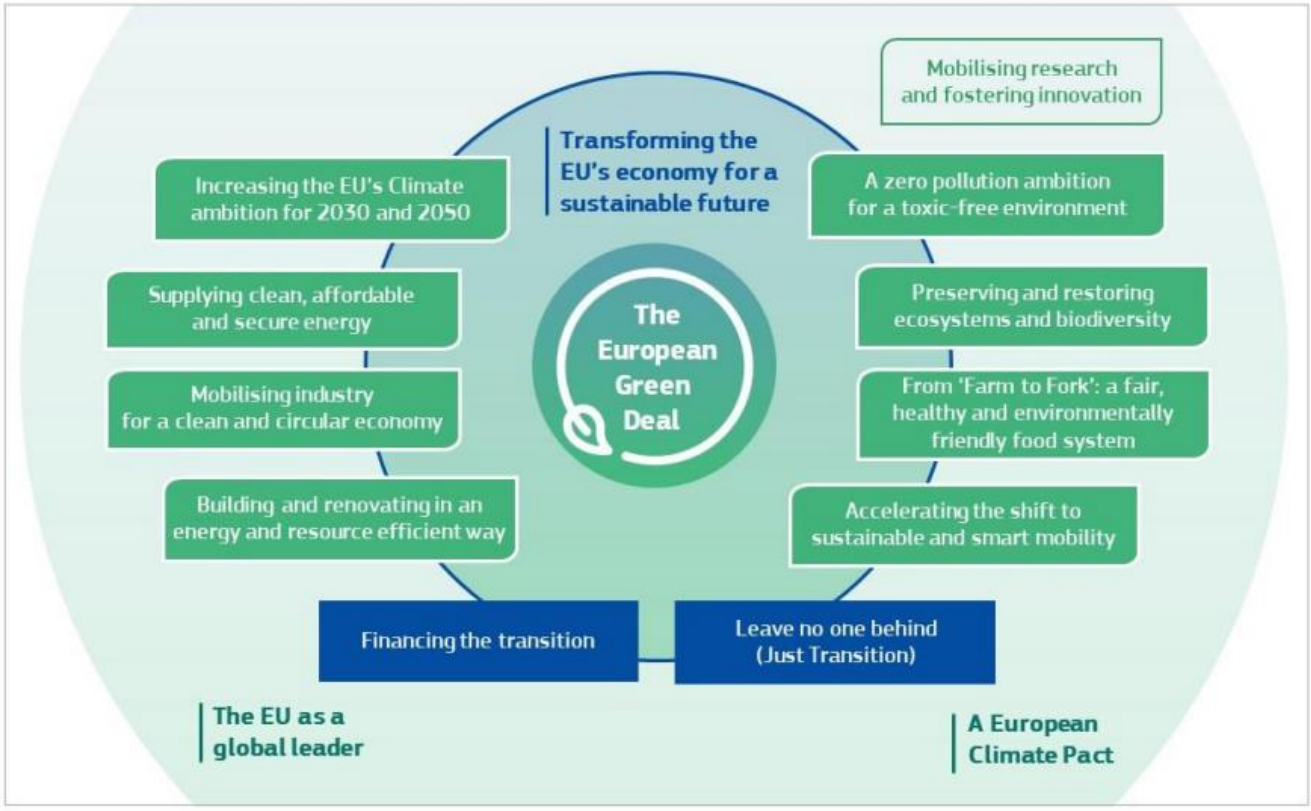


Figure 6: The European Green Deal (EC, 2019)

The Green Deal considers access to resources, a strategic security question, fundamental to its delivery. It particularly seeks to ensure the *'supply of sustainable raw materials, of critical raw materials, necessary for clean technologies, digital, space and defence applications, by diversifying supply from both primary and secondary sources'.*

By considering primary and secondary sources, the EC does not solely focus on extraction but also considers processes which allow for the recycling and recovery of raw materials. It also considers its access to resources within and outside the EU MSs to ensure a secure and reliable access to Strategic Raw Materials (SRM). This is also the first time the EC requalifies the concept of CRMs. In effect, by specifically SRMs, it clearly defines a sub-group of more strategic critical raw materials. Those are the ones at the heart of follow-up stimulation policies and regulations adopted by the Commission.

The ***Circular Economy Action Plan*** 2020 (EC, 2020a) builds on the European Green Deal to scale up the circular economy. It also reiterates the need to achieve climate neutrality by 2050 and to decouple economic growth from resource use, while ensuring the long-term competitiveness of the EU. The action plan is particularly focused on the acceleration of the transition towards a '*regenerative growth model that gives back to the planet more than it takes*'. It considers the need to keep resources consumption within planetary boundaries. The action plan aims to strengthen the EU's industrial base, foster business creation and entrepreneurship among small and medium enterprises. It also places co-creation with economic actors, consumers, citizens and civil society at the heart of the agenda.

The Circular Economy Action Plan articulates a sustainable product policy framework which promotes a move away from the typical linear pattern of 'take-make-use-dispose'. It foresees that this shift from linear to circular does not just apply to end products but across the supply chain, referring to the inclusion of the raw materials that go into manufacturing. This is particularly relevant to how batteries are dealt with, with the Action Plan proposing an evaluation of the Batteries Directive.

It also considers circularity in production processes, proposing a review of the Industrial Emissions Directive and the promotion of the use of digital technologies for tracking, tracing and mapping resources. The action plan focuses on several specific sectors, including batteries, as mentioned above, construction and buildings, food, water and nutrients. It also notes that the Commission will put forward waste reduction targets for specific streams.

During the informal meeting of the Heads of State or Government in March 2022, known as the ***Versailles Declaration*** (EC, 2022), the need to build a more robust economic base, which is more resilient, competitive and fit for the green and digital transitions, while leaving no one behind, was identified. In particular, the declaration seeks to reduce the strategic dependencies on which sectors are founded, including CRMs. The declaration states *'we will secure EU supply by means of strategic partnerships, exploring strategic stockpiling and promoting a circular economy and resource efficiency'*.

3.3.2 Minerals

The EU's demand for base metals, battery materials, rare earths and more are set to increase exponentially as the EU divests from fossil fuels and turns to clean energy systems which necessitate more minerals (EC, 2024b). The ***European Raw Materials Initiative*** (EC, 2008) is the EU's strategic plan designed to tackle the issue of raw materials access in the European Union. The initiative covers all raw materials used by European industry except materials from agricultural production and materials used as fuel. The initiative established the raw materials supply group, with representatives from EU countries, EEA countries and EU candidate countries. The initiative has three pillars:

- Fair and sustainable supply of raw materials from global markets.
- Sustainable supply of raw materials within the EU.
- Resource efficiency and supply of secondary raw materials through recycling.

The CRM list is continually evolving, with items being added or deleted.

Table 3: The 2020 and 2023 CRM Lists (EC, 2023)

2023 CRMs vs 2020 CRMs			
Antimony	Gallium	Phosphate rock	Vanadium
Baryte	Germanium	Phosphorous	Arsenic
Bauxite	Hafnium	PGM	Feldspar
Beryllium	HREE	Scandium	Helium
Bismuth	Lithium	Silicon metal	Manganese
Boron	LREE	Strontium	Copper
Cobalt	Magnesium	Tantalum	Nickel
Coking coal	Natural graphite	Titanium metal	~~Indium~~
Fluorspar	Niobium	Tungsten	~~Natural rubber~~
Legend Black: CRMS in 2023 and 2020 Red: CRMS **added in** 2023 ~~Blue:~~ CRMs **removed** in 2023			

The EU's policy is now principally expressed through the ***Critical Raw Materials Act*** (CRMA) (EC, 2024). The Act was prepared to combat the EU's heavy reliance on imports, often from a single third country and to address strategic dependencies. The EU currently relies almost exclusively on imports for many of these raw materials[6]. In relation to processing capacity, China controls 56% of the global capacity for refined lithium, 60% for refined cobalt and 58% for refined manganese (Herbert Smith Freehills, 2024). In other cases, 90% of the EU supplies of rare earths, gallium, magnesium and boron is extracted in China. The EU has access to certain resources. It could therefore, partly resolve its supply problem by developing processing capacity in Europe. The aim of the Act is, therefore, to create a secure and resilient EU CRM supply chain, to reduce the administrative burden and simplify permitting procedures for critical raw materials projects in the EU. The Act acknowledges the crucial role of raw materials as the beginning of all industrial value chains. It also acknowledges the fact that in some cases, certain CRMs are either almost exclusively sourced and/or processed in third countries, such as China or the Democratic Republic of Congo, which exposes the EU to significant supply risks. In addition, with widespread and accelerated transition toward renewable energy and digitisation, demand for some CRMs is forecast for sharp increases.

It recognises that non-regulatory efforts have not delivered access to a secure and sustainable supply of CRMs and notes the lack of regulatory framework aimed at reducing supply risks. It also recognises that the EU potential to increase its extraction, processing or recycling capacities is underexploited. The EC also considers that European knowledge of CRM occurrences is dated and not reflective of the current importance of CRMs.

In relation to waste management, it considers that existing legislation does not promote a shift towards circularity of raw materials.

As a result, the CRMA has four objectives:

1. Strengthen the different stages of the European CRM value chain.
2. Diversify the EU's import of CRMs to reduce strategic dependencies.
3. Improve the capacity of the EU to monitor and mitigate current and future risks of disruptions to the supply of CRMs.

[6]Of 28 out of 87 individual materials or groups assessed in the 2022 Study on the EU's list of CRMs, the import reliance is 100% at the extraction or processing stage, and above 80% for another 16 materials.

4. Ensure the free movement of CRMs on the single market while ensuring a high level of environmental protection, by improving their circularity and sustainability.

Given the highly strategic nature of the problem of reliance on CRMs from imports, coordination and cooperation between the States and the Commission is required. As a result, the Act reinforces a number of principles:

- Proportionality:
    - The measures relating to Strategic Projects relate to SRMs as these are the ones that are most necessary for the green and digital transition.
    - The measures on exploration are proportional to the size of each MSs territory and MSs will keep control of their own existing exploration policies.
    - National programmes of exploration are required to stimulate the development of the CRM value chain.
    - MSs are responsible for identifying and monitoring key market operators, while the Commission would engage with the MSs on a regular basis.

Instrumental to the Act is the designation of Strategic Projects which will benefit from support for access to finance and shorter permitting timeframes (15 months for processing or recycling permits and 27 for all extraction permits). A number of key articles that are of relevance to Task 3.1 are summarised in Appendix I.

In summary, from a permitting perspective, the CRMA is expected to significantly alter CRM projects so long as these are designated as Strategic Projects. Such projects will avail of fast-tracked permitting procedures using one-stop-shops. Notwithstanding this, it makes significant changes to the role of certain existing parties, particularly Geological Surveys Organisations (GSO) around Europe. These will have to work closely with the government or alone, to devise, implement, monitor and report back to the Commission on their CRM exploration programmes. It is generally considered that given the heavy reliance on data and appropriate knowledge to identify Strategic Projects, the brunt of the changes derived from the entry in force of the Act would be borne by GSOs and those organisations in charge of exploration programmes, where such do not exist at present. In addition, it is expected that given the focus on speeding and streamlining permitting procedures, competent authorities will also need to reconsider their procedures and processes.

In addition, it will push MSs to reconsider mining waste for potential reuse. Again, this may require the alteration or creation of new procedures to assess potential.

3.3.3 Industry

In May 2021, the Commission published an update of the ***New Industrial Strategy for Europe*** (EC, 2021a). The update was published in the aftermath of the fallout from the Covid-19 pandemic which highlighted vulnerabilities, dependencies and territorial inequalities. The update reiterates the need to strengthen the Single Market's resistance to disruptions and to analyse and address strategic dependencies, both technological and industrial. Through the update, it is proposed to create a Single Market Emergency Instrument which, inter alia, would seek to build a mechanism through which Europe can '*address critical product shortages by speeding up product availability'.*

To support the preparation of the update, the Commission identified 137 products in sensitive supply chains upon which the EU is highly dependent. Of these, 20 are raw materials and chemicals. 52% of these products are provided by China, highlighting the heavy reliance on external countries and therefore the vulnerability of the supply chain. The Strategy also refers to the European Raw Material Alliance (ERMA, n.d.) which is working to identify a pipeline of projects that can supply rare earth and magnets value chains, energy storage and conversion materials. It estimates that if all the projects identified by ERMA were to be delivered, it would be equivalent to providing enough EU-made rare earth magnets to support 60% of the EU annually installed wind energy capacity and up to 20% of the EU supply for projected nickel demand by 2030.

The ***Green Deal Industrial Plan*** (EC, 2023a) reaffirms the EU commitment to speeding up net-zero industrial transformation. It considers the roll-out of renewable energy, the transformation of energy and transport

infrastructure and it requires works on the diversification and strengthening of supply chains. The Plan recognises that the era of cheap fossil fuel is over and reiterates the need to accelerate the green transition which will allow for access to abundant and affordable clean energy. It takes a global view and considers all aspects of the supply chains, including the sourcing of raw materials and the creation of new technologies.

The Green Deal Industrial Strategy is based on four pillars:

- A predictable and simplified regulatory environment;
- Faster access to sufficient funding;
- Skills; and
- Open trade for resilient supply chains.

The Plan requires the shortening and increased predictability of permitting processes by defining specific time limits for the different stages of permitting. It also requires consideration of the MSs' administrative capacity and the introduction of a one-stop-shop, as a single point of contact for prospective developers, to support the entire administrative process. The Industrial Plan also envisages the designation of net-zero supply chain projects of strategic interest. These projects may be multi-country and would benefit from accelerated permitting procedures, as well as avail, in part of EU and national public funding.

The plan is underpinned by the ***Net-Zero Act*** (EC, 2023a) with a view to simplify the regulatory framework for the production capacity of products that are essential to the achievement of climate neutrality goals, such as batteries, wind turbines and an array of electricity generation and storage technologies. Although this Act does not specifically address CRMs, it stimulates the accelerated deployment of an industry that relies heavily on CRMs: renewable energy systems and energy storage.

3.3.4 Environment

The EU's environmental policy is principally expressed and implemented through the various directives, considered below. There is however an overarching environmental policy framework. The ***EU Strategy on Adaptation to Climate Change*** (EC, 2021b) sets out how the MSs can adapt to climate change and should become resilient by 2050. The strategy pursues three objectives focused on systemic, smarter and faster adaptation. It particularly supports MSs in their commitment to the Paris Agreement, discussed in further sections of this report. The Strategy is derived from the European Green Deal. The ***European Climate Law*** (EC, 2021) establishes in law the goal set out in the European Green Deal for Europe's economy and society to become climate-neutral by 2050. The law also sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. It establishes a governance framework to ensure strong coherence across Union policies with the climate neutrality objective, and a commitment to engage with sectors to prepare sector-specific roadmaps charting the path to climate neutrality in different areas of the economy.

The ***EU Biodiversity Strategy 2030*** (EC, 2020) is a suite of initiatives aimed at the long-term protection of nature and to reverse the degradation of ecosystems. A key action is to enlarge existing Natura 2000 areas, with strict protection for areas of very high biodiversity and climate value. An important target is to ensure that 30% of the land areas of MSs is covered by designated protected area status.

The Strategy also includes a proposed ***Nature Restoration Law*** (EC, 2022a), which makes restoring certain species and habitats mandatory - inside and outside the Natura 2000 network - a core objective with clear deadlines. The Law would set multiple binding restoration targets and obligations across a broad range of ecosystems, including forests, agricultural land, rivers, marine habitats and even urban areas. In total, by 2030 these nature restoration measures should cover at least 20% of the EU's land and sea areas, and all ecosystems in need of restoration by 2050. MSs are required to develop national Nature Restoration Plans to achieve these targets, with these plans being assessed by the Commission to ensure compliance. The law facilitates the expansion of the protected areas outside the existing Natura 2000 network. A project of overriding public interest, for which no less damaging alternative solutions are available, would be

determined on a case-by-case basis. While an impact assessment of the law was undertaken, there was no specific reference to mineral development or CRMs (EC, 2023). Furthermore, while there is reference to streamlining permitting procedures in relation to renewables in the preamble to the proposal, such references do not extend to CRMs.

The ***Emerald Network*** is an ecological network made up of Areas of Special Conservation Interest (ASCI). The objective of the Emerald Network is the long-term survival of the species and habitats. The Emerald Network consists of the ASCI designated under Recommendation No. 16 from the 1989 Bern Convention and Resolution No. 3 of the Standing Committee to the Bern Convention (Council of Europe, 2024). ***Natura 2000*** is an ecological network of protected areas, set up to ensure the survival of Europe's most valuable species and habitats. Natura 2000 is based on the Birds Directive (EC, 2009) and the Habitats Directive (EEC, 1992) – refer to section 3.4 below.

3.3.5 Energy

The production and use of energy account for more than 75% of the EU's greenhouse gas emissions. Decarbonising the EU's energy system is therefore critical to reach the 2030 climate objectives and the EU's long-term strategy of achieving carbon neutrality by 2050. The European Green Deal focuses on three key principles for the clean energy transition, which aim to reduce GHG emissions and enhance the quality of life of our citizens:

1. Ensuring a secure and affordable EU energy supply.
2. Developing a fully integrated, interconnected and digitalised EU energy market.
3. Prioritising energy efficiency, improving the energy performance of our buildings and developing a power sector based largely on renewable sources.

There are several supporting strategies for energy Integration, offshore renewable energy, methane reduction and hydrogen production.

The ***REPowerEU Plan*** published in May 2022 (EC, 2022b) is focused on reducing dependency on Russian fossil fuels and on the acceleration of the clean transition. This Plan is underlain by a resilient energy system (production, storage and distribution) and while much of the plan is focused on accelerating the deployment of renewable energy, it also recognises the need to diversify the supply of CRMs, the reduction of sectoral dependencies, and the need to shift to a circular economy. In the plan, the Commission aims to intensify the work on the supply of critical raw materials and to secure the supply of CRMs. It aims to '*strengthen the value chain through the identification of mineral resources and of critical raw materials projects in the European strategic interest, while ensuring high level of environmental protection, including projects that promote a circular economy and resource efficiency.'*

3.4 Environmental Directives

3.4.1 Overview

One key aspect of EU membership transposing into national legislation the EU Directives. While there is a wide range of Directives covering many topics, the focus of CIRAN is on the interaction between CRMs and environmentally sensitive sites. The notion of environmentally sensitive sites does not just imply consideration of the EU environmental Directives. These are also fundamental to framing the spatial designation of sites, the number of such sites and to guiding the assessments undertaken as part of permitting procedures. Given the focus of CIRAN, not all Directives have been subject to the same level of scrutiny. This review focuses on those Directives that have significant implications for the planning and permitting of critical raw materials projects, particularly those within environmentally sensitive areas.

3.4.2 Environmental Assessments and Designation

The ***Strategic Environmental Assessment (SEA) Directive*** 2001/42/EC (EC, 2001) aims to ensure a high level of environmental protection. It sets out a procedure to ensure that environmental considerations are taken into account when preparing, adopting and implementing certain plans and programmes. The Directive applies to public plans and programmes that have been prepared and/or adopted by competent authorities and that provide a framework for future development consents of individual projects. This includes spatial land use plans and mineral plans. This Directive provides a very good opportunity to consider and resolve spatial conflicts through environmental sensitivity mapping. All likely significant effects on different aspects of the environment must be assessed strategically. Those elements of the environment that need to be considered include biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

The ***Environmental Impact Assessment (EIA) Directive*** 2014/52/EU (EC, 2014) builds and expands upon the preceding EIA Directives. By way of summary, the EIA directive aims to ensure a high level of environmental protection and that environmental considerations are integrated into the preparation and authorisation of projects. It covers impacts upon flora, fauna, soils, water, air, climate, cultural heritage, material assets and it also covers impacts upon human beings, including human health. EIAs can include assessments of socio-economic conditions, including impacts upon population and regional economy, although in-depth assessments in relation to social and economic factors are usually considered separately.

The Directive includes two annexes, Annex I and Annex II, that together identify the projects and relevant thresholds that trigger an EIA. For projects listed in Annex I, an EIA is mandatory. MSs decide on a case-by-case basis whether Annex II projects require an EIA. Thresholds are set in Annex II. Some projects may not be above the threshold, but may still require an EIA, if the project is likely to have significant effects on the environment. There are a number of projects that can be associated directly or indirectly with CRMs that are listed under Annex I. The most relevant one is item 19, which includes quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction, where the surface of the site exceeds 150 hectares. Annex II specifically lists extractive projects, including quarries, open cast mining, and underground mining. Appropriate alternatives must be considered and the reasons for selecting the preferred alternative must have regard to the effects on the environment. However, the preferred alternative does not have to be selected solely on environmental grounds, as other technical and economic factors may apply.

The procedure set out under the EIA Directive is similar to that set out under the SEA Directive. While the scope of the two assessments usually differs, much of the work done under the SEA can be built upon for the EIA. Alternatives identified during the SEA may be relevant for the EIA, some of the data gathered under the SEA may be used to form the baseline for the EIA. Article 2(3) makes it mandatory to coordinate and/or join assessment procedures for an EIA and an AA, and the Commission has published guidance on that matter (EC, 2016).

There are opportunities for streamlining environmental assessments and this has been undertaken for other project types (e.g. energy) (EC, 2013). Consideration of shorter environmental assessment timeframes and simplified procedures are increasingly prevalent in other industries, particularly in renewable energy.

The Directive sets out the process to examine the anticipated environmental effects of a proposed project. Typical EIA procedures include *screening, scoping,* preparation of the *environmental impact assessment report (EIAR)* by the developer for submission to the competent authority, and *consultation*. It is a principal assessment of a proposed project's impacts on the environment, and this is undertaken by the competent authority when granting a consent for development. Any likely significant effects must be considered and assessed. It is only those effects that are likely to be significant that need to be focused on. It should be undertaken alongside the project design phase to ensure that it informs the design as required, including the incorporation of mitigation measures. Project promoters or developers are tasked with preparing the EIAR that is submitted to the competent authority as part of the permitting process. The same EIAR may be submitted to different consenting authorities for different permits. This can give rise to consistency issues

and coordination between competent authorities, which may be focusing solely on different aspects of the project (e.g. waste management, spatial planning, pollution control).

The Directive requires the use of mitigation measures to avoid, prevent or ameliorate the significance of effects, particularly those that are significant. The competent authority may still grant consent where there are significant effects upon an aspect of the environment (e.g. impact upon groundwater) and may balance this negative effect against other benefits of the project (e.g. the production of critical raw materials). This is generally explained in a reasoned conclusion by the competent authority.

The Directive also requires participation of the public in the process. There is ample case law in relation to EIA. Following reports of court cases in several MSs, the Commission confirmed that project splitting is disallowed (EC, 2021), and that the cumulative assessment shall be taken into account. At EU level, there is guidance on EIA (EC, 2017a) but not specific to extractive industries.

The ***Habitats Directive*** 92/43/EEC **(**EEC, 1992) along with the ***Birds Directive*** 2009/147/EC (EC,2009), aim to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the EU MSs. Together, these Directives set up a coherent network of sites (the Natura 2000 Network) hosting habitats and/or species that should be maintained or restored at favourable conservation status according to the terms of the Directives. Any plan or project likely to have a significant effect on a site within the Natura 2000 network is subject to an AA of the implications for the site in view of the site's conservation objectives (Habitats Directive, Article 6(3)). The AA decision is binding and determines whether a plan or project may proceed, subject to specific provisions set out in Article 6(4).

The Habitats Directive assessment undertaken in accordance with article 6(3), is generally articulated around three steps: screening (article 6(3)), AA (article 6(3)) and derogation procedure (article 6(4)). The figure below details the assessment as set out under article 6(3) and 6(4) of the Directive.

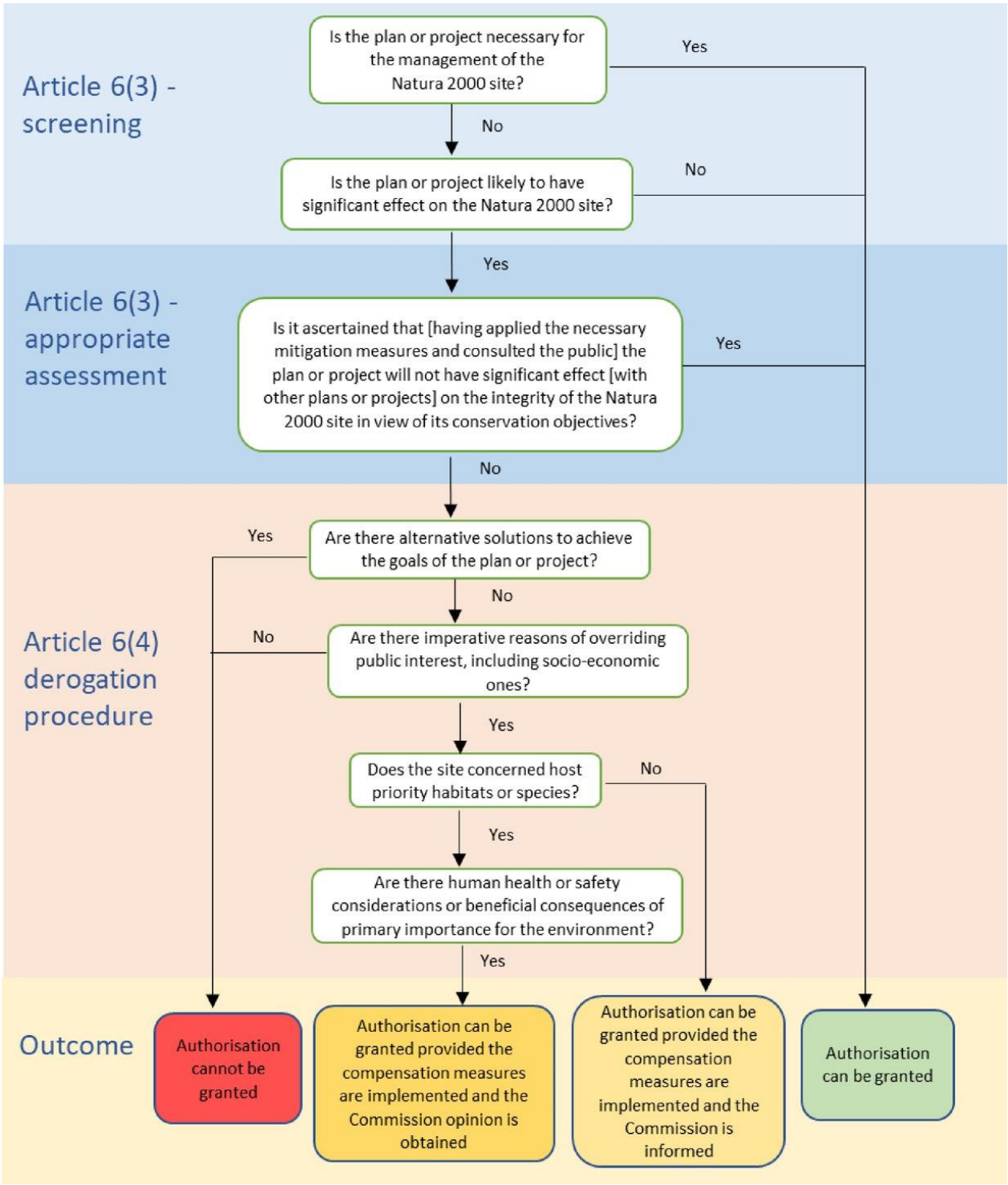


Figure 7: Flow chart setting out the procedures as described under articles 6(3) and 6(4) (EC, 2021)

In some respects, the Directive requires that MSs and competent authorities use an absolute approach in relation to plans/programmes and projects subject to appropriate assessment. In effect, no development can result in adverse effects to Natura 2000 sites' integrity. However, as for the WFD (EC, 2000), it does not fundamentally forbid projects or plans to overlap, either in whole or in part, with a Natura site.

The 2021 guidance (EC, 2021c) generally concerns the application of article 6(3) and article 6(4). Where a development may have an adverse effect upon the integrity of a Natura 2000 site, under Article 6 (4) it may still proceed where there are *imperative reasons of overriding public interest* (IROPI). The guidance provides definitions for a number of terms:

- *Imperative* means the plan or project serves an essential public interest, rather than private interest;

- *Overriding* means the interest served by the plan or project outweighs the harm (or the risk of harm) or the risk of harm to the integrity of the site as identified in the AA;
- *Of public interest* means for instance that it is a fundamental part of public policies for the State and society.

Compensation is an important aspect of any IROPI case, and this can be provided at the plan or project level, but more often than not it is done at the project stage. IROPI justification for mining is very challenging, given that these projects are put forward by private developers, and it is difficult to demonstrate that they are in the public interest. Rehabilitation is an important aspect of mineral development, but generally cannot be regarded as compensation under Article 6(4) of the Directive. However, under very particular circumstances, the rehabilitation of a mining site without adverse effect on a Natura 2000 site could provide appropriate and advanced compensation measures for another extractive project at a different site, where adverse effects cannot be ruled out and where the alternative solutions and IROPI tests can be met.

The ***Guidance Document on Non-energy Mineral Extraction and Natura 2000*** (EC, 2011) highlights the importance of utilising the spatial planning frameworks available as it provides for a more balanced development framework at an early stage of the planning process, taking into account social and economic, as well as environmental factors. In this context, spatial planning is a particularly useful tool for examining how to support economic development whilst at the same time avoiding or reducing, wherever possible, potentially negative impacts on the natural environment, including preserving the integrity of Natura 2000 sites. Consideration of alternatives is an important aspect of this decision-making. It also facilitates identification and mapping of potential conflicts at an early stage.

The relationship between EIA and AA is important, the EIA process does not replace the need for an AA, and neither procedure can override the other. One of the key distinctions between EIAs and AAs, apart from the fact that they measure different aspects of the natural environment and have different criteria for determining 'significance', is how the outcome of the assessment is followed. In the case of an AA, where significant effects are identified, it cannot progress unless it goes through the IROPI process. Where significant effects are identified as part of the EIA process, a development can proceed considering other balancing factors.

A comparison of the procedures for Appropriate Assessment, EIA and SEA are provided in the table below.

Table 4: Comparison of Procedures under SEA, EIA and AA (EC, 2011)

	SEA	EIA	AA
Types of develop-ments targeted	Any **plan** or **programme** (a) prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which sets the framework for future development under the EIA Directive and (b) likely to have significant effect on environment	All **projects** listed in the EIA Directive	Any **plan** or **project** which –- either individually or in combination with other plans/projects –- is likely to have a significant effect on a Natura 2000 site
Impacts Assessed	Likely significant effects on the environment, including on aspects such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material	Direct and indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative significant effects on …. Biodiversity, population,	The Assessment should be made in view of the site's conservation objectives relating to species or habitats

	SEA	EIA	AA
	assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors	human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors	
Who carries out the assessment	The competent authority taking into account information supplied by the developer in documentation	The competent authority taking into account information supplied by the developer in the EIAR	
Required consult-ations	Compulsory with environmental authorities and the public	Compulsory with environmental authorities and the public	Not compulsory, but encouraged
How binding are outcomes?	The environmental report, as well as the opinions expressed **shall be taken into account** during the preparation of the plan or programme and before its adoption or submission to the legislative procedure	The results of consultations and the information gathered as part of the EIA **must be taken into consideration** in the development consent procedure	**Binding.** The competent authorities can agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site

3.4.3 Waste Management and Pollution Control

The ***Industrial Emissions Directive*** (IED) PE-CONS 87/23[7] (EC, 2024c) amends Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) and supersedes several directives that focus on waste management and the integrated pollution prevention and control (IPPC) directive. The original directive did not specifically apply to non-energy extractive industries but did apply to some related or cohabiting activities (waste management, emissions to water or air). The recent revision applies directly to non-energy extractive industries. This results in a requirement for an environmental licence/permit (IEL), which is often separate and distinct from a development consent permit. Usually, the same EIAR will be submitted with both applications. The Directive provides an integrated approach to emissions for air, water and soil and requires the use of best available techniques. Article 12 sets out permitting requirements. The Directive also considers GHG emissions. A number of general principles apply to IEL (article 11), including appropriate preventive measures must be taken against pollution; BATs are to be applied and necessary measures are to be taken upon definitive cessation of activities to avoid any risk of pollution and return the site of operation to the satisfactory state.

BATs are the subject of exchange of information between MSs, the industries concerned, Non-Governmental Organisations (NGOs) and the Commission. Permit holders are required to supply information to the competent authority on an annual basis to allow for the monitoring of emissions.

The IED also includes a form of derogation that would allow, in specific circumstances, for one to exceed the emission levels associated with BATs. This is only allowed in cases where an assessment shows that the achievement of emission levels associated with the BAT as described in the BAT conclusions (cf. Article 4 of the IED) would lead to disproportionately high costs in comparison to:

- the environmental benefits due to the geographical location; or

[7] At the time of drafting the adopted directive text had not been published.

- the local environmental conditions of the installation concerned; or
- the technical characteristics of the installation concerned.

In any case, it is the duty of the competent authority to ensure that no significant pollution is caused and that a high level of protection of the environment as a whole is achieved. Such derogations may be obtained for a temporary period of not exceeding nine months, for the purpose of testing and use of emerging technique.

The new iteration of the Directive was adopted in April 2024. It will increase the focus on energy, water and material efficiency and reuse, in addition to promoting the use of safer, less toxic or non-toxic chemicals in industrial processes. Importantly, it now applies directly to the non-energy extractive industry. MS have 22 months to incorporate the new provisions into national legislation.

The ***Waste Framework Directive*** 2006/12/EC (EC, 2006b) provides an overall framework for waste management. However, the effect of Article 2(1)(b)(ii) of the Directive is to exclude from its scope 'waste from prospecting, extraction, treatment and storage of mineral resources and the working of quarries where they are covered by other legislation. This area of regulation is covered by the Extractive Waste Directive.

The ***Extractive Waste Directive*** 2006/21/EC (EC, 2006a) requires any operator responsible for managing extractive waste (i.e. the waste generated by mining operations) to obtain a permit. The measures contained in the Directive cover waste management from prospecting to extraction, treatment and storage of waste including tailings, waste rock, overburden and topsoil. The Directive requires, amongst others, that all operators prepare a waste management plan, which ensures the appropriate planning of waste management options with a view to minimising the generation of extractive waste and its harmfulness, encouraging waste recovery and securing its long-term disposal. The Directive also contains measures for major accident prevention and information. Operators are responsible for enacting major-accident prevention policies for each site. Although the Directive does not require a permit for all the operations falling within its scope, the submission of waste management plans generally fits well within environmental permitting systems.

The ***Best Available Techniques Reference Document for the Management of Waste from Extractive Industries, in accordance with Directive 2006/21/EC,*** (EC, 2018) identifies the key environmental issues relating to managing mine waste (e.g. metal contamination of plants, soils, groundwater, human health and impacts upon biodiversity) in the long-term. The guidance aims at providing extractive industries, competent authorities and other relevant stakeholders with up-to-date information and data on the management of extractive waste, and: supporting decision makers by providing a list of identified BAT to prevent or reduce as far as possible any adverse effects on the environment and human health brought about as a result of the management of extractive waste.

The ***Environmental Liability Directive (ELD)*** 2004/35/EC76 (EC, 2004) establishes a framework for environmental liability based on the "polluter pays" principle, with a view to preventing and remedying environmental damage from "events, acts or omissions". Under the terms of this Directive, environmental damage includes direct or indirect damage to species and natural habitats protected at community level by the Birds Directive or by the Habitats Directive but excluding acts authorised under Article 6(3) and 6(4) of the latter. The liability scheme applies to certain specified activities where it is possible to establish a causal link between the damage and the activity in question. The public authorities are responsible for ensuring that the operators responsible take or finance the necessary preventive or remedial measures themselves.

3.4.4 Water Directives[8]

The ***Water Framework Directive (WFD)*** 2000/60/EC (EC, 2001) establishes a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater. It seeks to maintain and improve the aquatic environment through the achievement of good quality status known as 'Good Status'. 'Good Status' is comprised of four assessments: ecological status of surface waters, chemical status of surface waters, chemical status of groundwater and quantitative status of groundwater. Achieving good status involves meeting certain standards for the ecology, chemistry and quantity of waters. A key requirement is to establish river basin water management plans. Mining activities or potential projects need to be considered as part of the preparation of the management plans. Assessments carried out would consider cumulative effects on water resources in a watershed. The Directive also contributes to the progressive reduction of emissions of hazardous substance to water.

The WFD is particularly relevant for the mining operations given the potential for dewatering and discharges from tailings and other stages of mining exploration and exploitation. Mining operations are subject to assessment under Article 4 of the Directive and this assessment is usually integrated into the permitting process. Where there is potential for a deterioration in water quality, exemptions may be applied as a result of new sustainable human development activities (Article 4(7)). This can include extraction of CRMs. Projects must demonstrate overriding public interest and there is much overlap with the IROPI process under the Habitats Directive.

The ***Groundwater Directive*** 2006/118/EC (EC, 2006) aims to prevent and control groundwater pollution, setting down measures including the definition of criteria for the assessment of good groundwater chemical status and of establishing criteria to determine starting points for reversal. Overall, the Directive is said to complement the provisions preventing or limiting inputs of pollutants into groundwater covered by the WFD and aims to prevent the deterioration of the status of all bodies of groundwater.

The ***Flood Directive*** 2007/60/EC (EC, 2007a) establishes a framework for the assessment and management of flood risks to reduce the negative consequences of flooding on human health, economic activities, the environment and cultural heritage. This is usually integrated into the provisions of the EIAR for individual projects.

3.5 International Mineral Resource Classifications

3.5.1 Overview

Mineral resources reporting and classification is important for the supply of CRMs and this is recognised by the CRMA. It is needed for strategic planning purposes. There are several types of mineral reporting systems in use around the world, and when considering the EU level, there are wide disparities among MSs in relation to the use and type of reporting, with some countries using several of them. Belgium, Luxembourg, Malta and the Netherlands do not use a specific reporting system. Others, such as Austria, France, Germany, Greece, Ireland, Portugal, Spain, Sweden and the UK use derivatives from the Committee for Mineral Reserves International Reporting Standards (CRIRSCO) system (Kot-Niewiadomska & Galos, 2019). Countries formerly part of the Soviet Union normally use national systems, adapted from the Soviet GKZ "ГКЗ" classification. Other countries such as Cyprus and Italy use their own national classification.

The Committee for Mineral Reserves International Reporting Standards (CRIRSCO, 2023) is an international association of fifteen regional organisations from around the world, which promotes best standards in international minerals reporting. The CRIRSCO International Reporting Template provides the basis for the development and periodic updating of individual standards, such as the PERC (The Pan European Reserves

[8] This section does not include a review of the Marine Strategy Framework Directive (MSFD) 2008/56/EC as CIRAN relates to terrestrial development.

and Resources Reporting Committee) Reporting Standard, the Australasian JORC Code, or the Canadian CIM Definition Standards and NI 43-101 legislation.

The United National Framework Classification for Resources (UNFC) (UNECE, 2021a) is an international scheme for the classification and management of resources, encompassing oil & gas, minerals, renewables and water. The United Nations Economic Commission for Europe recognises the essential role of CRMs and works to align them with the UN SDGs. The overarching goal is to secure a resilient, sustainable and ethical supply of CRMs for the transition to a net-zero economy. Hungary, Slovenia and the Ukraine have been using this classification for mineral deposits.

3.5.2 CRIRSCO Aligned Reporting Codes

CRIRSCO-aligned reporting codes, such as the European PERC Reporting Standard, the South African SAMREC, or the Canadian CIM Definition Standards, were developed to provide the financial world with a tool to more reliably judge the viability of mineral exploration and mining projects. While originally the assessments focused on geological, extraction and processing technology and related economic aspects, in recent years it has become apparent that the potential viability of projects also depends on the environmental, social and governance (ESG) context. Thus, the purpose of CRIRSCO-aligned reporting is to separate potentially viable projects from those that, for a variety of reasons, will not be viable. These reports use consistent terminology and provide guidelines for the quality assurance used in company estimates of mineral resources and mineral reserves.

The CRIRSCO template distinguishes different levels of uncertainty over the mineral occurrence (the resource) and how much of it is likely exploitable (the reserve), including assessments:

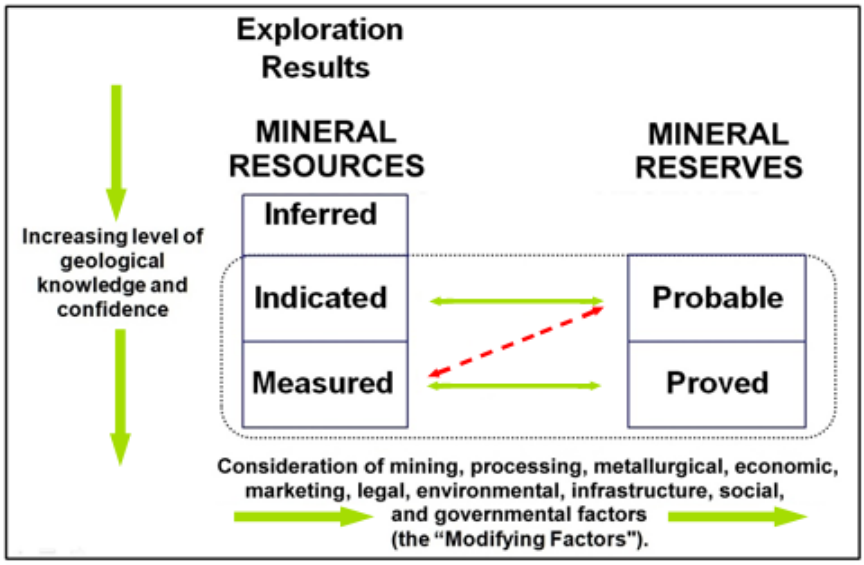


Figure 8: Mineral resources and reserves according to CRIRSCO definitions (CRIRSCO, 2023)

The reporting undertaken under the CRIRSCO template is managed by regional members that are responsible for adjusting the reporting template to the requirements of regional securities and market authorities. For this reason, companies typically utilise the code applied in the countries where they are (or pretend to be) listed. CRIRSCO-aligned reporting codes include:

- JORC Code, which is Australasian but commonly used in Finland, Greece, Ireland, Portugal, Spain, Sweden and the UK.
- PERC Reporting Standards, which is European-led and commonly used in the UK, Ireland, Sweden, Norway and Finland, Spain.
- NI43-101, which is Canadian but also used in Finland, Portugal, Spain, Sweden and the UK.

- Russian Modified (NAEN) Code, used by a number of MSs formerly part of the Soviet Union.
- Other codes which are not used in Europe or by MSs but are used around the world (e.g., Brazil, Chile, South Africa).

These codes follow the same set of principles and use the same definitions, and as a result, there is consistency across CRIRSCO-aligned reports allowing for comparison. A key principle of all CRIRSCO-aligned reporting codes is competence, which requires that the reporting be based on work that is the responsibility of a suitably qualified and experienced person (referred to as a Competent Person or a Qualified Person) who is an experienced professional member of a Professional Organisation with an enforceable code of ethics and disciplinary process, which includes the powers to suspend or expel a member. The Competent/Qualified Person should consider the protection of the natural environment and the safety, health and welfare of the public in the assessment of mineral resources and reserves. These considerations are accounted for under the modifying factors (Figure 8 above and Table 5) which therefore must acknowledge environmental and social impacts of development and ensure that mitigation measures and remedial measures are considered.

Table 5: Environmental and Social Aspects in CRIRSCO-Aligned Codes (Kot-Niewiadomska & Galos)

Criteria	Explanation
Mineral Rights and Land Ownership	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area • Location plans of mineral rights and titles. It is not expected that the description of mineral title in a technical report should be a legal opinion
Other	• The effect, if any, of natural risk, infrastructure, environmental, legal, marketing, social or governmental factors on the likely viability of a project and/or on the estimation and classification of the Mineral Reserves • The status of titles and approvals critical to the viability of the project, such as mining leases, discharge permits, government and statutory approvals • Environmental descriptions of anticipated liabilities. Location plans of mineral rights and titles

While land ownership issues are addressed, the CRIRSCO template does not clearly delineate other crucial social factors, such as community engagement, social acceptance, cultural heritage, and broader societal impacts. However, it's worth noting that efforts are underway to expand and develop the societal dimension within the reporting standards. This is exemplified by the latest version of PERC's Mineral Project Evaluation Report Template, released in May 2024, which acknowledges a broader range of social considerations beyond land ownership and reflects the evolving nature of the reporting standards.

As noted in preceding paragraphs, some EU countries use one or more derivatives, specifically the JORC, NI43-101 and PERC. Reporting under the JORC code requires consideration for waste and process residue and for social license to operate. Under the NI43-101 code requires consideration of social and community requirements but appears less specific than the requirements of JORC. The latest version of PERC explicitly requires consideration of both environmental and social factors, aligning with the growing emphasis on comprehensive sustainability reporting.

Reporting under the JORC code requires consideration for waste and process residue and for social licence to operate. Under the NI43-101 code requires consideration of social and community requirements but

appears less specific that the requirements of JORC. Under PERC, there is a requirement to consider environmental and social factors.

3.5.3 UNFC Classification

The UNFC was developed as an umbrella classification framework for governments, industry and finance to strategically assess their oil, gas and mineral inventories with a view to developing policy planning. In recent years the subject area was widened to include a variety of energy conversion systems (fossil fuel, renewables such as wind, hydropower, or geothermal systems, as well as nuclear energy systems) and water resources. The UNFC draws on a wider range of data, from early-stage data obtained from geological reconnaissance or statistical forecasting to information collected by different reporting templates, including CRIRSCO. To facilitate longer-term strategic planning, it also encompasses projects that are currently not economically viable, since the economic context, technologies and ESG context can change over time.

The UNFC framework aims to assess the levels of confidence with which the quantities of minerals extractable by a project can be predicted. It has been designed to meet the needs of policy formulation, strategic resource management, corporate business processes, and financial capital allocation. It uses a principles-based system which employs the three fundamental criteria of environmental-socio-economic viability (E), technical feasibility (F) and degree of confidence in the resource estimate (G). These criteria are split into categories, which, in turn, can be split into sub-categories. The three criteria are graphically represented along three axes as can be seen in Figure 9 below. The class along each axis can be expressed in a numerical form to create a code.

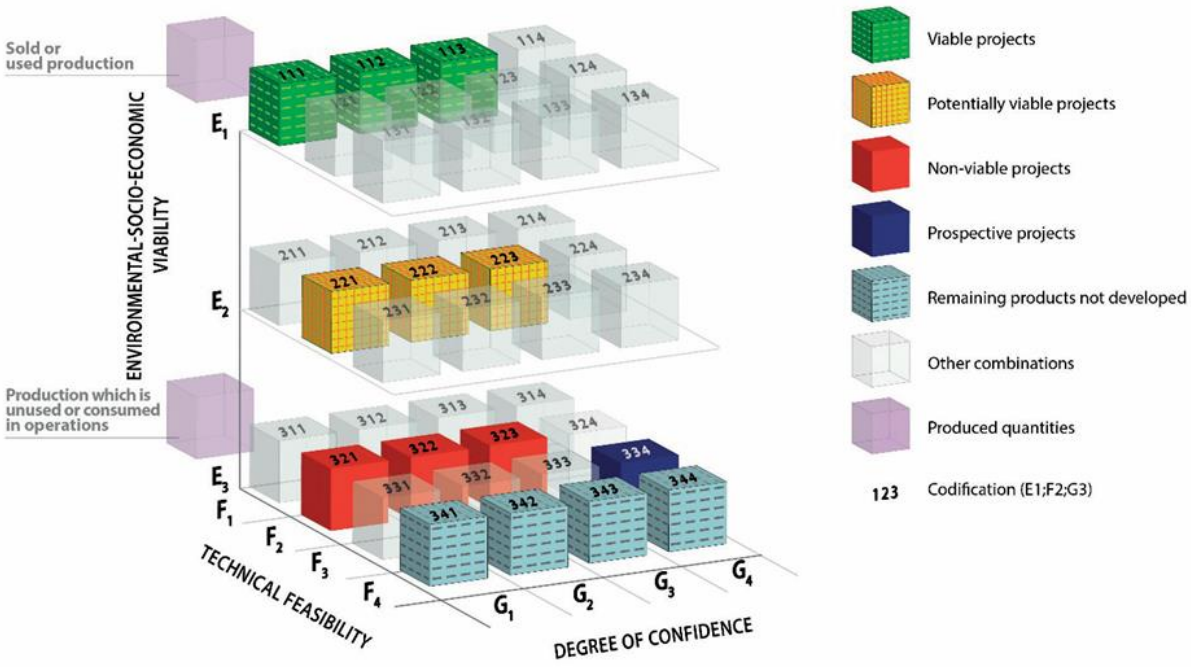


Figure 9: UNFC Categories and Examples of Classes.

Classification occurs on a given date. It is done according to:

a) Produced quantities that have been sold or used;
b) Produced quantities which are unused or have been consumed in operations;
c) Quantities of known product that may be produced in the future. This is defined by technical and environmental-socio-economic studies;
d) Remaining quantities of product not developed by any project;

e) Quantities of a product that may be produced in the future from prospective projects. Again, this requires the use of technical and environmental-socio-economic studies;
f) Remaining quantities of product not developed by any prospective project.]

The UNFC is a voluntary classification system, and it does not require the public disclosure of estimations.

The UNFC provides the following classifications:

- **Viable projects** are defined according to several categories. 'On Production' projects are ongoing active projects producing and selling products. 'Approved for Development' implies that all permits and financing have been approved and arranged and that construction is underway or due to start imminently. 'Justified for Development' are projects which are technically feasible, environmentally, socially and economically viable and are expected to successfully secure all required permits.
- **Potentially Viable Projects – Development Pending** are projects which are subject to ongoing project-specific technical studies (including additional data gathering) or for which project feasibility studies and other socio, environmental and economic studies are complete and have confirmed the viability and/or have identified optimum scenario developments. Some of these projects may have non-technical contingencies that are actively being resolved. In this case, contingencies are understood to be directly related to the developer.
- **Potentially Viable Projects - Development on hold** are projects which are deemed to have a reasonable chance of achieving viability but that are experiencing major non-technical contingencies (social or environmental issues). In this case, contingencies are coming from external parties which make decisions on the projects and where there is no clear timeline for the resolution.
- **Non-viable projects – Development Unclarified** are projects at early stages of technical and environmental-socio-economic evaluation and/or in need of significant further data acquisition. Their potential as a viable development is unclear.
- **Non-viable projects – Development not Viable** are projects of insufficient potential to warrant further data acquisition or the removal of contingencies.
- **Remaining products not developed from projects** regards quantities that are not developed from projects but may be in the future should new technologies be developed.

In summary, the UNFC provides a method and framework against which natural resources can be estimated and categorised. Its systematic format allows for comparison to be drawn amongst users of the framework.

Article 19 of the CRMA requires MSs to classify mineral occurrences using the UNFC system. Unlike the CRIRSCO-aligned codes, UNFC also permits the classification of mineral deposits that are currently not viable for any reason (economic feasibility, societal acceptability, permitting issues, market conditions, etc.), which is useful for a country or EU-wide assessment of mineral inventories. Furthermore, under the CRMA, MSs should make publicly available the information acquired, where appropriate, using the framework of the ***Infrastructure for Spatial Information Directive (INSPIRE)*** (EC, 2007).

3.6 Extent of CRMs and Environmental Designations

A key task in the CIRAN project is to determine the extent of CRM deposits that are affected by environmental designations. Ongoing in CIRAN WP 3.2, is a mapping exercise of the spatial extent of overlay between CRM occurrences and environmentally protected areas. The mapping culminates in another deliverable (D3.2), available later during the CIRAN project. Results of this mapping displayed below are intermediary products, which will be refined for the D3.2 deliverable, but already highlight the principal issue of high probability of CRM occurrences being located near protected areas.

3.6.1 CRM Data

The MIN4EU project harmonised data sets include critical raw material data points.[9] This data set was found to contain the most representative data on European CRM occurrences. The subset with CRM data is named *'Critical raw material occurrence points 2023 (EGDI/MIN4EU)'.* See Figure 10 below.

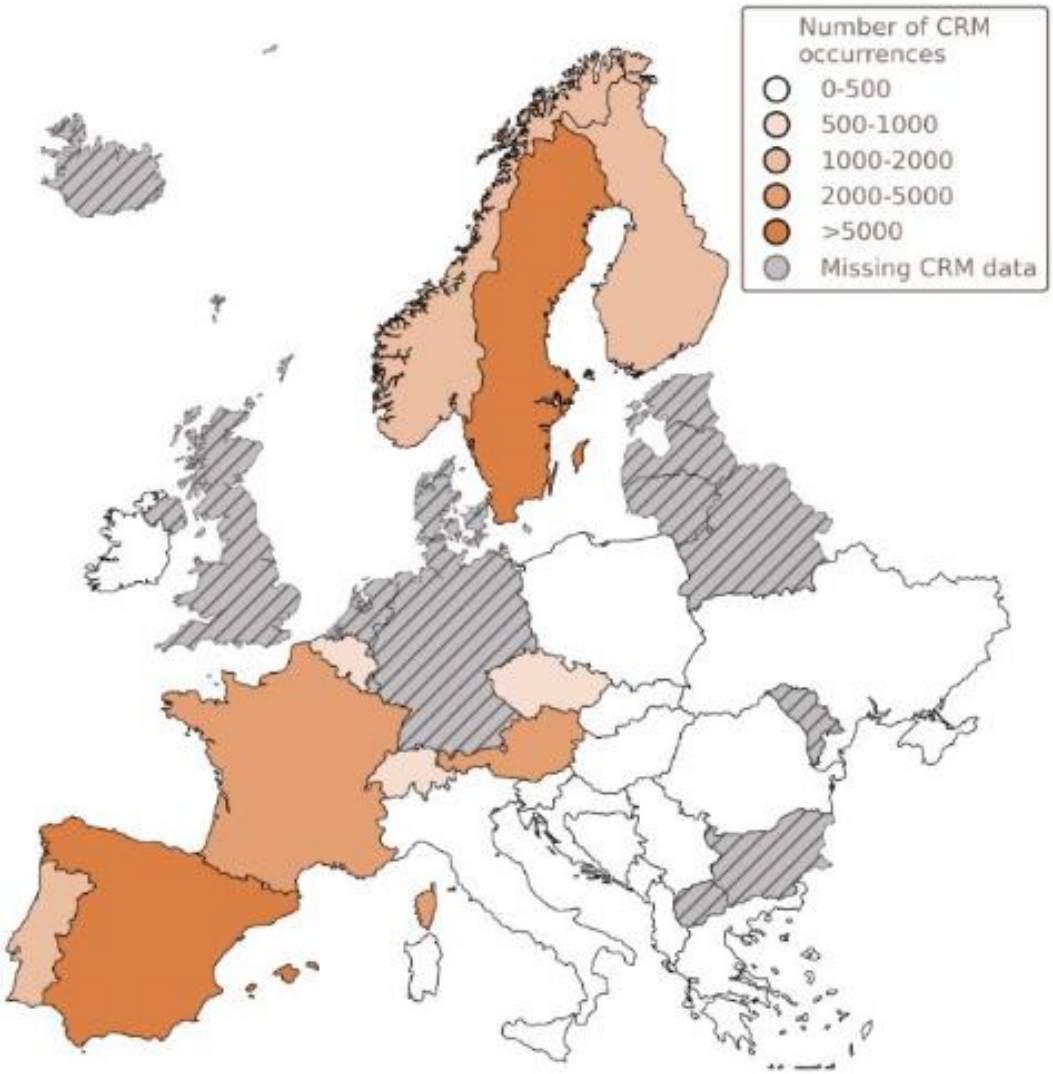


Figure 10 : CRM Occurrences in Europe (EGDI)

Countries without any CRM data include Germany, Lativa, Lithuania and Estonia and the UK. Furthermore, the CRM data counts vary between countries with over 5,000 occurrences in Sweden and Spain, compared to less than 500 for most countries (white fill colour). This is likely a reflection of the extent of exploration for CRMs, which differs from country to country, but also on technical details such as how CRM occurrences are reported, which differs between countries.

3.6.2 Environmentally Protected Areas

The spatial extent of environmentally projected areas is illustrated below. It can be seen that the land territory covered is extensive and covers Natura 2000 sites, Emerald Network Sites and nationally designated protected areas (CDDA).

[9] See EGDI.

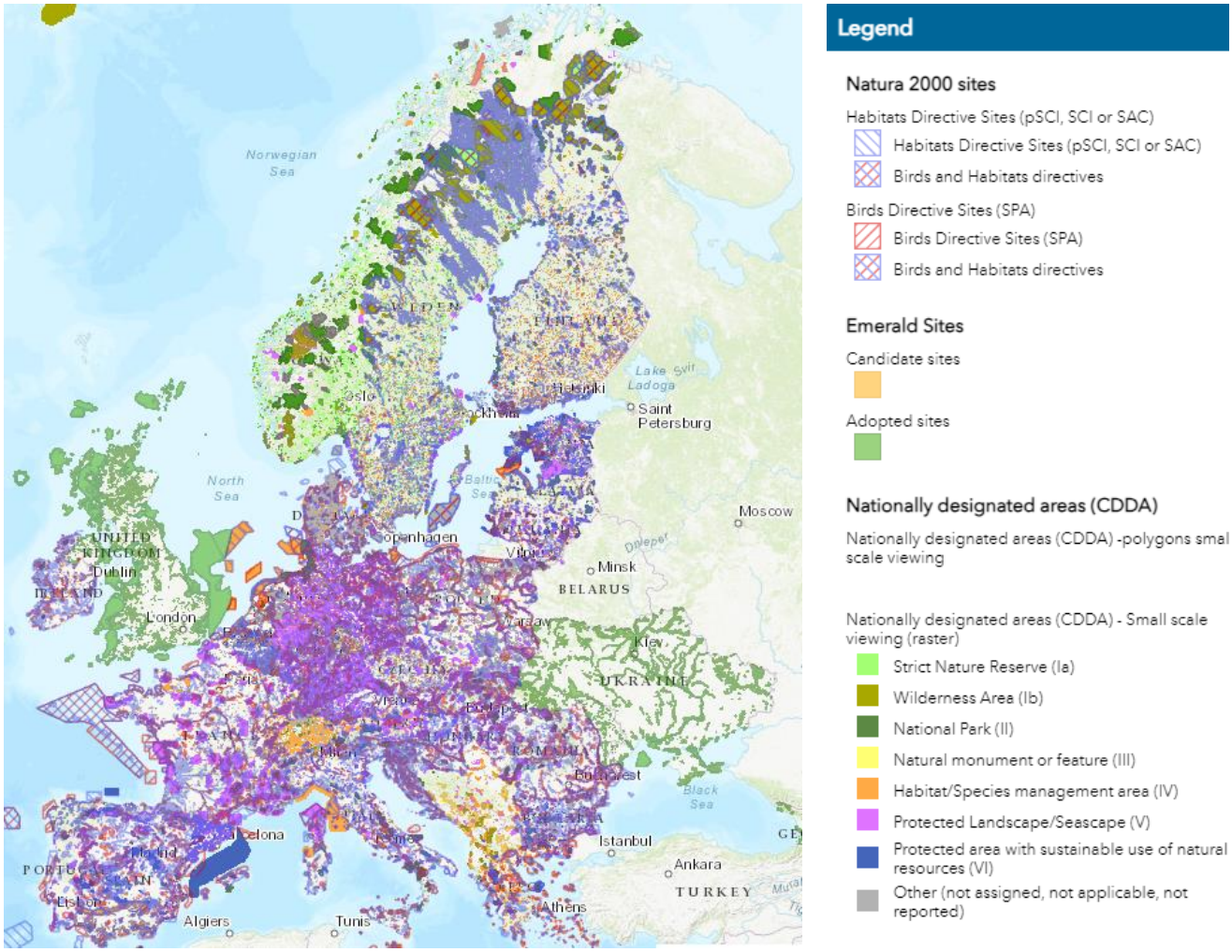


Figure 11: European Protected Sites (EEA, 2023)

In 2021, around 1.1 million km^2 of the EU Member States' land area was designated for the preservation of biodiversity as Natura 2000 sites or nationally protected sites. This represents over a quarter (26%) of the total EU land area. The extent of protected areas is considered for each individual country in Section 4 of this report. The 26% land coverage does not include nationally protected areas and Emerald Network Sites (Eurostat, 2022).

3.6.3 Overlap between CRM Occurrences and Protected Areas

Figure 11 illustrates the mean distance from CRM occurrences within a country to the nearest protected area. Furthermore, to better estimate overlap between occurrences and protected areas, a buffer-zone of 5 km width was taken around CRM occurrences. This buffer-zone is taken to acknowledge that a mining project may affect a protected site, even if it located outside its boundaries. There may, for example, be hydrological links between the area of the proposed mine and protected area, or other emissions may arise from a mining project that impact upon a protected site (e.g. dust, noise). It should be noted that the buffer-zone of 5 km was selected purely for the purposes of identifying the potential overlap between CRM occurrences and protected sites. Projects located outside the 5 km buffer-zone can still potentially influence protected sites, and each project needs to be assessed at the application stage with regard to the source-pathway-receptor model of environmental impacts. In particular, hydrological links may connect a mining operation to a protected area a considerable distance away and can give rise to the potential for significant effects. Conversely, a mountain area or a water-divide can be an effective separation over a much shorter distance.

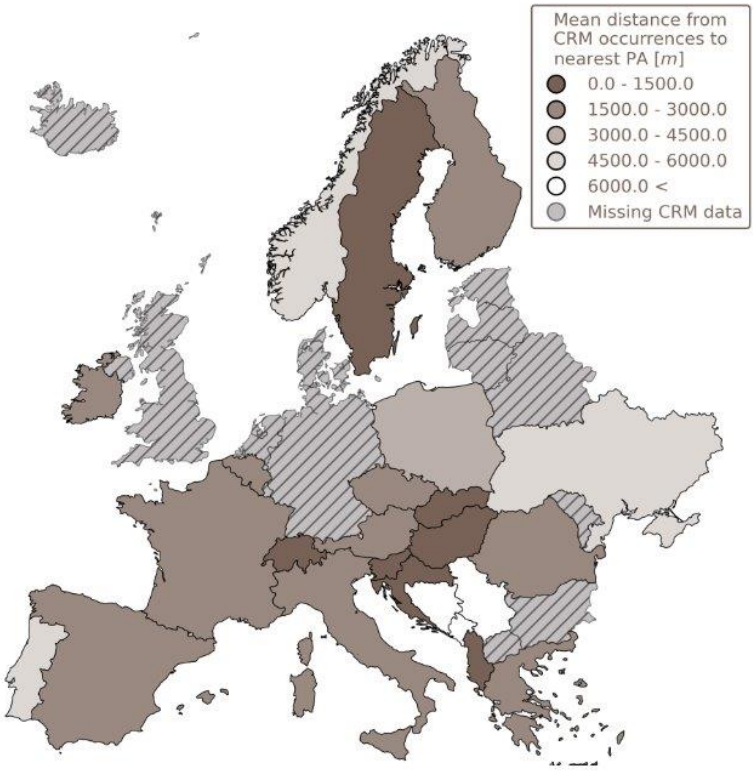


Figure 12: Mean Distance (km) from CRM Occurrence to nearest Protected Area (Ovaskainen et al.)

In most countries CRM occurrences have a mean distance of between 1.5 km and 3 km to a protected area. Some countries, which have a very high recorded occurrence of CRM have a very short distance (e.g. Sweden and Switzerland have mean distances of less than 1.5 km).

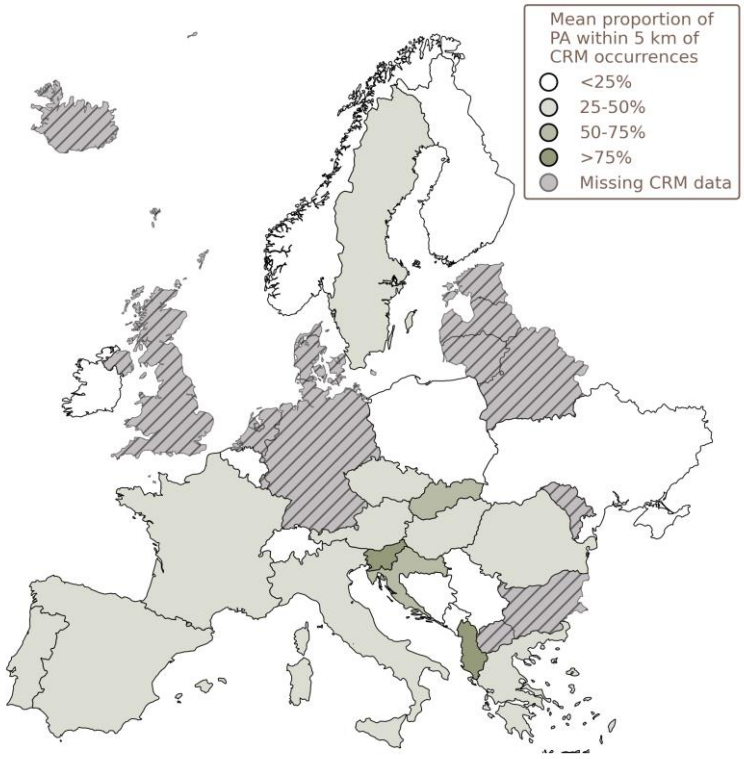


Figure 13: Mean proportion of protected areas within 5 km of CRM Occurrences (Ovaskainen et al.)

A further means by which to express the spatial extent and relationship is to consider to what extent protected areas overlap within 5 km of a CRM occurrence. Preliminary results extracted from the work undertaken by Ovaiskainen (forthcoming) indicates that in most countries, on average, between 25-50% of protected areas stretch into the assumed 5 km buffer zone around CRM occurrences. Refer to Figure 14 above. This reflects other research (EC, 2023e) which indicates that a total of 375 out of 943 CRM projects under development in the EU (40% of the total) are located within or closer than 1,000 m to 180 areas identified as Natura 2000 (0.6% of the total number of Natura 2000 areas).[10]

3.7 Issue Identification

The CIRAN project adopts the principles of DPSIR analysis (refer to Section 2.1 above). It is evident from the preceding discussion that there are strong policy drivers for the extraction of CRMs, which are needed to support the Green Deal policy agenda. It is important to keep in mind, that many of the raw materials deemed 'critical' are inter alia so because of policy decision that spurred an unprecedented demand for them. Concomitantly, there are extensive policy requirements relating to the protection of the environment, promotion of biodiversity and expansion of designated protected areas.

Significant pressures are emerging from the exponential demand for CRMs at a time when the EU is seeking to ensure security of supply of such important elements in the value chains for industrial development in Europe and to reduce reliance on external sources. The mapping exercise summarised in 3.6.3 above highlights that there is significant spatial coincidence of CRM occurrences with protected areas. While CRM extraction could be accommodated technically and from an impact perspective within or near protected areas, the capacity of regulatory systems to deal with the resolution of such conflicting objectives may be suboptimal, or not fit for purpose. The MinLand project examined the competing issues which mining projects experienced (MinLand, 2019). Nature conservation was identified as being the most important other competing land use/issue by some margin. The study highlighted that Natura 2000 sites appear to be a particularly controversial and difficult land use to reconcile for mining stakeholders but also for representatives of GSOs. By its nature, mineral extraction has an impact on the land it is operating on or underneath. Most mines require removal of vegetation, top-soil and surface layers during the extraction process and will need space for storage, infrastructure, access roads, the disposal of extractive waste, etc. While some of these changes may be only temporary, albeit potentially for very long periods of time, the land use change due to the disposal of extractive waste as such will be permanent – at least the topography will be altered, while the original vegetation cover may be reconstituted.

The review therefore confirms that there are existing challenges in relation to the current state of regulatory regimes that are in place to control the development of mining projects. It should be noted that, due to investment into exploration in Europe over the past decades, the knowledge of CRM occurrences, particularly those at greater depth, is rather limited. Thus, the areas of potential conflict could be much more frequent than the currently available data seem to indicate.

The CRMA with its policy objective to shorten permitting times is likely to aggravate potential regulatory conflicts, which are time-consuming to resolve due to the multitude of vested interests that need to be heard.

[10] Internal analysis by DG GROW referenced in EC, 2023e.

4 Country Reviews

4.1 Introduction

This section provides a summary of the regulatory frameworks of the countries studied by CIRAN. These include Austria, Belgium (Flanders Region), England, Finland, France, Ireland, Italy, Norway, Portugal, Spain and Sweden. The country summaries are organized around thematic pillars:

- Governance and regulatory frameworks.
- Plan preparation and designation.
- Permitting processes (exploration and extraction).
- Stakeholder engagement and social acceptability.
- Data and digital tools.

4.1.1 Austria

Governance and Regulatory Framework

Austria's administrative system comprises a central government, nine federal state governments (Bundesländer), and over 2,000 local municipalities. The Federal Ministry of Finance (BMF) is in charge of drafting mineral legislation. The Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology (BMK) is tasked with the preparation of mineral plans and policies, including the Austrian Mineral Resource Plan (AMRP) – The Raw Material Masterplan 2030, which is quite unique in Europe as it avails of vertical integration, albeit fragmented, down to local levels (Luodes et al., 2019; Gugerell, 2019). The inclusion of minerals in the land-use process is facilitated by the AMRP. However, as it is indicative, its implementation is voluntary by Austrian federal administrations.

The Federal Spatial Planning Act (Raumordnungsgesetz - ROG) drives federal legislation which is adapted to the federal (Länder) circumstances (WKO, 2023). This law provides the framework for spatial planning and land-use planning at national level. It sets out principles and guidelines for sustainable development, regional planning, and the coordination of land use activities in Austria at the federal and local levels. The BMK coordinates and oversees spatial planning efforts at the national level and ensures that that federal states align with Austria's sustainability and development goals. The spatial planning system is hierarchical in nature, consisting of state development strategies (Landesraumordnungsprogramm); regional plans (Regionales Raumordnungsprogramm) and sectoral plans (Raumordnungsprogramme für Sachbereiche) both on federal state and regional level; local development strategies (örtliches Entwicklungskonzept); municipal-level land-use plans (Flächenwidmungsplan) and building schemes (Bebauungsplan) (Scharmann, 2020). Austria's spatial planning system is characterised by municipal autonomy within a legal framework, with local spatial plans subject to approval by state governments. Municipal authorities within each federal state are responsible for creating local and municipal development plans that adhere to the State Spatial Development Plan (SSDP). These plans provide a detailed framework for land use, infrastructure, and development at the local level.

The Austrian National Spatial Development Plan (Österreichischer Raumordnungsbericht – OR) is based on the ROG and provides overarching guidance on the coordination of spatial planning at a national level. Each of Austria's nine federal states are responsible for developing their own (SSDP). These plans align with the principles and guidelines outlined in the OR but are adapted to federal contexts and priorities. The plan guides spatial development in the individual federal states. Austria makes a distinction between regional and local spatial planning. Its regional strategies and concepts which are implemented by regional organisations; however, these are generally not legally binding and serve as recommendations based off the regional state strategies (Schindelegger et al., 2018). There is therefore partial vertical integration of both sectoral interests (minerals) and of spatial planning.

Plan Preparation and Designation

As stated above, the AMRP has been adopted by certain Austrian federal administrations. The AMRP's role is designed to employ innovative and systematic analytical methods for the identification and evaluation of mineral resources within Austria. It first identifies conflict-free zoning areas. The relevant ministry can then suggest them for protection as 'Raw Material Priority Zones' (RMPZ). The establishment of these zones in the Regional Development Programmes relies on geological and economic data derived from the AMRP. Regional governments are responsible for implementing measures to protect these areas (Weber et al., 2008).

In the process of defining RMPZ, several important factors must be taken into account. Firstly, certain areas prohibited for mining activities are excluded as stipulated by MinroG, the Raw Materials Act (Article 82) (EC, 2017c). These restricted zones encompass residential and construction areas, accompanied by a 100 m definitive buffer-zone (with anything between 100 to 300 metres being negotiable), as well as regions designated for water protection and areas classified as environmentally protected. Secondly, careful attention is given to addressing conflicts that may arise from competing surface claims, such as Agricultural Priority Zones or Green Zones, and resolving any constraints imposed by other legislative frameworks, such as those governing water bodies and forested areas. The use of the AMRP provides very high success rates for mining sites which have been identified as a RMPZ in the AMRP, with first time applications reaching up to 80% success rates and permitting rates of almost 100% success rates on appeal (EC, 2017c).

The local council establishes specific zoning regulations for the city or locality and its open spaces. These commitments are integral components of the zoning plan. The development plan and the zoning plan are developed by the local council and outline regulations governing planning and development within specific sections of designated land MinroG includes zonings related to mining and extraction activities via zonings such as Priority Zones, Exclusion zones (found in specific landscape types like in Syria), delineations in Regional Plans or Sectoral Plans, and zoning of 'mining areas' (EC, 2017c).

Sites can be protected through the mechanisms of the Habitats and Birds Directives at national level. There are also national parks. The Federal Environment Agency (Umweltbundesamt) also designates sites as nature conservation areas or landscape protection areas which are protected under national legislation. There are 14 types of areas protected under nature conservation law with varying degrees of protection.

There is no integration between the requirements of the SEA and Habitats directives, although the assessments communicate with each other. In public administration, horizontal coordination among relevant departments occurs through informal, issue-driven fora that facilitate discussions, assessments, and negotiations involving competing land-use concerns and requirements. Such collaborative meetings involving different government levels are essential for harmonising various interests, such as wildlife conservation and agriculture, through a discourse-based process (Gugerell, 2019).

Permitting Processes - Exploration

The primary legislation governing mining and extraction industries in Austria is the Mineral Raw Materials Act 1999 and amendments (Mineralrohstoffgesetz, 1999 - MinroG). This legislation was prepared by the Federal Ministry of Finance (BMF). The Minister of Finance grants exploration and extraction licenses to mining companies, contingent upon stringent environmental criteria. Critical raw materials are classified as 'free for mining' minerals (Bergfreie), which are minerals without a designated owner and are therefore available for exploration. In effect, the exploration phase can be split into two different permits. If the type of minerals is not known, a company can apply for a prospecting permit. If the mineral is known but not whether extraction is viable, then an exploration permit is required. Both are delivered by the Federal Ministry of Science, Research and Economy (Bundesministerium für Wissenschaft, Forschung und Wirtschaft) on behalf of the national mining authority (Montanbehörde). By law, the authority has a timeframe of six months to make a decision. However, it is standard practice to make the decision within three months (EC, 2017c).

Permitting Processes – Extraction

Between one and three permits are required to carry out mineral extraction. A mining license is required from the Federal Mining Department. A number of elements are taken into consideration: whether extraction is viable; other permissions are not opposed to the extraction, and the public interest, which implies consideration for nature conservation, land use planning, tourism, environmental protection, water management, transportation and national defence. Mining sites will only be authorised if regional land use planning identifies the mining area (EC, 2017c). There may be additional permits in accordance with nature conservation law, water management law, waste management law and forestry law. There is a one-stop-shop for EIA, with the administrative authority dealing with all relevant specific laws (mining, environment, forestry, etc.) up to the permit point. Monitoring and compliance checks are dealt with by the relevant authorities (EC, 2017c).

Stakeholder Engagement and Societal Acceptability

Austria supports robust public engagement through the various levels of government included in legislation and guidance from the ROG to EIA Laws. The Allgemeines Verwaltungsverfahrensgesetz 1991 (AVG) is Austria's general administrative procedure act which promotes transparency of administrative actions. It requires, inter alia, that authorities provide information to citizens about their rights and obligations during administrative procedures including right to access relevant documents. Public consultations, with defined timelines, facilitate feedback and recommendations, promoting diverse stakeholder engagement. Public hearings are a cornerstone for major projects, often with government organisations and expert panels. Additionally, third-party organisations and NGOs contribute diverse perspectives, enhancing the inclusivity of decision-making processes. Regarding corporate social responsibility, mining companies must adhere to various guidelines to gain societal and government acceptance. Mining companies engage in close dialogue with local communities, addressing concerns and seeking input. They may also financially support communities through tax contributions, development funds and/or infrastructure investments (such as road improvements). According to Österreichisches Montan-Handbuch, companies may offer educational programmes to enhance local skills and employability. It must be noted, however, that these are not mandatory but are considered as part of the mechanisms to gain societal acceptability (Bundesminsterium Finanzen, 2022). The Austrian Ministry for Sustainability and Tourism provides high quality, publicly available information points on mining. It is working toward improving public perception and acceptance. Mining companies can also invest into and cooperate in education activities for technical universities. Mining companies may also have open-door days to show the community activities undertaken (Luodes et al., 2024).

Data and Digital Tools

Companies operating in Austria use the PERC derivative for reporting on projects. Austria otherwise does not use the UNFC template yet. There is good availability of CRM data (EGDI/MIN4EU). MinroG requires the use of automation technology to maintain a record of the ownership of mining rights and of survey maps. The Raw Material Information System (IRIS) is an interactive system which uses the metallogenic map of Austria.

In relation to compliance with the INSPIRE Directive, Austria has a relatively low compliance rate pertaining to compliance on dataset interoperability (Minghini et al., 2020). This suggests difficulties in data sharing between bodies located within and outside of Austria.

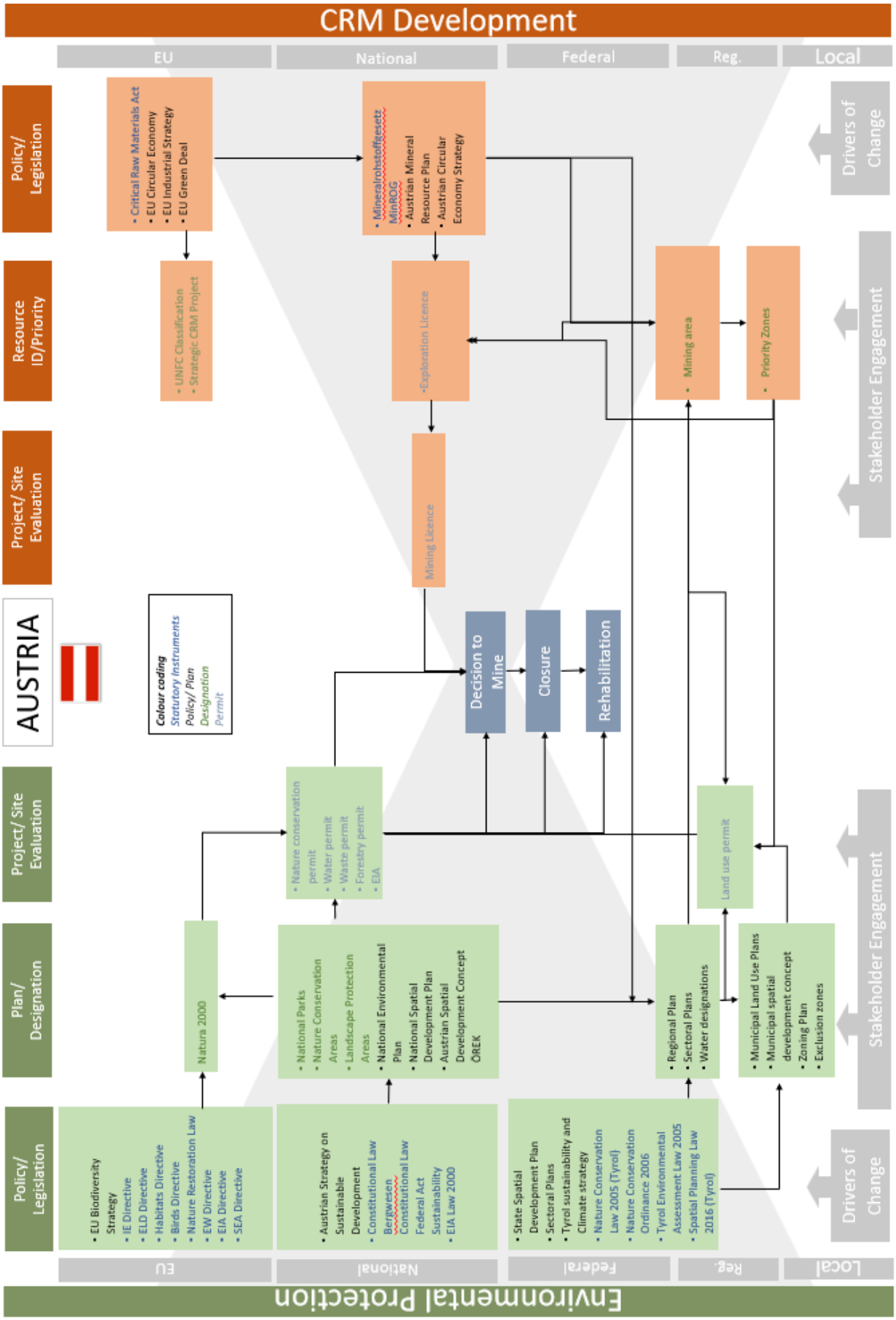


Figure 14: Regulatory Framework Austria

4.1.2 Belgium – Flanders

It is important to note at the outset that there are limited extraction activities in the Brussels-Capital Region, principally consisting of sand quarrying. In addition, Extraction activities in Wallonia ceased quite some time ago, and it is in the process of withdrawing existing concessions to free up the territory for research by 2030 (EC, 2019a). On this basis, this section focuses exclusively on the Flanders Region.

Governance and Regulatory Framework

Belgium is a federal State comprising three regions: Flanders, Wallonia and the Brussels-Capital Region. The enactment of the Special Institutional Reform Act of the 8th of August 1980 gave the three regions responsibility for licensing and permitting.

Spatial planning is delegated to the three regions, the municipal authorities, and to a lesser extent to the provincial authorities. The Belgian planning system is based on the 1962 Spatial Organisation and Town Planning Act, which was amended several times. The significant reforms of 1980 and 1988 made spatial planning a regional competence. Despite the act being in place, the regions are free to amend/enact legislation as necessary, leading to diverging systems across the regions.

Regional Spatial Development Plans (bestemmingsplannen) are prepared in Flanders to set out the spatial organisation of the region. Regions are also responsible for environmental legislation, energy and building code regulations. The whole region is therefore assigned a function (or zoned). Spatial implementation plans can be prepared to create new areas for extraction, for instance. There are two ways to initiate a spatial implementation plan. Either the minister responsible for natural resources can propose to the cabinet to state the procedure based on a Mineral Resources Note or a person or company can make a request for the same. In this case, the request must be in compliance with the surface minerals resources policy. If the Minister approves, he/she can then propose to start the procedure for a Spatial Implementation Plan. Flanders also has a provincial level, which delivers Provincial Structure and Provincial Implementation Plans. In Flanders, spatial planning is regulated by the Flemish Spatial Planning Code. All of the Belgian municipalities, regardless of the region, can prepare Municipal Structure Plans and detailed Municipal Implementation Plans.

The regions have the exclusive competencies for environmental matters, including environmental permits and ensuring permit compliance. The main pieces of legislation for consenting are the Flemish Integrated Permit Statute, dated 25th April 2014 and related implementation decrees. The regulatory authorities in Flanders are the Environmental Department and the Flemish Waste Agency (for matters related to waste and materials). At federal level, the main regulatory authority is the Federal Environmental Inspection of the Federal Public Services for Public Health, Safety of the Food Chain and Environment.

Plan Preparation and Designation

Natura 2000 legislation is included in the Nature Conservation Act. In Flanders, conservation objectives are set at regional and local levels. The Flemish Nature Agency is tasked with the whole Natura 2000 designation process.

The entire Flemish territory has been assigned a use, which means that extraction areas have been defined at plan level through the Spatial Implementation Plan.

Permitting Processes - Exploration

Drilling activities have to be reported to the Flemish administration.

Permitting Processes - Extraction

In Flanders, licensing is governed by the omgevingsvergunning (integrated environmental permit or physical aspects permit) which is delivered in the case of extraction by the Provincial Executive. This permit is derived from the Omgevingsvergunningsdecreet and the order titled Omgevingsvergunningsbeluit. Regulations on building and changing the landscape are listed in the Vlaamse Codex Ruimtelijke Ordening, where environmental regulations are set out in Title IV and V of the Decree concerning general provisions related

to environmental policy. The omgevingsvergunning is in effect a digital one-stop-shop, with a single point of entry for applicants.

Stakeholder Acceptance

There has been limited to no mining and exploration in recent times in Belgium, stakeholder acceptance has not been a focus of this country profile. It is nonetheless assumed that given the lack of mining or exploration, the activity may not be well accepted. It does not appear to be politically supported either.

Data and Tools

Exploration data are not made available to the public for a period of 10 years after submission (EC, 2019a). The omgevingsvergunning is operated through an online platform acting as an integrated environmental permitting platform, or a one-stop-shop. Applications are made through the Omgevingsloket (Omgevingsloket Vlaanderen, n.d.) where applications can be made, tracked, viewed and commented on. All relevant competent authorities have access to this platform.

In relation to the INSPIRE Directive, Belgium had a relatively low compliance rate with regards to the percentage compliance on datasets interoperability (Minghini et al, 2020). This suggests difficulties in data sharing between bodies located within and outside of Belgium.

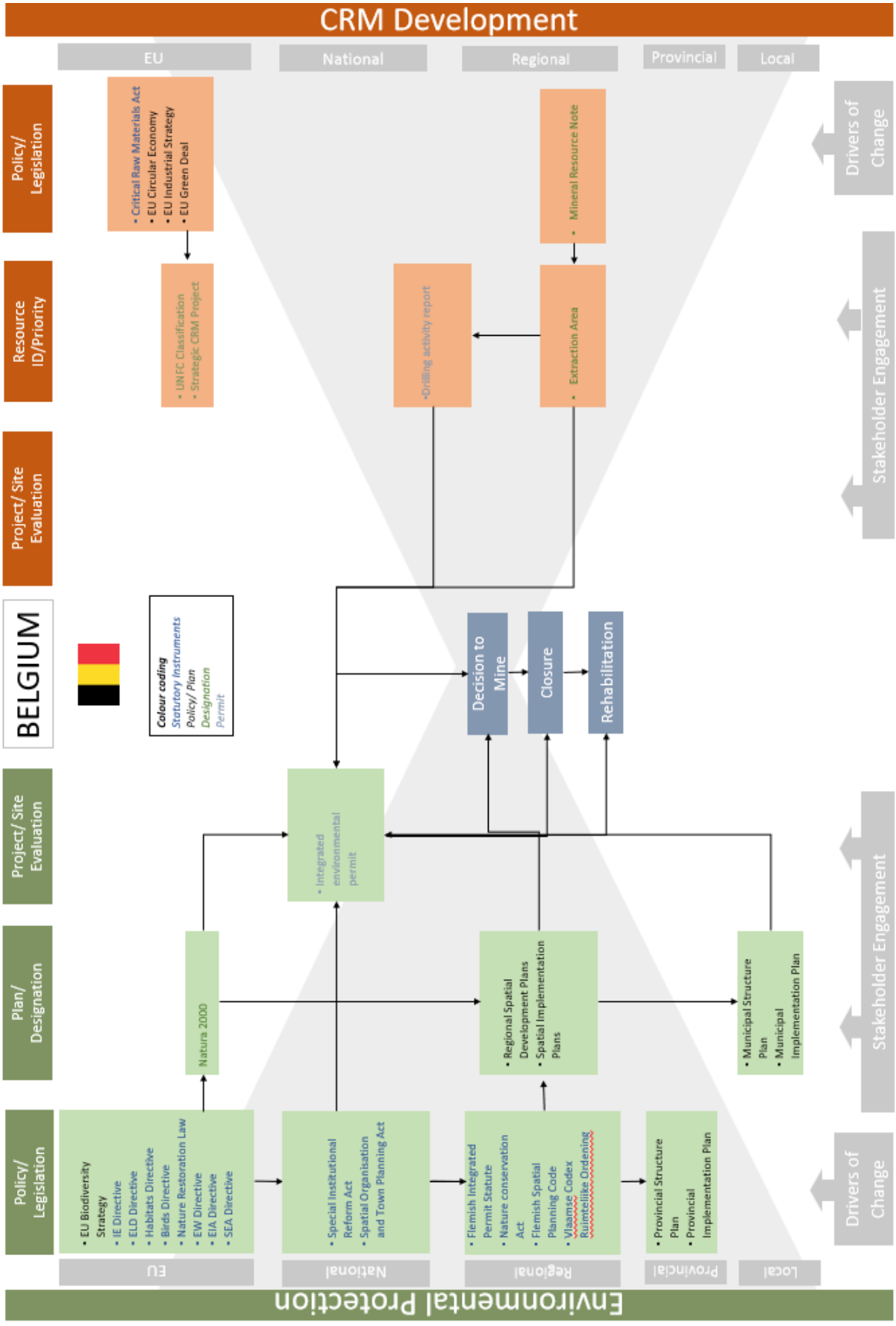


Figure 15: Regulatory Framework Belgium

4.1.3 England - United Kingdom

Governance and Regulatory Framework

This section looks at on England, as this was the focus of the United Kingdom case studies. Although the UK is no longer a member of the EU, the *European Union (Withdrawal) Act 2018* (Parliament of the United Kingdom, 2018) established the concept of 'Retained EU law' which maintains EU laws as they applied to the UK at the conclusion of the withdrawal process.

England has a multi-tiered system of governance which includes national, regional, and local levels. The National Planning Policy Framework (NPPF) 2023, prepared by the Minister for Housing, Communities and Local Government (MHCLG) is the overarching planning guidance and considers mineral policy. Central government is responsible for principal planning legislation, which includes the Town and Country Planning Act 1990 (Parliament of the United Kingdom, 1990) and associated amendments and regulations.

All minerals in the UK are owned privately by landowner, except those owned by the Crown Estate (oil, gas, gold and silver) and unworked coal and coal resources, which are managed by the Coal Authority. There is no extraction and exploration licensing procedure required for privately owned minerals to consider aspects relating to royalties, meaning there are no royalties to be charged. It also means only a development permit is required if minerals are privately owned. Mineral planning and permitting is the responsibility of the mineral planning authority (MPA). Mineral planning authorities are county councils, unitary authorities or national park authorities. In addition to delivering permits, they are tasked with compliance and monitoring.

While mining and extractive industries policy is largely devolved to lower levels, the Department for Energy Security and Net Zero (DESNZ) can draft policy papers and statements on mineral development to establish the national direction.

The Department for Environment, Food and Rural Affairs (DEFRA) oversees environmental policy and regulation as well as setting environmental designations. The Environment Agency is a state agency responsible for regulating activities that have the potential to impact the environment. It oversees environmental permitting, water quality management, flood risk management, and environmental regulation enforcement.

Natural England, funded by DEFRA, is an executive state agency established by Act of Parliament (2006) as the government's adviser on the natural environment. It is tasked with certain environmental designations derived from national legislation and those derived from European and international obligations. It is assisted by the Joint Nature Conservation Committee (JNCC), the statutory nature adviser to all four countries of the United Kingdom. Historic England is responsible for the designation and protection of historic and cultural sites and areas which include Conservation Areas.

Plan and Designation

Internationally or European protected sites: These include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), RAMSAR wetlands, candidate SPAs/SACs or candidate RAMSAR wetlands. They are designated under European directives and international conventions to protect habitats and species of European or global importance (Moussaid & Hilton, 2023). They are classified by the Secretary of State for DEFRA in England. Management of these sites is the responsibility of Natural England.

Nationally protected sites: These include Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and national parks. They are designated under various UK laws to protect habitats and species of national importance. They are notified by Natural England (Moussaid & Hilton, 2023). Natural England also designates Areas of Outstanding Natural Beauty (AONB).

Locally protected sites: These include Local Nature Reserves (LNRs), Local Wildlife Sites (LWSs), Local Geological Sites (LGSs) and local landscape designations. They are designated by local authorities or other

organisations to protect habitats and species of local importance. Many of these are managed by English Heritage They have different names and criteria depending on the area (Moussaid & Hilton, 2023).

As noted above, the NPPF is the national planning policy framework but it is non-spatial in nature. County Councils prepare minerals and waste plans as they are responsible for mineral working and waste management in their jurisdiction (EC, 2017). In the event that part of the jurisdiction of an authority becomes designated as a national park, the plan remains in place until the national park authority in charge decides to keep the plan in place or prepare its own (or subsume it in the case of an extension). In accordance with the SEA Directive, plans have to consider alternative policy approaches. These plans set out policies which serve as the framework for decision-making. In addition, they have to establish Mineral Safeguarding Areas (MSA) in accordance with the NPPF. This means that potentially useful and viable mineral resources of both local and national importance are identified. The NPPF provides a definition of mineral resources of local and national importance that does not include all CRMs but does include coking coal, fluorspar and tungsten (Department for Levelling Up, Housing & Communities, 2023). It is important to note that this also allows for the consideration of whether identified resources are accessible or not. In some cases, this is also considered by MPAs. Where there are overlapping environmental designations, these act as de facto protection for the mineral resources. These plans do not specifically consider CRMs or mean that planning permission will be automatically granted as an outcome of the permitting process. Instead, it suggests that there is a de facto presumption that minerals could be worked, providing that there are no material considerations suggesting otherwise. This plan also does not preclude the need to obtain the other required environmental permits. Importantly, the fact that a large number of minerals are not included in those plans, does not preclude applications to work other CRMs from being made. These would be assessed on their own merits.

Mineral and waste plans are subject to both the SEA Directive and the Habitats Directive. Minerals Local Plans may include plan-level mitigations, but these are generally unspecific and tend to put the onus on project developers. There is otherwise no priority project mechanism. Given that national park authorities can be MPAs, this suggests that mineral activities are not precluded from national parks.

Local authorities prepare local plans for other uses. These are more typical land use plans which will include policies and zoning designations for the use of lands. These plans undergo SEA and AA (habitats regulation assessment) as well. Local authorities can also create local nature reserves.

Exploration

For minerals in private ownership, there is no need for an exploration licence. For those in the ownership of the Crown Estate, an exploration licence is required from the organisation. Generally, the right to exploration has to be acquired from the landowner prior to starting. This means that in the event that the surface is in ownership of the Crown Estate, an exploration licence will be required. Exploration areas are generally identified on survey maps (EC, 2017). This allows for linking below surface resource and landownership (EC, 2017c). Under the *Town and Country Planning (General Permitted Development) (England) Order 1995* (Parliament of the United Kingdom, 1995) exploration activities are exempted from planning permission but should be notified to the planning authority. The exemption does not necessarily allow for free-for-all unrestricted activities and imposes conditions to the exploration company. If the mineral searched is coal, then the Coal Authority is responsible for granting exploration licenses and monitors the operations.

Extraction

Extraction of minerals is very much dependent on the land use planning system. As per exploration, the need to acquire an extraction permit will depend on the landowner. If the owner of the mineral or the surface is the Crown Estate, then a licence will be required.

Permits for development must be obtained from the relevant local planning authority which in this case is known as an MPA. Mineral extraction can only take place if planning permission was secured from the MPA, and if the adequate surface rights have been secured (to access below surface) and when all relevant environmental permits have been secured. This may also include permits related to surface water,

groundwater and mining waste which are required from the Environment Agency. The agency will also issue integrated pollution control permits.

A mining operator may need to secure a European Protected Species Licence from Natural England if the works impact on a European protected species. Certain species have their own dedicated mitigation licences (bats, dormice, natterjack toads, otters, newts, smooth snakes and sand lizards). As certain species are protected under national legislation but not European legislation, they may also require a mitigation licence. There is no one-stop-shop for permitting. The individual permits must be sought from the relevant competent authorities. As with more mainstream development applications, there is a right of appeal to the National Planning Inspectorate. This can add a step and therefore delays the overall process. The process to secure permits is sequential and generally no environmental permits are sought until the 'principle of the proposed use of land and the details of the mineral operations and facilities it required have been granted planning permission' (EC, 2017).

AA is carried out as part of the permitting procedure (known as Habitats Regulations Assessment). England uses the derogation procedures under article 6(4) of the Habitats Directive from time to time. Developments considered for derogation have included, to date, airport development, offshore wind energy, flood alleviation, port infrastructure. Not all cases have been successful.

Stakeholder Acceptance

Similar to its continental European counterparts, the British Geological Survey (BGS) undertake education activities relating to geology. There is no clear evidence as to how much of it is focused on CRMs. Exploration and mining companies tend to engage with affected communities within and outside of statutory processes. There are legal obligations known as 'Section 106 Agreements' whereby developers may be required to provide for public benefits. Under section 106 of the Town and Country Planning Act, 'planning obligations' that aim to mitigate the impacts of a development proposal can be imposed on a permission. These are imposed when the decision-maker considers that certain impacts cannot be mitigated through normal planning conditions. They have to be applied fairly and be reasonably related in scale and kind to the development (NPPF, 2023, para. 56).

The planning obligations are additional to the community infrastructure levy. This levy contributes to the construction of new or to improve infrastructure. Given that plans are prepared locally for minerals, albeit not specifically metallic minerals or CRMs, there is an assumption that mineral local authorities would be predisposed to accept mining as a land use. In addition, mineral development is a topic covered by NPPF, the national policy instrument. In 2023, BGS published a report identifying areas in the UK for prospective CRMs on behalf of the Critical Raw Minerals Intelligence Centre (CRMIC). The report identified that parts of the Cumbria, North Pennine Orefield and the south-west of England would be 'particularly worthy' of more research (Deady et al., 2023). The report was funded by the Department for Business & Trade.

Data and Reporting

Companies operating in England use the JORC reporting standards. The country does not use the UNFC template yet. It also uses the NI43-101. BGS holds a wide range of data, literature and maps. The maps are available online using the BGS GeoIndex. As stated in the preceding section, BGS recently undertook research to identify areas for CRM prospections. The results are presented in the *Potential for Critical Raw Material Prospectivity in the UK* published in 2023 (Deady et al., 2023). This suggests that there is sufficient knowledge to identify, at least, prospection areas for CRMs.

BGS published in 2011 *Mineral safeguarding in England: good practice advice* (Wrighton et al., 2011). The guidance provides advice to MPAs on how mineral safeguarding areas can be defined in local plans and how current national safeguarding policies in England can be implemented. It is important to reiterate that only three CRMs are considered under the Mineral Local Plans.

In relation to compliance with the INSPIRE Directive, England as part of the UK had an extremely low compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al.,

2020). This suggests difficulties in data sharing between bodies located in the UK and outside UK. This may be less of an issue as the country is no longer an MS but may give rise to transboundary issues with Ireland.

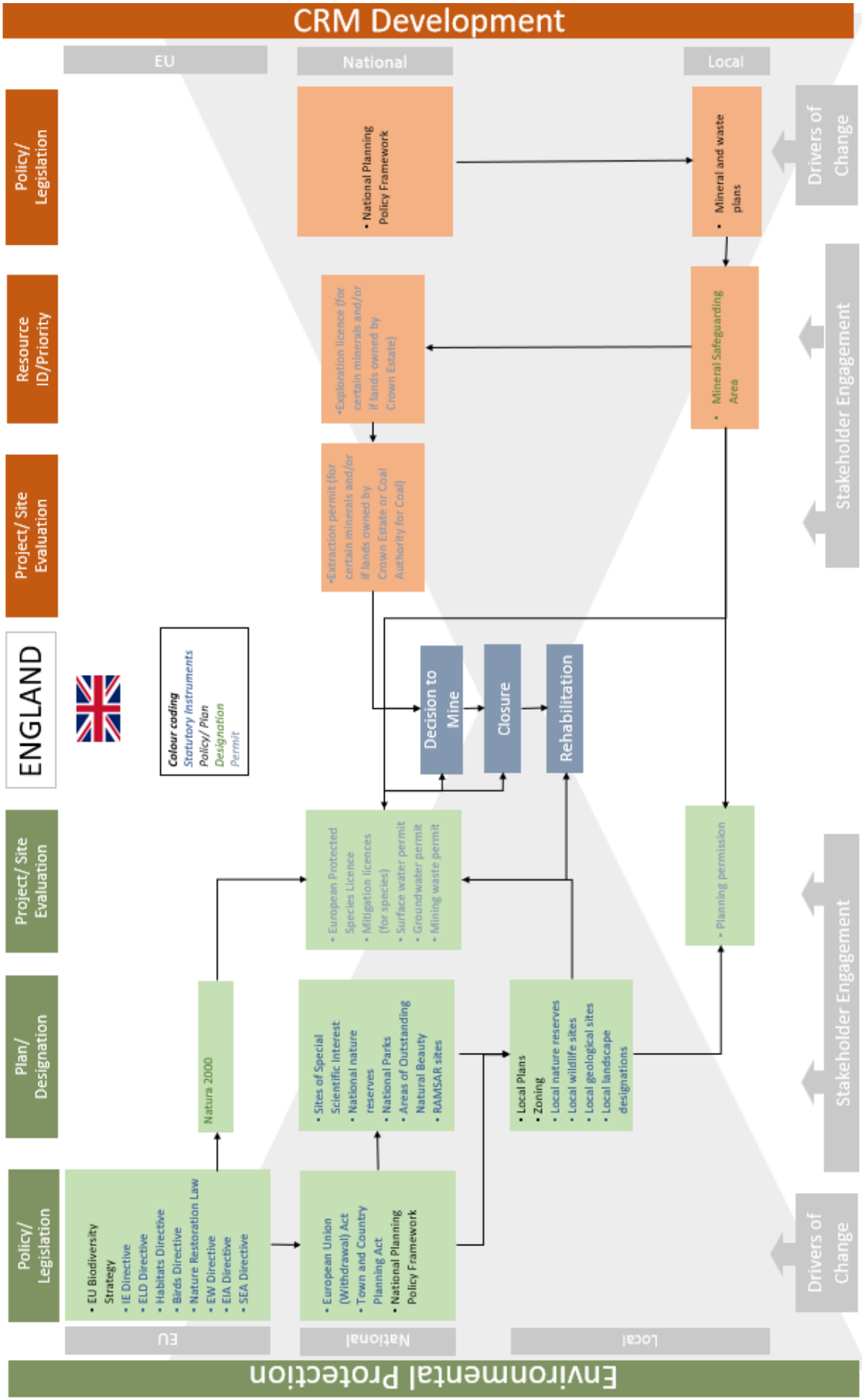


Figure 16: Regulatory Framework England

4.1.4 Finland

Governance and Regulatory Framework

Finland has a unitary system of government with a hierarchy of national government departments, regional councils and local municipalities, which are established under the Local Government Act 2015 (410/2015). They are all responsible for a range of policy preparation and delivery of state services. TUKES, The Finnish Safety and Chemicals Agency, which is a national agency, has responsibility for mineral licencing. In addition, to the regional councils, there is a network of Regional State Administrative Agencies (AVIs), which are responsible for environmental permitting, and regional Centres for Economic Development, Transport and the Environment (Ely-keskus), which are tasked with promoting regional competitiveness, well-being, sustainable development and curbing climate change.

The Ministry for the Environment has primary responsibility for the designation of Natura 2000 Sites. The Ministry for the Environment can also declare new conservation areas by decree. However, regional councils have a role in designating non-statutory protected areas, which have a lower level of protection and are not subject to AA under the Habitats Directive. There are 41 National Parks on State owned land that are managed by Metsähallitus, the Finnish Forestry Authority. Metsähallitus is also responsible for identifying nature conservation areas, which are confirmed by decree. There are seven UNESCO World Heritage Sites in Finland, six of which are cultural sites, and one which is a natural heritage site. There is further scope for identification of areas for protection by private parties. To date, approximately 7,800 private nature reserves have been designated.

Various national government Ministries (e.g. the Ministry of the Environment and Ministry of Labour and Economy) develop national policy. They define the National Land Use Guidelines/Objectives (Valtakunnalliset alueidenkäyttötavoitteet), which form part of the Land Use and Building Act 132/1999. Mineral development is not dealt with at the national level, but at the regional level. While mineral planning is not specifically addressed at the national level, there is a need to consider natural resources (luonnonvaara) when planning according to the updates of the Land Use and Building Act. The Regional Councils are responsible for Regional Plans, and Municipalities are responsible for land use planning at local level. Municipalities can decide if they include or reject mineral extraction in their land use plans.

Plan and Designation

General guidelines controlling land use planning are defined in Finland's Land Use and Building Act (1999/132). As stated above, all three levels of governance have a role in spatial planning, with the strategic direction being determined nationally.

Finland has a *State Land Plan,* which addresses government objectives and is managed by Metsähalllitus according to its own programs (economical and environmental). *Regional Plans* set out the main spatial policies in so far as they relate to mineral development. They seek to balance the different development needs of the region, including environmental, economic and social. These Regional Plans are the only ones that deal with mineral resources and deposits. As the regional councils are responsible for non-statutory protected areas, and mineral resource identification, there is scope for clear balancing of objectives in policy formulation. Principal spatial conflicts are addressed at this level. Mineral resources are identified in these plans as EK (mineral exploitation) areas. These EK areas include buffer zones around deposits. While the Natura 2000 network is established outside this framework and is confirmed at national level, other environmental protected areas are designated and reflected in the regional plans. There is a series of other environmentally protected areas, including national parks, MIRES designations and wilderness areas under the Wilderness Act. River basin management plans are prepared by Ely-keskus (Centres for Economic Development, Transport and the Environment).

The municipality is responsible for the *Local Master Plan* (1:10000) *and the Local Detailed Plan* (1:2000). At this level, building permits are managed and extractive activity requires its own land use designation. In order to undertake exploration, the local masterplan needs to be changed to allow exploration (Gugerell, 2019). When proposing a mineral extraction project to a municipality, there may be objections. The mining area is

defined by purpose, and as a result, other activities will not be allowed within the mining area. The mineral land-use for extraction is thus part of spatial planning. Under the Mining Act 2023, local level plans and zoning may restrict the realisation of extractive activities, and a plan approved by the municipality is a precondition for granting a mining licence. Mining and exploration are prohibited in national and natural parks. There are no exceptions to this rule and environmental and mining authorities will not give permits in these areas.

Plans prepared will be subject to an SEA process. However, there are plans and programmes that may not be the subject of SEAs but will nevertheless involve an assessment of the environmental effects of implementing the plan or programme.

The Land Use and Building Act defines conditions for the granting of building permits, building demolition permits and landscaping work permits. Planning permission for ore processing facilities and other significant buildings can be based on detailed local plans. Detailed local plans may also define permanent mining industrial areas that serve more than one mine site. Whenever a mining project requires new plans, these plans must be drafted in accordance with the Land Use and Building Act. Land use permits are subject to EIA processes under the EIA Directive. Assessment of the impact upon Natura 2000 sites are often integrated into the EIA undertaken for the building/processing plant planning permission that may be required. Natura surveys consider the habitat of the area, hydrogeology, the impacts, previous environmental damages and their remediation, and effects on other land uses affected by the project (take reindeer herding as an example). Generally, the assessment of the effects upon Natura 2000 sites covers a wide area, which will include an assessment of linkages between the mine development and the designated site.

The Administrative Procedures Act 2003 (434/2003) sets out how complaints are dealt with through the legal system. Complaints are dealt with by the regional administrative court in the first instance and ultimately the Supreme Court.

Prospecting and Exploration

The legal basis for the mineral exploration and extraction is the Mining Act 621/2011 (EC, 2017e). According to section 7 of the Mining Act, there is no need to seek a consent for prospecting work, which takes place before exploration. To find minerals (prospection), anyone can carry out activities, even on another party's land, so long as it does cause damage or exert more than minor inconvenience or disturbance, and as long as they have the authorisation of the owner (EC, 2017e). They do require the making of a claim reservation (varaus) by notifying TUKES. This gives a form of privilege as regards the submission of an ore prospecting application. The reservation claim effectively gives an order of priority as to whom can carry out exploration activities and therefore request a permit. An EIA is not legally required for ore prospecting activity.

An exploration permit (malminetsintälupa) is required when the landowner has not given consent, or if the activity can cause environmental effect and gives rise to safety concerns.

Exploration activity shall not cause harm to the natural environment. If the exploration area includes species or habitats that are protected under legislation or international agreements, these must be taken into account during licensing. The impacts of ore prospecting or exploration on the natural environment are usually minimal, but surveys of the present state of the environment before commencing any activities that will affect the environment need to be undertaken. The resulting reports can be utilised during the subsequent EIA procedure for the mining project. Prospecting and exploration may continue in the area of the mining concession and its surroundings during the mining activity. Natura 2000 assessment reports are prepared, which include a description of the exploration methodology and technology, and possible impacts on the habitat and hydrogeology.

There are several parties that may be involved in extraction permitting, depending on the circumstances of a project. They may have roles in permitting and/or provide guidance. There is no statutory timeframe for delivering exploration permits. There are timeframes attached to Natura 2000 assessment (six months) (EC, 2017e). Sites with more complex circumstances may take longer. MINLEX found that exploration permits in Sámi Homeland may take two years (EC, 2017e).

Extraction

For mining, a company has to obtain a mine permit. This gives rights to exploitation, sets royalties to be paid to landowners, mining taxes, and closure and rehabilitation parameters. Mining is not permitted in nature protection areas and there are no exceptions to this rule. It is however not banned in sites forming part of the Natura 2000 network. To start mining, a number of permits may be required:

- Mining permit; which requires EIA and AA;
- Environment permit, which also includes EIA and AA;
- Planning permission from the municipality;
- Establishment of the mining area, which is an exercise carried out by the relevant land survey office;
- A mining safety permit; and
- Permission from the Sámi Parliament, if relevant or from the local Skolt Village[11].

It can take over nine years before all permits are secured. This is due to a combination of a high number of permits being required, public opposition, a lack of expertise in competent authorities and lack of support. There is also no one-stop-shop in Finland. However, given the requirements of the CRMA, the establishment of a one-stop-shop is being investigated.

Stakeholder Acceptance

Consultation on plans and permitting is generally in accordance with statutory requirements. Regional land use planning is undertaken through the preparation of statements and consultation between different authorities and stakeholders, including vulnerable groups if relevant to the region. Communities may give statements on plans and projects. Mineral exploration and mining permits require consultation of all interested parties in written form and/or through public meetings. The application/granting process of both the exploration license and the mining concession involves a request for feedback from other authorities, landowners and other stakeholders, including reindeer herders in the areas where it is practiced. An application affecting the Sámi homeland also requires a statement from the Sámi parliament. A total of 18 different stakeholder groups were represented in the preparation of the recent Mining Act 2023.

In Finland, most of the mining and mineral exploration disputes are related to permitting procedures and sensitive context related to land uses which are prone to disputes such as Sámi homeland, protected areas, reindeer herding, tourism, second homes along water bodies, etc. (Eerola, 2022). Other reasons for dispute relate to corporate conduct such as lack of communication or past misconduct (Eerola, 2022).

Provision of jobs, housing, and purchase and use of local products and services as much as possible are among the distributive fairness issues. Major companies also sponsor sport and cultural associations and events in municipalities and offer scholarships for mining-related studies (Eerola, 2021). In Lapland, and other remote places, they might also build or help to maintain roads in collaboration with municipalities when such service also support their own activities. Generally, such benefit sharing activities are practiced by major companies with advanced and long-term mineral exploration and/or mines.

Data and Reporting

Companies operating in Finland use different mineral reporting systems including the JORC and NI43-101 (Kot-Niewiadomska & Galos, 2017). Finland also uses the UNFC reporting standard. When collecting data from third parties, the Geological Survey of Finland (GTK) requires that data must comply with the national standard. GTK is currently developing a tool called AIMEX which will be used to carry out sensitivity analysis mapping to balance environmental, societal, and economic interests. GTK is constantly working to improve the knowledge of CRM resources. It recently completed the Battery Mineral Project (GTK, 2024) which

[11] The Skolt Sámi are a Sámi ethnic group who live around a number of villages in the municipality of Inari, in the Murmansk Oblast and in the Sor-Varanger Municipality.

published new data and reports on raw materials needed for batteries (lithium, graphite, and cobalt). The project identified areas where these minerals are likely to occur. It also started preliminary mapping on rare earth elements. All information is publicly available.

In relation to compliance with the INSPIRE Directive, Finland had an extremely low compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020). This suggests difficulties in data sharing between bodies located in the Finland and outside of Finland.

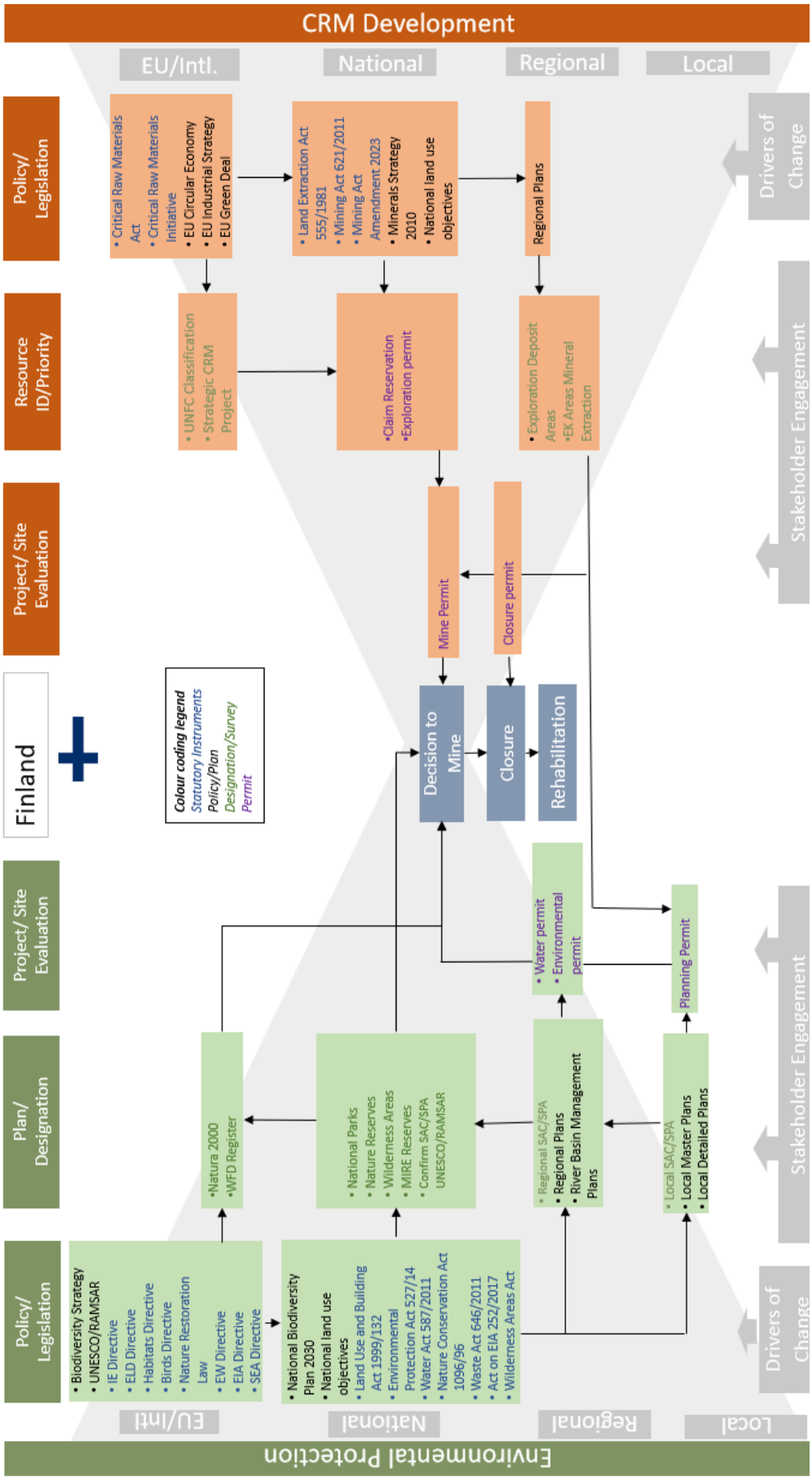


Figure 17: Regulatory Framework Finland

4.1.5 France

Governance and Regulatory Framework

There are four levels of governance in the French land use planning system: national government, regional government, departments (101 units including the overseas departments) and municipalities (over 35,000 units). The fourth level consists of groupings of local authorities. These are communautés d'agglomération. They allow for the sharing of resources, whether financial or personnel, and are particularly important in more rural areas, where small village councils may not have the necessary resources or sufficient need to have professional and technical staff dedicated to specific roles. The national level, i.e. the government through the various ministries, is primarily responsible for the preparation and enactment of legislation focusing on land use planning, environmental planning and other specific fields, including but not limited to mining.

The Mining Code is the principal piece of legislation regulating mining activities in France. France operates on the basis of decentralised governance. This means that while there is a national government acting as the legislator and a de facto competent authority for certain matters, particularly environmental, the state is effectively represented at local level by a Departmental Prefect. Mining is subject to a number of procedures but stands completely independent from land use planning processes.

The Prefect is tasked with the designation process for environmentally sensitive sites. The Departmental Prefect is a local representative of the State and in this instance would represent the Minister of the Ecological Transition, Territorial Cohesion and Energy Transition. The Prefect initiates and organises the designation procedure and identifies those who will form part of the Managing Committee (Comité de Pilotage) in charge of the preparation of the management plan. The Prefect also presides over the Committee. At the end of the procedure, the Minister is the final decision-maker when it comes to designation of a site. The Minister relies on the work of the Prefect with the Managing Committee.

Limited planning takes place at national level. Regions are tasked with the preparation of Regional Schemes for Sustainable Development, Spatial Planning and Territorial Equality. There are limited spatial designations at regional level. At grouping level, territorial coherence schemes are prepared for urban areas or groupings of smaller local authorities. At a local level, local urban plans or inter-municipal local urban plans set out local zoning. In general, for mining consent, the Prefect, acting in the capacity as representative of the State will work with the Regional Division for the Environment, Spatial Planning and Housing (DREAL), who will consult with the local authorities.

Plan and Designation

There are three levels of spatial planning. As there are no dedicated national spatial plans, the country operates on a decentralised basis at regional level. Each region prepares regional schemes for sustainable development, spatial planning and territorial equality (Schéma Regional d'Aménagement, de Développement Durable et Egalité Territoriale (SRADDET)). These documents principally act as a guide for public investment into infrastructure, including infrastructure that falls within the remit of the region, such as secondary schools or regional roads. These plans are political and prepared by the Regional Authorities and their members, who are representatives of the elected members of the constituting local authorities. These plans include a summary of the regional baseline, challenges and objectives. This summary is presented in both written and graphic form. It includes a set of general rules and proposed measures to support other public authorities involved in spatial planning and the environmental report.

At grouping level, territorial coherence schemes (Schéma de Cohérence Territoriale) are prepared for either urban areas or groupings of smaller local authorities. They serve as guides for different sectors, for spatial planning, housing, transport, environment, including biodiversity, energy and climate. They translate at grouping level the aspirations of higher-level plans, which allows plans prepared at local level to exclusively refer to these plans for guidance on the policy direction to be followed.

At local level, local urban plans (plan local d'urbanisme (PLU)) or inter-municipality local urban plans (plan local d'urbanisme intercommunal (PLUI)) are the main tools for spatial planning. They set out local zoning regulations. Not all local councils have a PLU or PLUI, if levels of development do not warrant it. In this case, development is regulated by the Planning Code.

Exploration and mining fall outside the remit of the Planning Code and therefore are not considered as part of land use planning. As a result, neither exploration nor mining are addressed in any of the aforementioned plans as this would mean that the plans transgress their legal purpose. Post-mining land-use is the only element that is considered during spatial planning, with relevant local authorities preparing mining risks prevention plans (Plan de prévention des risques miniers) where these are located on or near historic mines. In this case, special rules for development and urbanisation will be defined and applied. There is in effect no integration and no prioritisation at plan-level of mineral interest in land use planning.

Natura 2000 sites are integrated into the planning documents listed above. In essence, plans and policies that may impact on a Natura 2000 site are subject to a Habitats Directive Assessment. The definition of Natura 2000 sites and other protected sites avails of limited public consultation at designation stage. However, as management committees are established for each of the sites, it is possible that a mining or exploration company are invited to become a member, if they have a publicly known interest in the site. Mining and exploration companies otherwise avail of the same rights as individuals when it comes to environmental decision-making and participation in plan-making as such rights are enacted through the Environmental Code and do not discriminate between individuals and entities. However, as stated above, there is limited to no interaction between spatial planning and mining permitting.

Exploration

The Mining Code sets out the rules for exploration in France. The Minister for Economy, Finances, Industrial and Digital Sovereignty is tasked with giving consent for mineral exploration. The task, however, is deferred to the Prefect, who represents central government at regional level. This consent is known as an Exclusive Exploration Permit (PER). This permit does not give rights to carry out invasive exploration works. An additional authorisation (permis d'ouverture des travaux d'exploration) is required, if more invasive activities such as drilling are planned.

One single assessment is undertaken to cover the requirements of the Habitats and EIA Directives. Deliberation on each procedure is delivered simultaneously with the decision to allow the exploration activities.

Similar to Belgium, France has not mined or carried out mineral exploration in Metropolitan France since the closure of the last coal mine in 2004, with the exception of industrial minerals. Mineral exploration for metals restarted in 2013 in Metropolitan France and has led to significant finds with several potential mining projects progressing toward opening. Exploration activities have been driven by the private sector. Notwithstanding this, in spite of the lack of national plan or strategy in place for mineral extraction and specifically CRMs, there is a strong push at national level toward restarting mining activities, specifically lithium extraction. As of Q2 of 2024, there are three projects progressing towards the opening of a mine. As evidenced in the case of the EMILI project in Échassières, there is strong political and governmental support for the opening of lithium mines in Metropolitan France. However, at a lower level, the support is less clear with evidence of both support and opposition.

Extraction

Currently, Metropolitan France does not have any active metal mines, but the Government is actively supporting privately promoted projects. Overseas territories such as New Caledonia and Guyana have ongoing extraction operations (EC, 2017). The Minister for Economy, Finances, Industrial and Digital Sovereignty is tasked with giving consent for mineral extraction. This decision-making is also deferred to the respective Prefect.

Owing to the enactment of the new Mining Code, all permits are now integrated, with one decision-maker, the Prefect. The Prefect will designate the relevant authorities whose input, expertise and/or advice is

required, including the environmental authorities and the local authorities, in particular DREAL and the Biodiversity Office. The permit consists of a single EIA assessment which also integrates the assessment under the Habitats Directive.

Stakeholder Acceptance

Public consultation is mandatory in accordance with the EIA Directive. Certain projects may be the subject of a public debate. Public debates are not automatic for all projects but are mandatory for a project such as a mine. Public debates are organised by the National Commission on Public Debate. This commission is an independent authority that is tasked with ensuring that all citizens living in France have access to information and are able to exercise their rights of participation in policy development and projects with a potential impact on the environment. The Commission identifies the questions that the debate will seek to answer. This does not only focus on the mining project per se but can go beyond and consider macro-economic questions and environmental challenges such as impacts on water and waste or alternatives to the use of the CRMs. The public debate feeds into the decision-making process. Overall the permitting process takes around three years (EC, 2017), including the debating phase.

As there has been no mining in Metropolitan France, there has been no community involvement programme put into place. There is also no specific community compensation requirement in either the Mining Code or the Environmental Code. Should a form of community gain be provided, it will therefore be down to the individual mining companies themselves. There is also no evidence of such programme being in place in overseas territories.

Data and Reporting

The French Geological Survey (Bureau de Recherche Géologiques et Minières (BRGM)) is tasked with data collection and collation relating to minerals. It also provides advice and drafts guidance documents. It has six missions, one of which is focused on raw materials and the circular economy. By law, BRGM is tasked with the collection, either directly or indirectly, validation, archiving and publication of data covering the French territory, including data on exploration, drillings and other data collected during exploration and extraction activities (République Française, 2023b). It also has to develop methods to analyse and model the data. BRGM maintains InfoTerre, which is the database holding all geological data. Some of the data are accompanied by details on water features and/or designated nature protection sites. BRGM has also developed a series of software-tools which can support a number of functions or activities including but not limited to predictive mapping and to calculate impacts to groundwater.

The BGRM has carried out an assessment of Metropolitan France's tungsten and antimony occurrences and predictive mapping for Europe for tungsten, antimony, copper, germanium, gallium, tantalum, cobalt and rare earth elements.

In relation to compliance with the INSPIRE Directive, France had an extremely low compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020). This suggests difficulties in data sharing between bodies located in France and outside of France.

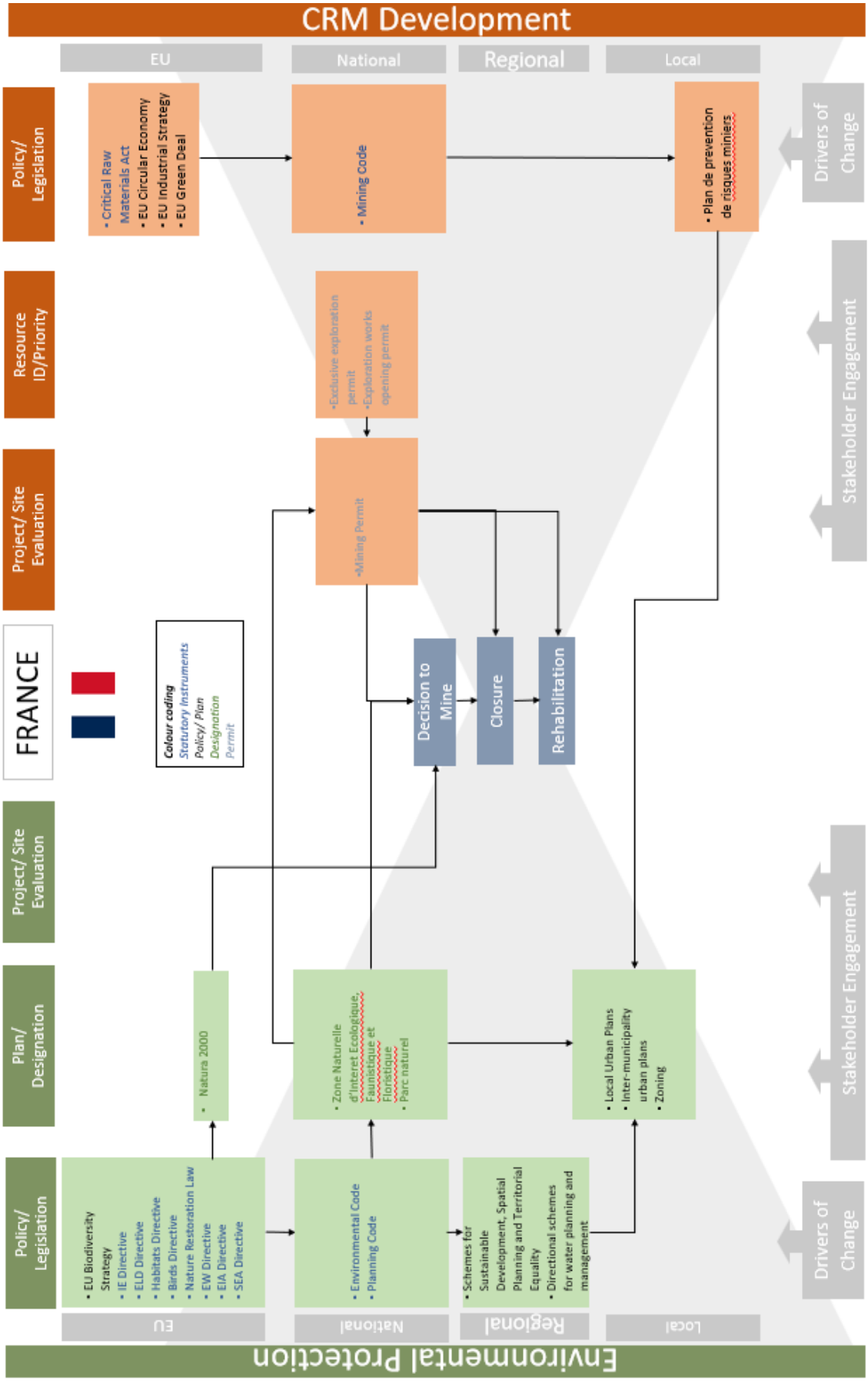


Figure 18: Regulatory Framework France

4.1.6 Ireland

Governance and Regulatory Framework

Ireland has three levels of government: national, regional (three regions) and local (31 local authorities). Central Government is responsible for the preparation of legislation and national policy. Mineral legislation and mineral strategic policy are the duties of the Department for Environment, Climate and Communication (DECC). The Department for Housing, Local Government and Heritage (DHLGH) is responsible for (spatial) planning legislation and policy, and for environmental legislation and designation. The regional level has a more supportive role insofar as it regionally translates national policy and guides local policy. Local policy is more detailed and has to comply with higher level policy, meaning vertical integration between the different levels is quite strong.

Plan and Designation

The land use or spatial planning system is well developed with four layers of hierarchical plans reflecting the governance levels listed above. The local level is divided into two levels: the development plan and the local area plan (LAP), the former focusing on the entire area of a local authority and the latter on a specific area. Lower-level plans must have regard to higher level plans and policies. Land use zoning in Ireland is determined at local level by the local authority. Environmental designations are, for the most part, made at national level by the Minister of State for Nature, Heritage and Electoral Reform and incorporated into local plans. Local authorities may designate other areas for environmental reasons (high amenity areas). As stated above, there are no mineral designations in land use planning. However, plans can include policies and objectives that may be supportive or otherwise of mineral development. Mineral planning is largely sectoral and does not include spatial designation. There is therefore only partial integration. Land use planning translates national policies and environmental designations, but mining is not considered as a land use for the purpose of zoning. As a result, in Ireland, aside from Geoparks, there are no spatial designations applied to minerals. One designation specifically excludes mineral activities: national parks, which are the responsibility of the Minister of State for Nature, Heritage and Electoral Reform (dependent on the DHLGH).

DECC published a national Mineral Policy Statement that recognizes the role of CRMs in society. By law, the regional authorities (RAs) and local authorities (LAs) must have regard to government policy in their own plan. The same principle applies in decision-making. In that regard, there is good vertical integration of governance.

In Ireland, plans tend to include mitigation measures which require projects to take into consideration the requirements of the Birds and Habitats Directives, the EIA Directive and of IED.

Exploration

For exploration, applicants should secure a prospective licence (PL) from the DECC, who makes the decision based on the recommendations of the Geoscience Regulation Office (GSRO). This takes between 13 and 15 months. The Minister carries out a screening exercise to confirm whether an assessment under the Habitats and/or EIA Directives is required.

There has been a recent application for lithium exploration which gathered significant interest. The case shows community opposition against the extraction of the mineral, although there has been, to date, no discussion of potential extraction. In normal times, there is limited to no involvement from the local authority in exploration, but given this case gained significant interest, the local authority was forced to comment publicly on the case. Mineral exploration decision-making is highly centralised and has limited to no interaction with the land use planning system. As of Q2 of 2024, the company undertaking the exploration activity had still not been able to access the land a year after receiving permission. This is because the landowner has not allowed the company to do so. This was, in spite of the fact, that exploration activities at the location had been carried out for years.

Extraction

Consent applies a mixed regime with involvement from local and national competent authorities. Three sequential permits are required: planning permission has to be secured from the local planning authority, or if appealed, from An Bord Pleanála (ABP), a central government body which acts as the national appeals board. Following this, an Industrial Emission Licence is required from the Environmental Protection Agency (Government of Ireland, 2013), followed by a State Mining Lease or Licence from the Minister for Environment, Climate and Communications (MECC). Each permit acts as a gateway to the next. While the Environmental Protection Agency and the MECC may be consulted with as part of the EIA procedures for the planning permission stage, interactions between the authorities are limited to specified periods overlapping with the mandatory periods of public consultation. Each permit stage is accompanied by its own Habitats Directive Assessment and EIA, which are separate assessments, although they are linked. The overall duration can be up to four years (EC, 2017) but this entirely dependent on the fact that neither ABP, the Environmental Protection Agency, nor MECC are legally timebound and it does not include any potential judicial review of any of the stages. In effect, it could take much longer to secure all the different consents, in particular if one or more of them were to be the subject of judicial review.

There is no one-stop-shop in Ireland. In relation to the EIAR specifically, although each stage of permitting requires its own EIA, the same EIAR is used for all. This does not preclude each of the relevant authorities to request further information to support its assessment. There has been a growing body of legal challenges to administrative decisions in the last four years in Ireland. However, to date, none specifically concerns mineral development, except quarrying, and more specifically the need to carry out retroactive EIA (known as substitute consent). Much of it relates to issues pertaining to the Habitats Directive. Historically, like most MSs, Ireland has rarely used derogation procedures under the Habitats Directive. Derogation was used in two cases, both of which related to projects promoted by a local authority or a state company.

Stakeholder Acceptance

The Geological Survey Ireland (GSI) is active in the promotion of CRMs in the green transition and has undertaken over the last year a campaign aimed at highlighting the role of CRMs. It publishes regularly a 'Green Metal Fact' that provides concise and clear information on CRMs (see figure below).

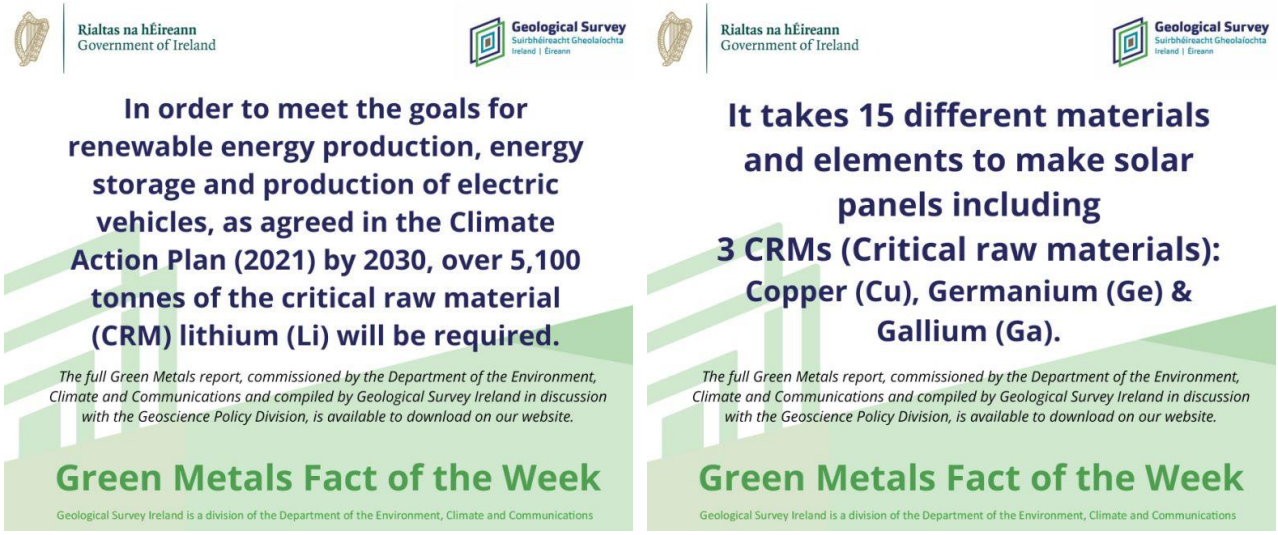


Figure 19: Examples of 'Green Metals Fact of the Week' promotional campaign

Mining and exploration companies in Ireland are well organised and undertake public engagement and consultation of their own accord in addition to the mandatory phases of public consultation imposed by the different stages of permitting. Through their corporate social responsibility programmes, Irish exploration and mining companies actively engage with the public (Luodes et al., 2019), but recent exploration cases show this is increasingly fraught with opposition and discontent (Luodes et al., 2024). Generally, mining companies finance and support local organisations and groups in the area of their activity. It does not appear to be the case for exploration companies. Given the location of mines in rural areas, local authorities are generally supportive of economic opportunities provided that the development complies with the local planning policy framework. Mines that went through the planning system in Ireland were always given planning permission by the relevant local planning authority. Community gain is engrained in planning policy at local level, with development plans often requiring the preparation of social/community infrastructure audits and the provision of such infrastructure where required. Certain categories of developments known as strategic infrastructure development (SID) may be required to provide community gain by law. In general, the development of a mine in Ireland would also require the payment of development contributions to the local authority toward public infrastructure. There is no community ownership programme for mining.

Expertise, Data and Tools

Data collection is undertaken in two ways. PL holders are to provide exploration results in accordance with the terms and conditions of the licences. In parallel, GSI carries out data collection through the Tellus survey, the national programme to gather geochemical and geophysical data. Companies operating out of Ireland use the PERC resource classification. Ireland currently does not have a system for designating areas to safeguard minerals. Data collected are stored in GSI OnLine Documents, Maps and InformatioN Explorer (GOLDMINE). The tool allows for the search of an online archive database and to download full-size resampled pdfs and original TIFF image files. It also includes datasets (mineral exploration reports, geotechnical reports, boreholes and tests, geological maps, publications, bulletins, published and unpublished reports, groundwater well hydrographs, airborne geophysical maps, mineral locality reports and mine record and maps. Data that are available on GOLDMINE as it depends on whether a PL area has been active or not. There is also the OPALS public viewer that allows for the visualisation of mineral deposits and occurrences in several categories (gold, base metal, industrial mineral or coal and minor base metals). Again, only some details are available.

In relation to compliance with the INSPIRE Directive, Ireland had excellent compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020).

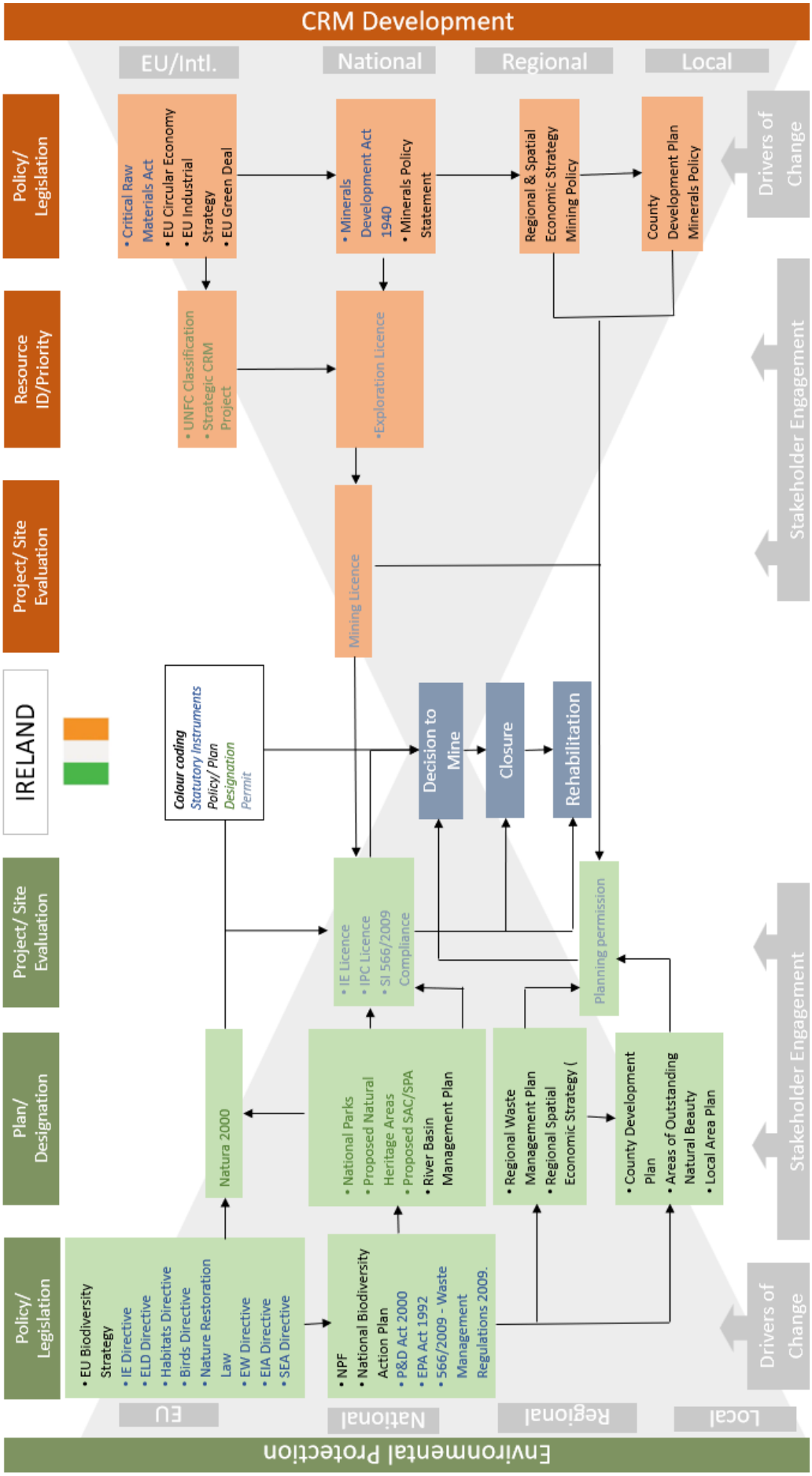


Figure 20: Regulatory Framework Ireland

4.1.7 Italy

Governance and Regulatory Framework

There are four levels of government in Italy: the State, the regions, the province and the municipal level. In relation to land use planning, the regional authorities can prepare legislation to regulate their planning system. Regional authorities also oversee land use planning but they collaborate with central government in this task (Ministry of Cultural Heritage and Tourism). Land use plans are prepared by provinces in some cases. In both cases, the regional or provincial plan steers the direction for the municipal level (Gugerell, 2019).

The primary legal framework overseeing mining and extractive industries in Italy is established by Legislative Decree No. 1443/1927 which established the legal regulation of strategic mineral extractive industries such as mines. The Mining Law (Royal Decree) No. 1443 of 1927 categorises minerals as first category ('category I') or second category ('category II') minerals (EC, 2017). CRMs form part of the first category. The Minister of Economic Development (MISE) prepares mineral policy for the county. The Constitutional Law No.3/2001 delegated administrative authority of these mineral to the regions, which includes permitting procedures of solid minerals. The Directorate General for General and Environmental Security of Mining and Energy Activities - National Mining Office for Hydrocarbons and Georesources (under MISE) provides rules for Category I minerals.

Similar to land use planning, the regions prepare and enact their own mineral legislation. For first category minerals, the regions are the competent authorities (except in the case of Emilia-Romagna where is it is the province and municipalities (EC, 2017).

Some regions and local municipalities have significant autonomy in Italy, with Article 116 of the Constitution of the Italian Republic (1947) granting home rule to five regions which have varied financial, administrative and legislative powers. In addition, the Constitutional Law 3/2001, passed several administrative competences to regions. For instance, they are responsible for granting permits and overseeing extractive activities within their territories, in accordance with national policies and regulations. This includes land use planning and ensuring that local environmental and safety standards are met. The governance structure in Italy is multi-tiered and each of its regions have a high degree of autonomy from the national level. The national government plays a role in providing a general legislative framework for land use and urban planning, as well as mining legislation and policy.

Law No. 1150/1942 supervises territorial and urban planning. As part of the urban planning instruments, the act contains guidance for General Municipal Plans (Piani Regulatori Generali) as well as policies that allow for regions and municipalities to adapt rules to local requirements. The Legislative Decree No. 152 of 2006 is an overarching legislative framework applicable to all matters concerning environmental protection, which includes SEA, EIA and IPPC. However, each of Italy's Regions have their own rules governing these matters and are regionally specific.

Each of Italy's regions then develops its own Regional Territorial Plan (Piano Territoriale Regionale (PTR)), which must be consistent with national legislation. This plan outlines the objectives for land use and includes policies for environmental protection, historical and cultural preservation, and infrastructure development. The provinces of Italy coordinate between regional and local plans to ensure municipal plans are aligned with both regional policies and national guidelines. The core of local planning policies in Italy is at the municipal level with each municipality developing its own Local Urban Plan, which is a detailed plan for land use within the municipality. This plan includes specific zoning regulations, plans for infrastructure development, and guidelines for the preservation of historical sites and natural areas.

Plan Preparation and Designation

In general, there are no specific policies in place that protect the mineral industry in planning policy, however, there are mining plans set for second category materials. In some regions, there are policies regarding first category materials. All Italian Regions, and sometimes Provinces, have taken on the responsibility of

managing Mining Plans. These plans outline details like demarcation and identification, extraction needs and methods, excavation timelines, and quarry restoration strategies.

As stated in the preceding section, each of Italy's regions has its own laws governing spatial planning, in accordance with the national legislative framework. The PTRs are strategic planning documents prepared by regional governments. They set out a vision and guidelines for regional development, land use, and environmental management at the regional level. At the municipal level, a general regulatory plan provides detailed zoning and land-use planning guidelines and regulations for development specific to each municipality. This plan is the primary tool through which local planning policies are implemented.

The Municipal Urban Plan (Piano Urbanistico Comunale) is a tool for municipalities to manage urban development, focusing on land use, urban regeneration, and infrastructure planning. The provinces of Italy coordinate between regional and local plans to ensure municipal plans are aligned with both regional policies and national guidelines. The core of local planning policies in Italy is at the municipal level with each municipality developing its own Local Urban Plan, which is a detailed plan for land use within the municipality. This plan includes specific zoning regulations, plans for infrastructure development, and guidelines for the preservation of historical sites and natural areas.

In Emilia-Romagna, mining companies can request that a municipal council changes a mining plan by including a new extraction area. This allows for safeguarding minerals (Gugerell, 2019). In this region, the provinces can prepare an Intra-Regional Plan for Extraction Activities (PIAE). This plan identifies the need for each mineral (quantities), the location for recovery and the maximum amount to be extracted. The sites are identified through the process of SEA. At present, these PIAE are used for surface materials.

The designation of environmentally protected sites involves both national and regional levels of government. Ministry of the Environment and Energy Security (Ministero dell'Ambiente e della Sicurezza Energetica) is the key ministry responsible for environmental protection in Italy including the designation of protected areas such as national parks, nature reserves, and protected marine areas. The Institute for Environmental Protection and Research (Istituto Superiore per la Protezione e la Ricerca Ambientale, ISPRA) was established by Law No.133/2008 and one of its tasks is to contribute towards the designation and management of these areas.

National Parks (Parchi Nazionali) are large areas designated to protect natural landscapes and habitats of national significance. Regional Parks (Parchi Regionali) focus on protecting natural and cultural features unique to specific regions of Italy and are managed by regional governments. Nature Reserves (Riserve Naturali) are areas designated to protect wildlife and habitats, can be national or regional in significance, and are often critical for preserving rare or endangered species and unique ecosystems. Biosphere Reserves (Riserve della Biosfera) are part of UNESCO's Man and the Biosphere Programme and are allocated to areas of ecological significance and are models of sustainable development and conservation. Italy also hosts UNESCO World Heritage Sites designated for their geological value, such as Mount Etna or the Dolomites.

Due to Emilia-Romagna regional law, mining activity within buffer areas (contiguous area – “area contigua” in Italian) of the protected areas is forbidden, unless the mine existed before the designation of the protected area/regional park. If mining activity already exists, it must follow policies and procedures allocated as part of the regional park plan.

Exploration

For First Category minerals, regional authorities are tasked with permitting, the exception being in Emilia-Romagna, where exploration licences are granted by the province and municipalities (EC, 2017). To obtain an exploration permit, the companies must submit an operation plan. The competent authority undertakes a screening of the applications to confirm whether an EIA is required. The average timeframe is 90 days in Emilia-Romagna but can stretch up to six months in other regions. Similar to other countries such as Ireland or Finland, holding an exploration permit allows the holder to proceed or gives them preference when it comes to securing the relevant extraction permit.

Extraction

Regional authorities deal with extraction permits for First Category minerals. Extraction permit applications are screened to confirm if they require EIA. The application must specify the timeframe for closure and remediation. Again, extraction permit applications are subject to an EIA procedure. This can be triggered either by the proposed extraction quantities, or the location on or near an environmentally sensitive site. In Emilia-Romagna, the timeframe to obtain a mining licence is maximum six months (EC, 2017). The extraction permit integrates considerations for land use and environmental impacts; therefore one permit covers all aspects.

Stakeholder Acceptance

Similar to the French government, the Italian government is keen to reopen mines. Italy principally extracts surface minerals through quarrying. Nonetheless, the Italian government has agreed to work with the French and German governments with a view to exchange data, best practice and cooperation in relation to extraction, refining, processing and recycling.

Societal acceptability is reached within the public participatory process and through stakeholder engagement. Public engagement in the mining plan is overseen by regional law on mining activity (Law No.17/1991) and by regional law on EIA (Law No.4/2018). Italy offers incentives for mining and extractive industries that align with social and environmental standards. These incentives often include streamlined regulatory processes for companies that demonstrate strong environmental stewardship and community engagement. Financial incentives, such as tax benefits or grants, may also be available for projects that contribute to local development, adopt sustainable practices, or invest in technology to minimise environmental impact.

Data and Reporting

The Instituto Superiore per la Protezione e la Ricerca Ambiental (ISPRA), the Italian Geological Survey collects and collates all geological data. The data are displayed on the Systema Nazionale per la Protezione dell'Ambiente. The platform allows users to add a large number of layers available from the ArcGIS online catalogue. This therefore gives users access to 10,000 layers through the platform. A review of the ISPRA website shows that data are not complete for the regions, suggesting there might be an ad-hoc knowledge of CRM resources at national level. ISPRA nonetheless participates in European-funded projects such as FRAME which specifically looks at the identification of target areas/deposits for exploration. Italy uses its own national reporting mechanism and not a CRIRSCO derivate like some of its European neighbours.

Gugerell (2019) found that mining companies pay a fee based on the amount extracted, 80% of which goes to the municipality, 15% to the Province and 5% to the Region. This money can be used for the recovery of abandoned sites, toward studies and the development of instruments for the management of data.

In relation to compliance with the INSPIRE Directive, Italy has a good compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020).

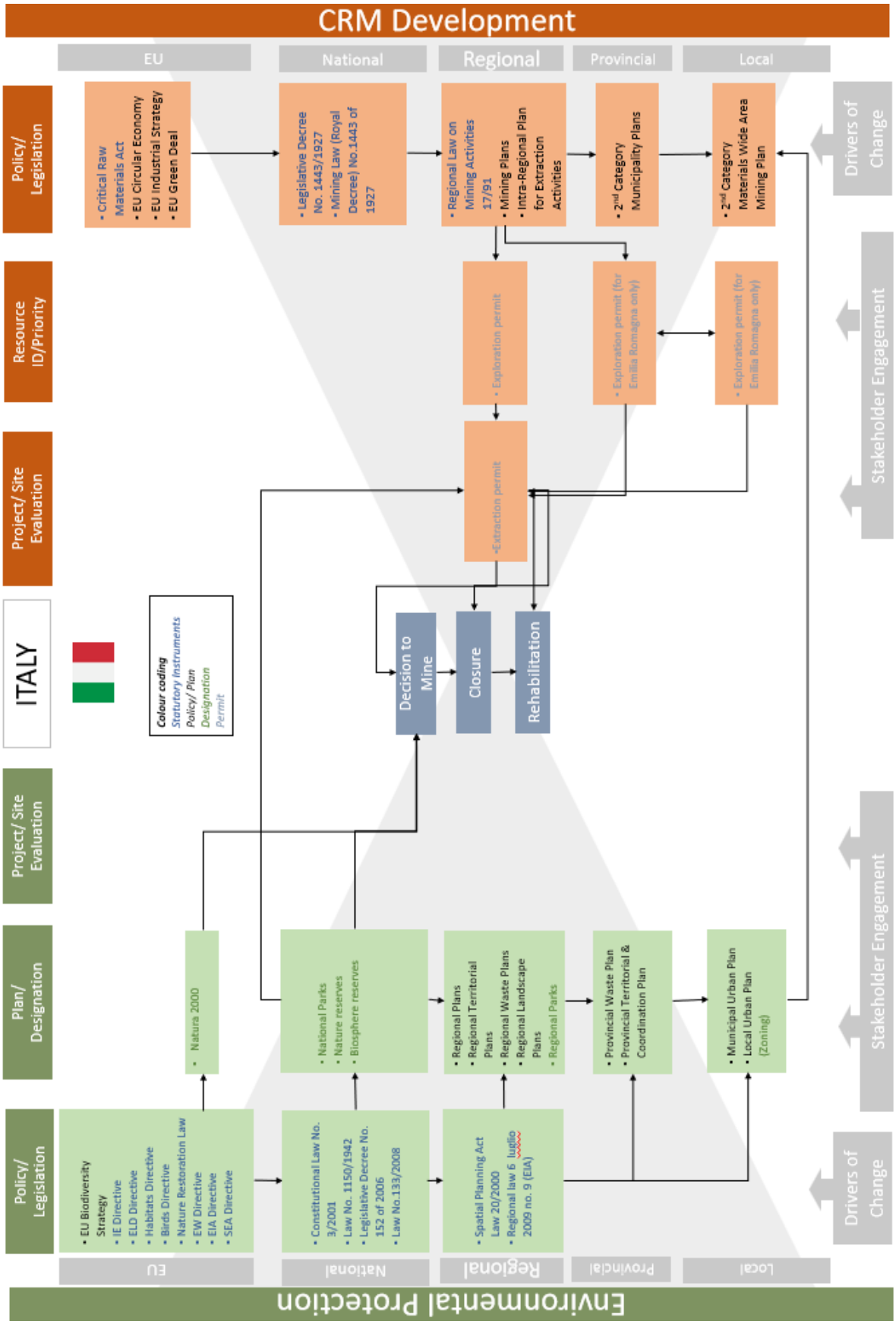


Figure 21: Regulatory Framework Italy

4.1.8 Norway

Governance and Regulatory Framework

Norway's governance structure is that of a constitutional monarchy with a parliamentary system, with the role of the monarchy being largely ceremonial. The government is headed by the Prime Minister, with the Parliament (Storting) acting as the supreme legislative body. Counties and Municipalities have significant autonomy, allowing for a level of decentralised decision-making tailored to local needs. Norway is not a member of the European Union (EU); however, it is part of the European Economic Area (EEA) and the European Free Trade Association (EFTA).

The Sámi Parliament (Sameting) in Norway was established in 1989 (under the Sámi Act 1989) as a representative body for the Sámi people. It operates independently from the Norwegian Parliament and is primarily responsible for cultural affairs and preservation of the Sámi peoples. The Sámi Parliament has a consultative role where it concerns Sámi people and their traditional territories such as land rights and resource management.

The principal legislation governing mining and extractive industries in Norway is the Minerals Act of 2009, which is further detailed by the Regulations to the Minerals Act of 2010. Additionally, the Planning and Building Act of 2008 and the Regulations on Impact Assessment of 2017 acts as a key regulatory framework in relation to land use, spatial planning, and environmental protection. These frameworks are set out by the national government. The Cultural & Heritage Act of 1978 covers matters relating to sites of archaeological importance.

In Norway, regional policies and legislation for spatial planning are mainly governed by county administrations. These subnational divisions operate under the national framework set by the Planning and Building Act (2008). The counties develop Strategies and Master Plans, aligning with national goals while addressing planning and development matters such as land use, transportation, economic development, and environmental protection. Similar to many other European countries, these regional authorities assist in aligning national laws and objectives with more regionally specific priorities.

Municipalities are the smallest unit of local government and are responsible for local spatial planning, including land-use decisions, zoning and local environmental considerations. The Planning and Building Act (2008) mandates municipalities to develop their own Municipal Master Plans. These plans are key instruments in local planning, outlining land use, infrastructure development, and environmental conservation within municipal boundaries. Municipalities are also required to create more detailed Zoning Plans, specifying land use for specific areas which include mining.

It is important to note that in June 2023, the Norwegian Government issued a more progressive mineral strategy and set up a Commission to review this document. There are plans to produce a bill for Parliamentary approval scheduled for Spring 2025.

In March 2024, the EU and Norway signed a Memorandum of Understanding (MoU) to launch a strategic partnership to develop a sustainable land-based raw materials and battery value chains (EC, 2024d). The MoU focuses on five areas:

- Integration of raw materials and battery value chains, facilitating joint investment projects;
- Cooperation on research and innovation (R&I);
- Application of high environmental, social and governance standards and practices;
- Mobilisation of financial and investment instruments; and
- Development of necessary skills for high quality jobs in the raw materials and battery sectors.

The Ministry of Petroleum and Energy (Olje- og energidepartementet) is primarily responsible for policy development in the mining sector. The Directorate of Mining, under the Ministry of Trade, Industry and

Fisheries, is responsible for the administration of extraction of mineral resources, which includes granting of exploration and extraction licences and oversees mining regulations.

Plan Preparation and Designation

The Ministry of Local Government and Regional Development (Kommunal- og distriktsdepartementet, KDD) is primarily responsible for policy development in spatial planning. This includes overseeing land-use planning, urban development, and regional policy, ensuring that these align with national objectives and legislation.

The Planning and Building Act (2008) is the primary legal framework for spatial planning and development in Norway. It outlines the processes for municipal master planning, zoning regulations, and building applications.

The National Planning Guidelines (Statlige Planretningslinjer) 2014 are general guidelines establishing national planning objectives with the aim to coordinate the planning process and are established under the Planning & Building Act (2008). Regional Planning Strategies (Regional Planstrategi) are enforced at a county-level and set out the priorities and goals a regional level. The Regional Plans are drawn from the regional strategy, outlining land use plans for specific areas (OECD, 2017).

Municipal Planning Strategies (Communal Planstrategi) – in a similar process to the regional strategies – describe local development goals, trends and priorities. The Municipal Master Plans (Kommuneplan) is informed by the strategy and must be developed by each municipality and cover land-use regulations and social targets (OECD, 2017).

Finally, Zoning Plans (Reguleringsplan) contain detailed land-use regulations and zoning for smaller areas within municipalities. These plans also contain provisions for the protection of environmentally sensitive areas and procedures for public participation. According to the OECD (2017), these plans override other existing plans and feed into the Municipal Master Plan. Luodes & Pantilla (2023) refer to the Planning and Building Act (2008) governing the land use planning process which takes place across national, regional, and local levels, involving the King, regional planning authorities, and municipal councils. The Directorate of Mining has the authority to raise objections to certain plans and zoning that impact resources classified as nationally/internationally or regionally important.

The key legislation governing environmentally protected areas in Norway is the Nature Diversity Act of 2009. This act covers biodiversity conservation, sustainable use of natural resources, and protection of natural habitats. It establishes guidelines for the management and preservation of protected areas, including national parks, nature reserves, and other designated conservation areas. This legislation works in tandem with international agreements and European Union directives that Norway is party to.

In Norway, environmentally protected sites are designated and managed by a combination of governmental bodies at different levels. The main responsibility lies with the national government, particularly through the Ministry of Climate and Environment. This ministry oversees environmental policy and management, including the designation and protection of natural areas. The Planning and Building Act (2008) also permits the establishment of special consideration zones near protected sites.

The Geological Survey of Norway identifies mineral deposits of public interest and classifies their significance (international, national, regional, local or not assessed) (Luodes et al., 2019). Designation does not necessarily preclude other uses. It may do in areas qualified as internationally, nationally or regionally important.

In 2023, the Norwegian Government published Norway's Mineral Strategy which has the goal of developing the country's mineral industry as the most sustainable in the world. The strategy relies on the list of CRMs developed by the EU but allows for future potential extension. It focuses on five key areas for mineral policy, which include:

- Quicker implementation of mineral projects, including the reduction of administrative processing time and streamlining permitting procedures; the creation of a one-stop-shop, the prioritisation of CRMs, the strengthening of the GSO's mapping capabilities;
- Contribution to the circular economy;
- Sustainability, which will seek, in part, to facilitate engagement with the Sámi Parliament and organisations;
- Access to capital; and
- A stable supply of raw materials for green value chains.

Permitting Processes - Exploration

The Directorate of Mining, under the Ministry of Trade, Industry and Fisheries, is responsible for the administration of the extraction of mineral resources which includes granting exploration and extraction licences and overseeing mining regulations.

As noted previously, the Minerals Act (2009) serves as an overarching key piece of legislation for mining and extractive industries which includes regulation of activities, property rights, environmental protection, and consultation with local communities. The Act contains procedures for applying for exploration and extraction licences and the conditions under which extraction activities can occur on private lands. This legislation also provides procedures to aid in resolving disputes between stakeholders, including enforcement measures. The Act also contains a protocol for consultation with the Sámi Parliament to ensure indigenous interests are considered and upheld during procedures.

Exploration rights are issued on a first-come/first-served basis, and these rights often come with minimal or no requirements for immediate work. This allows licence holders to retain these rights for an extended period without active exploration, leaving the commencement largely at their discretion.

Extraction

Licencees are entitled to seek a permit for exploitation, followed by the necessity of obtaining an operational license. This means that holding an exploration licence is a pre-requisite for entry into the process to secure an extraction license. Throughout this process, they must comply with several regulations, including conducting EIAs, adhering to restrictions on motorised off-road travel, and following pollution control laws. The project must also align with local or regional planning and building regulations. Securing approval from local authorities can sometimes be a challenging aspect of this process.

As stated earlier, prior to making an application, the site has to have been designated for mining purposes. To open a mining operation, multiple permits are required. This includes an operating licence, zoning plan approval, a tailings disposal permit, mining rights which are exclusive rights to mine in a given area and where necessary approval by the Sámi community.

Stakeholder Acceptance

The Norwegian Government is actively pursuing similar objectives to the EU through the publication of the Norwegian Mineral Strategy (2023) and the signing of the MoU with the EU (2024). Like Sweden and Finland, Norway has a Sámi community. Issues similar to those noted earlier also arise in terms of land use conflicts. The Nussir Case Study presented in Luodes et al. (2024) shows that some companies use internationally recognised ESG and corporate social responsibility (CSR) policies/programmes. Issues similar to those in Finland relating to the Sámi community and reindeer herding would also be relevant to Norway. The MinLand project had found that in mineral exploration and extraction are not viewed as importantly as other issues by local municipal powers due to their relatively short mandates. As a result, local elected representatives are not likely to support such activities if it is not viewed positively locally. The Norwegian Mineral Strategy 2023 recognises the need for stakeholder dialogue as a means to ensure that projects and their impacts become accepted. It notes the important role of gaining support particularly from municipal councils.

Data and Reporting

The Geological Survey of Norway identifies mineral deposits of public interest. The State owns metals that exceed 5 g/cm^3 specific density, which include chrome, manganese, molybdenum, niobium, vanadium, iron, nickel, copper, zinc, silver, gold (excluding alluvial gold), cobalt, lead, platinum, tin, zirconium, tungsten, uranium, cadmium, thorium, titanium, arsenic, and pyrite – this is covered through the Mineral Act 2009.

There is an exchange of data through the official Norwegian geodatabase Geonorge.no but there is no specific mechanism for exchanging information between the Geological Survey, the mining authorities and the land use planning authorities.

In relation to compliance with the INSPIRE Directive, Norway had a low compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020).

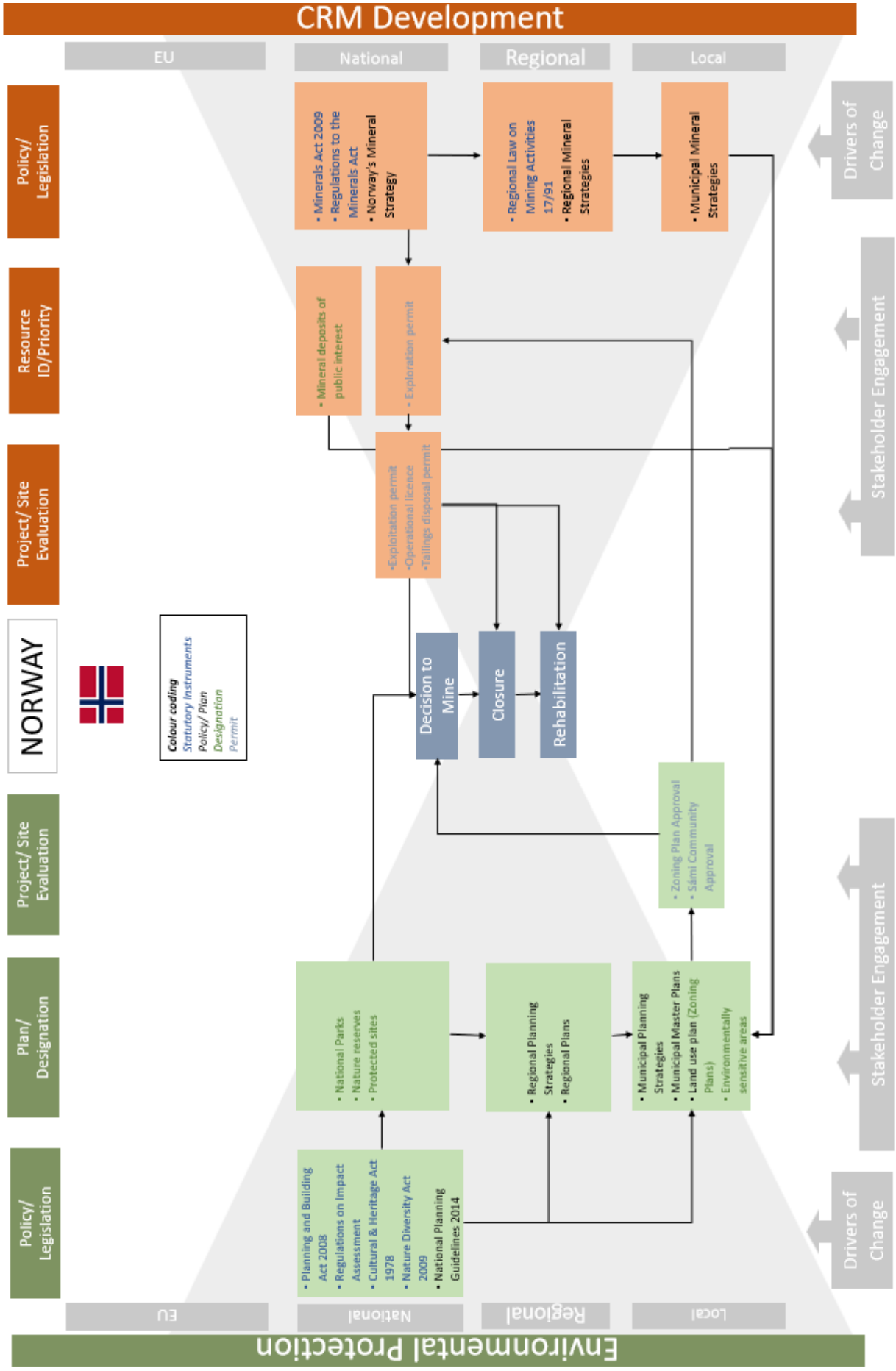


Figure 22: Regulatory Framework Norway

4.1.9 Portugal

Governance and Regulatory Framework

The primary legal framework overseeing mining and extractive industries in Portugal is established by the Law No. 54/2015, which establishes a general legal framework for exploration and mining of resources. This law governs a wide range of aspects within the mining sector, including exploration, licensing, mining rights, and environmental protections. It establishes the legal structure for mineral resource exploration and extraction in Portugal and additionally incorporates regulations pertaining to environmental impact evaluations, occupational safety, and the responsibilities and entitlements of mining companies. Portugal is rich in mineral resources, including copper, tungsten, lithium, and tin.

The government of Portugal plays a key role in designating and regulating the protection of environmentally protected areas. The Law No.54/2015 (Mining Legislation) was drafted by the then-Ministry of Economy and Innovation (Ministério da Economia e da Inovação), which is now superseded by the Ministry of Economy (Ministério da Economia). At a national level, the Directorate General of Energy and Geology (Direção-Geral de Energia e Geologia, DGEG) is now included in the Ministry of the Environment and Energy Transition (Ministério do Ambiente e Transição Energética, MATE). MATE is responsible for Portugal's the mining and environmental regulations.

In 2012, the Directorate General of the Territory (Direcção-Geral do Território, DGT) was established with the primary objective of overseeing spatial planning procedures in Portugal, as outlined in Law No.7/2012. Portugal also has two autonomous regions, the Azores and Madeira, which have their own governments responsible for managing protected areas within their territories. These regional authorities are responsible for designating and managing protected areas specific to their regions. Municipal governments are responsible for land use planning and development within or near environmentally protected areas.

The Decree Law 48/1998 (Framework Law for Spatial Planning and Urbanism) provides the fundamental legislation for spatial planning and urban development across Portugal and regulates the levels of public administration. The National Spatial Policy Programme (Programa Nacional da Política do Ordenamento do Território (PNPOT) 2019 (Law No.99/2019) is the key instrument for territorial management and development across the country and provides guidance for regional and municipal planning. The National Policy for Territorial Management (PNGT) provides guidance for land-use and sustainable regional development.

The Ministry of Environment and Climate Action (Ministério do Ambiente e da Ação Climática, MAAC) and the Institute for Conservation of Nature and Forests (Instituto da Conservação da Natureza e das Florestas, or ICNF) are responsible for coordinating and implementing national policies related to environmentally protected areas. The ICNF, in particular, is responsible for the management and conservation of natural and semi-natural areas. Furthermore, the Portuguese Environmental Agency (Agência Portuguesa do Ambiente, or APA) has environmental responsibility functions which include coordination of environmental policies, issuing of environmental permits and monitoring of water resources.

Generally, Gugerell (2019) found that there is good, yet informal horizontal integration between the different bodies working in public organisations. Together they work on policy issues focused on minerals, environment and infrastructure. They allow for the weighting of different policy options.

Plan Preparation and Designation

Spatial planning in Portugal is multi-levelled in its structure with several governmental bodies responsible for different aspects. As mentioned previously, the MAAC is responsible for overseeing and making amendments to the national spatial planning frameworks, such as the PNPOT. The Directorate General for Energy and Geology (Direção-Geral de Energia e Geologia, DGEG) oversees various aspects related to territorial planning, land management, and spatial development within the country, operating under the MATE.

The DGEG are involved in the development of Territorial Management Instruments (IGTs), specifically Municipal Master Plans (PDM), which are essential for effective urban and regional planning. They are responsible for environmental preservation within the context of energy and geological resources, collaboration with other relevant authorities and organisations for spatial planning and environmental protection, among other related responsibilities.

Portugal has a total of five regions on its mainland, alongside two autonomous regions (the Azores and Madeira). Each of the mainland regions are served by one of their respective Regional Coordination and Development Commissions (Comissões de Coordenação e Desenvolvimento Regional, or CCDR). These commissions are responsible for coordinating spatial planning and development within the region and work with national government to align with national and EU objectives. The CCDRs coordinate with local municipalities and are responsible for ensuring that development adheres to environmental regulations.

Each region develops its own Regional Spatial Plans (Planos Regionais de Ordenamento do Território, PROT), which align with the national policies and objectives (PNPOT), providing more detailed policy relevant to the region. Municipalities are a sub-regional government structure and are responsible for land use plans through the PDMs. The PDMs are legally binding documents at the municipal level for land use planning, which include regulations, development guidelines and zoning, sometimes including mining zones.

Article 3 of Decree-Law No.340/2007 outlines the criteria for categorising regions containing significant mineral deposits. There is a process known as the "Qualification and Disqualification of Mineral Deposits" outlined in Article 5 of Decree-Law No.30/2021. The DGEG is responsible for overseeing this procedure, and they facilitate public engagement through an online platform, including informative sessions intended for the public.

In relation to zoning systems for mining activities, the zoning type can vary depending on the regional or municipal regulations and other considerations. Mining activities may be covered and permitted within designated Extractive Industry Zones (Especiais de Mineração) or Geological Resource Exploration Zones (Espaços de exploração de recursos geológicos) where various industrial activities, including extraction and processing, are allowed.

The MAAC and associated agencies are tasked with the designation of protected sites. According to Branco & Pereira (2023), responsibility is also with APA, ICNF, and local municipalities to ensure compliance with the Directives and Biodiversity Plans.

The Framework Law on Environmental Bases (Lei de Bases do Ambiente) 1987, is a fundamental piece of legislation that establishes the principles, objectives, and guidelines for environmental policy within Portugal.

Branco & Pereira (2023) refer to the ICNF as setting and updating the limits of the designated areas. Natural Parks (Parques Naturais), National Parks (Parques Nacionais) and Natural Reserves (Reserves Naturais) are designated by the Ministry of Environment and Climate Action. Protected Landscapes (Paisagens Protegidas) are designated by the national government, regional and local authorities and depend on the significance of the landscape in question. Geoparks and Biosphere Reserves are designated by UNESCO and work in collaboration with national and local government and community groups. RAMSAR Sites are designated under the RAMSAR Convention and implemented by the MAAC. Portugal also hosts Community Reserves and Private Protected Areas which may not have legal recognition or protection but are supported by local government.

Law No.3 0/2021 – known as the ‘Mining Legislation’ – outlines the legal framework for mineral deposits (i.e. mines). Underground resources are owned by the State. The law suggests that mining activities should be avoided near to or within protected areas. The legislation states that the DGEG defines ‘defense zones’ to safeguard assets and structures, in any case, areas defined as ‘defense zones’ do not permit exploitation activities.

Permitting Processes - Exploration

DGEG, in consultation with the municipalities and other state agencies, is responsible for mining consent. The main regulatory structure governing mining and extractive sectors in Portugal is outlined in Law No.54/2015. This legislation provides a comprehensive framework for mining activities, encompassing exploration, licensing procedures, mining entitlements, and environmental safeguards. For exploration activities, DGEG is responsible for processing the decision made by the Minister for Environment and Energy Transition. There is no EIA for exploration. It is important to note that even if there is no EIA or other permit required for exploration, DGEG will liaise with the CCDRs and/or ICNF (if it is a sensitive area), as they are the municipal authorities of the area covered by the application. This is to ensure there is no conflict between mineral interests and other interests.

Similar to other countries reviewed in CIRAN, the exploration phase can be split into two permits. Prior appraisal rights can be sought to undertake preliminary studies or exploration rights where the aim is to increase the knowledge of geological resources.

There is no timeframe for making a decision on a licence. The EC (2017) found that on average it takes around seven months to secure an exploration permit. It also provides a general scheme of how the seven months are spent:

- Two months for the assessment and consultation with the municipality and environmental authority;
- Two months for public and stakeholder consultation;
- Another two months for the evaluation of the application and for negotiations of the terms; and
- One month for the ministerial decision.

In the event of a commercially viable discovery, the exploration permit guarantees the exclusive granting of a mining concession.

Extraction

As noted in relation to planning, there is good horizontal integration between the relevant bodies. These also work together with regards to decision-making. The Portuguese national mining authority, DGEG, acts as a one-stop-shop for all mining permits. To open a mine, applicants require a mining concession. Extraction activities are subject to a mandatory EIA. The EIA is carried out by both the Portuguese Environmental Agency and the Regional Coordination and Development Commissions.

Mining concessions can be assigned in several manners:

- Following an exploration campaign;
- On request by the mining company, if the mineral deposit is available.
- Through public tender, if it is viewed as strategic for the national economy.

Large operations require EIA and a protection plan to be submitted for approval by DGEG. Similar to exploration, there is no legally binding timeframe for decision-making. The EC (2017) found that on average it took 11 months to grant mineral rights.

Stakeholder Acceptance

Public engagement is encouraged in both spatial planning as well as mining and extractive industries, however, there are some notable differences related to the Portuguese system. The Portugal Participatory Budget (PPB) is a form of participatory budgeting at the local level that enables civil society to collectively determine public investments across various governmental sectors. The country has a relatively high degree of decentralisation, which results in citizen engagement at the local level. The Decree Law 116/2019 (Model of co-management of protected areas) enforces a public consultation process in Portugal (Branco & Pereira, 2023).

Luodes et al. (2019) found that mining projects could suffer from a lack of local support due to the short political mandates of locally elected representatives. As a result, this lack of support can cause issues for both inclusion of minerals in land use plans and during permitting processes. DGEG has therefore worked out a mechanism to ensure the promotion of societal acceptability in local areas. In the contracts signed between the State and the mining companies, up to 25% of the royalties can be deducted so that this money can be used to fund local projects and actions for the benefit of the communities. These are generally aimed at improving the welfare of the local community.

Data and Reporting

Portugal established a working group in 2021, made up of representatives from various organisations including DGEG, the National Laboratory for Energy and Geology and others. Their task is to identify critical and strategic mineral deposits, and the group's findings inform the National Strategy for Geological Resources, which aims to balance the development and exploitation of mineral deposits with environmental and social considerations.

In relation to compliance with the INSPIRE Directive, Portugal had a low compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020).

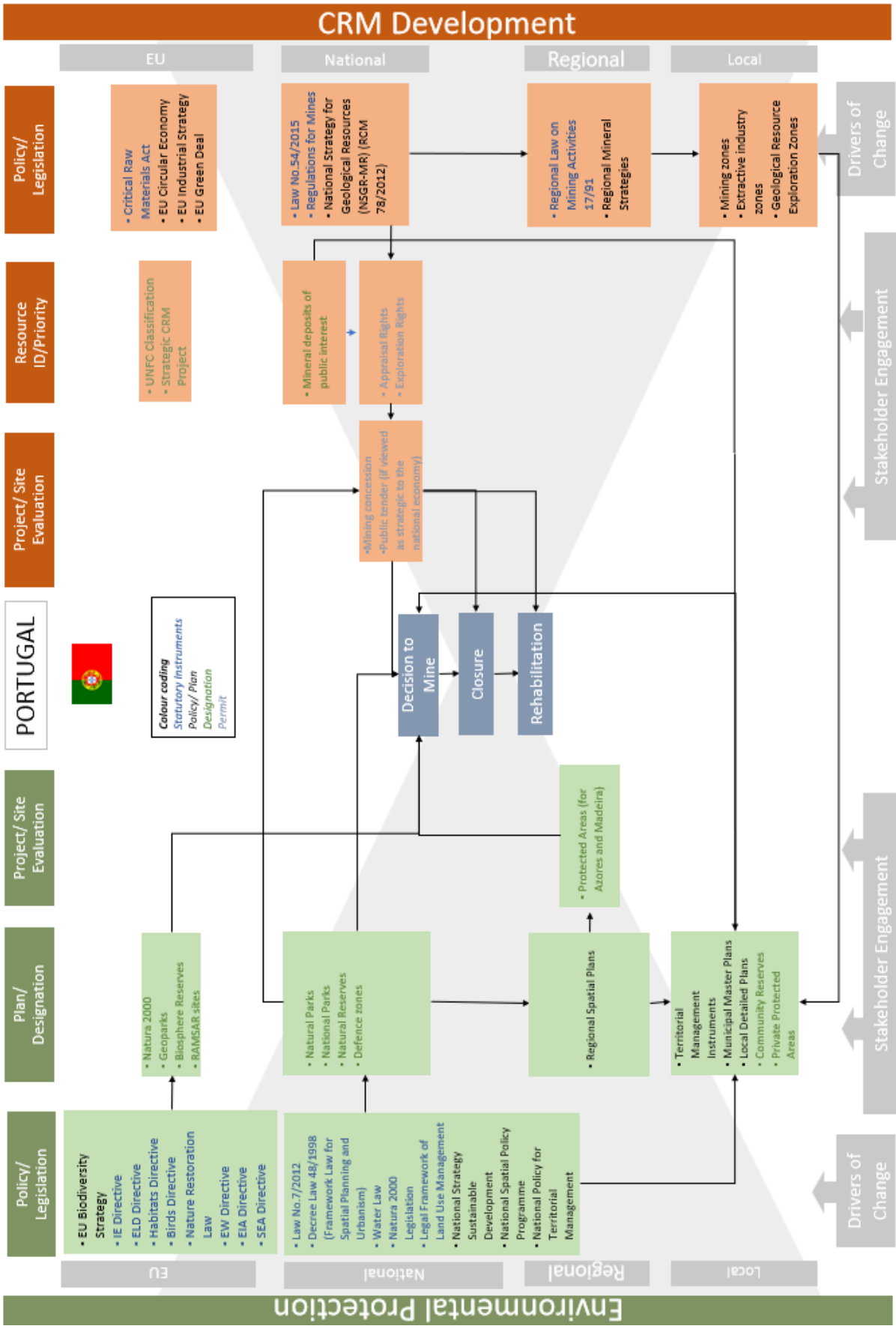


Figure 23: Regulatory Framework Portugal

4.1.10 Spain

Governance and Regulatory Framework

The Spanish Constitution of 1978 establishes that the State has exclusive remit over mining law. Autonomous regions can legislate on the management of environmental protection, the promotion of regional economic development and the development of basic mining rules. This is set out in the Spanish Mining Law 22/1973 of 21st July and the regulations approved by Royal Decree 2857/1978 of 25 August.

The government in Spain is divided into three levels: the State, the 17 autonomous communities and cities (regional level), 50 provinces and the local authorities (comprising either municipalities or groups of municipalities). Legislative powers reside with the central government and the parliament of each of the autonomous communities. The division of powers between the different levels are derived from the Constitution. Spatial planning is the responsibility of the autonomous communities, but central government has legislative powers, particularly in relation to environmental protection. Central government also develops sectoral plans (environmental, water, waste, infrastructure, etc) but has no authority in preparing spatial plans at national level. The Spanish Government adopted the Road Map for the Sustainable Management of Mineral Raw Materials in August 2022 (Ministry of Environment).

Autonomous regions establish their own legislative framework on land-use planning, although the remit is as defined by national legislation. Regional governments are responsible for the preparation of regional spatial plans, which are binding at municipal levels. They can also prepare their own sectoral mineral policy. Some regions also issue building permits for development that are either large and/or sensitive. Importantly, as some municipalities have no Municipal Urban Master Plan, the regional plan can act as the guide for development.

Municipalities prepare and adopt the Municipal Urban Master Plan and are also responsible for assessing application for consent. Municipalities can also prepare development plans which are for specific areas. The development shows permitted land uses and regulates conditions of development for all parcels of land. Mining can be considered as a use under the local plans, meaning there is a level of integration between land use planning and mining.

Plan Preparation and Designation

Spatial planning is devolved at autonomous community level and lower. As stated above, the government can prepare sectoral plans but is not responsible for spatial planning. The Land Use Planning Authority of the autonomous regions set out the framework for land use planning. Municipalities then prepare development plans that detail permitted uses and conditions for development prior to consent. This gives a clear framework for development consent. If any conflicts arise, then these are assessed during the permitting process.

As Spain uses a hierarchical planning system, all plans are required to have regard to higher level plans. This also allows for the most local plans to have more detailed spatial information, such as land use categorisation. There are three broad categories of land use: urban land, land for urban development and land protected from urban development. This means there is no specific category aimed at mining activities. Under the latter category, certain plots/zones are deemed to be protected. The protection regime may be derived from landscape protection, or natural designation or historic values, etc. There are categories where extractive industries can be prohibited, such as under 'land protected from urban development designated for protection'. Categories of land use may be amended, particularly to allow for mining. In this case a Mining-Environmental Planning Map is required. This map will include an environmental inventory of a specific area and an analysis of the mining activity and a mining survey.

If mining activities are not listed by the municipal master plan, then a land use change can be sought to facilitate development. This implies that mining activities can be considered as part of land use policy. Notwithstanding this, there is generally no specific land use category for mining activities. Certain autonomous regions include in their plans, policies supportive of mining activities, providing that these are

compatible with the preservation and protection of the environment (Luodes et al., 2019). Land use plans are subject to public scrutiny and must undergo public consultation.

There are several types of protected areas in Spain: Natura 2000 sites, protected natural spaces and sites protected under international agreements (such as RAMSAR or UNESCO World Cultural and Natural Heritage Convention). Natural protected areas can consist of parks, natural reserves and protected landscape. The Natura 2000 sites are designated by the autonomous regions, who report back to the Minister for Ecological Transition, who then acts as the intermediary between Spain and the European Commission. Areas can also be protected for historic or cultural values. There are 49 UNESCO World Heritage sites in Spain. Spain also has a tentative list for UNESCO WHC listed sites which includes 32 sites. Several of them are Mining Basins. These are located in Andalusia, the Balearic Islands, Aragon, Asturias, Castile-la Mancha, Castile-Leon, Catalonia, Murcia and the Basque Country (UNESCO, 2007). Cultural heritage is protected through the Law 16/1985 on Spanish Historical Heritage and the Royal Decree 111/1986.

In some cases, the Spanish government can decide to establish reserved areas whereby the mineral resources are declared to be of interest for economic and social development or national defence. In such cases, the government can directly investigate or exploit the resource, hold a public tender to select a concessionaire or form a consortium between the authorities and a third party. The reverse is also possible. As municipalities have control over land use planning locally, they can effectively ban mining activities. This was challenged in court and proven contrary to the Spanish Mining Law but not tested again (EC, 2017).

Permitting Processes - Exploration

Depending on the size of the area searched, a company will require an investigation permit (30 ha to 9,000 ha) or an exploration permit (8,700 ha to 93,000 ha) (EC, 2017). If an applicant is seeking an exploration permit, then the legal timeframe is six months for exploration and seven to ten for investigation. However, practice shows that this can take much longer (EC, 2017). A work project and restoration plan must be submitted with the application for approval.

Extraction

According to the Law 21/2013 of 9th December on Environmental Assessment, the Ministry for Ecological Transition is in charge of EIAs when a mining project overlaps several autonomous regions. Otherwise, the responsibility lies with the Environmental Authority of the Autonomous Region. The law applies to the whole country. Law 42/2007 transposes the Habitat Directive into national legislation. Regional Authorities are tasked with assessing possible effects on a Natura 2000 sites. In the event that compensatory measures and potential imperative reasons of overriding public interest are considered, then it is again the Regional Authority's duty to make this decision. There has been no attempt to use derogation procedures for mineral development in Spain to date.

Up to seven different authorisations might be needed from multiple authorities with no integration or coordination amongst authorities. Spain operates a system whereby it can pause the permit process to request more information before it is resumed. This in effect appears to lengthen the timeframe, without eating into statutory or legal durations where they exist (EC, 2017). By law, the mining permit itself should take around two months if derived from a pre-existing investigation permit. However, practice shows that it takes three to seven years and in some cases, it can take up to ten years (EC, 2017). In addition to the mining permit, a company may also require a water permit.

Stakeholder Acceptance

The Barruecopardo case study prepared by La Palma Research Centre for Luodes et al. (2024) found that the mining company hired employees from the community and collaborated with the town hall and local school to organise events. Other research by Vintró et al. (2012) looked into the CSR practices of mining companies in Catalonia. Although the sample surveyed comprised aggregate and ornamental stone companies and no companies extracting metals or CRMs, the research identified some details of the types of practices in place: codes of conduct, information transparency, promotion of local communities or cooperation with

humanitarian, environmental, and developmental aid NGOs. These practices are developed over time with a view to promote social acceptability.

Data and Reporting

Companies operating in Spain use several CRIRSCO derivatives for mineral reporting (JORC and NI43-101). There is good knowledge of CRMs occurrences in Spain. In particular, Spain is known to have good lithium resources in addition to being Europe's leading producer of strontium. The European supply of strontium is entirely provided by one mining company in Spain.

Data collected by IGME is INSPIRE compliant. Like all other European GSO, IGME operates a map and data viewer available to the public via ArcGIS. Data coverage and data can be downloaded and directly added to a range of map viewers including ArcGIS or Google Earth.

In relation to compliance with the INSPIRE Directive, Spain had nearly reached total compliance when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020).

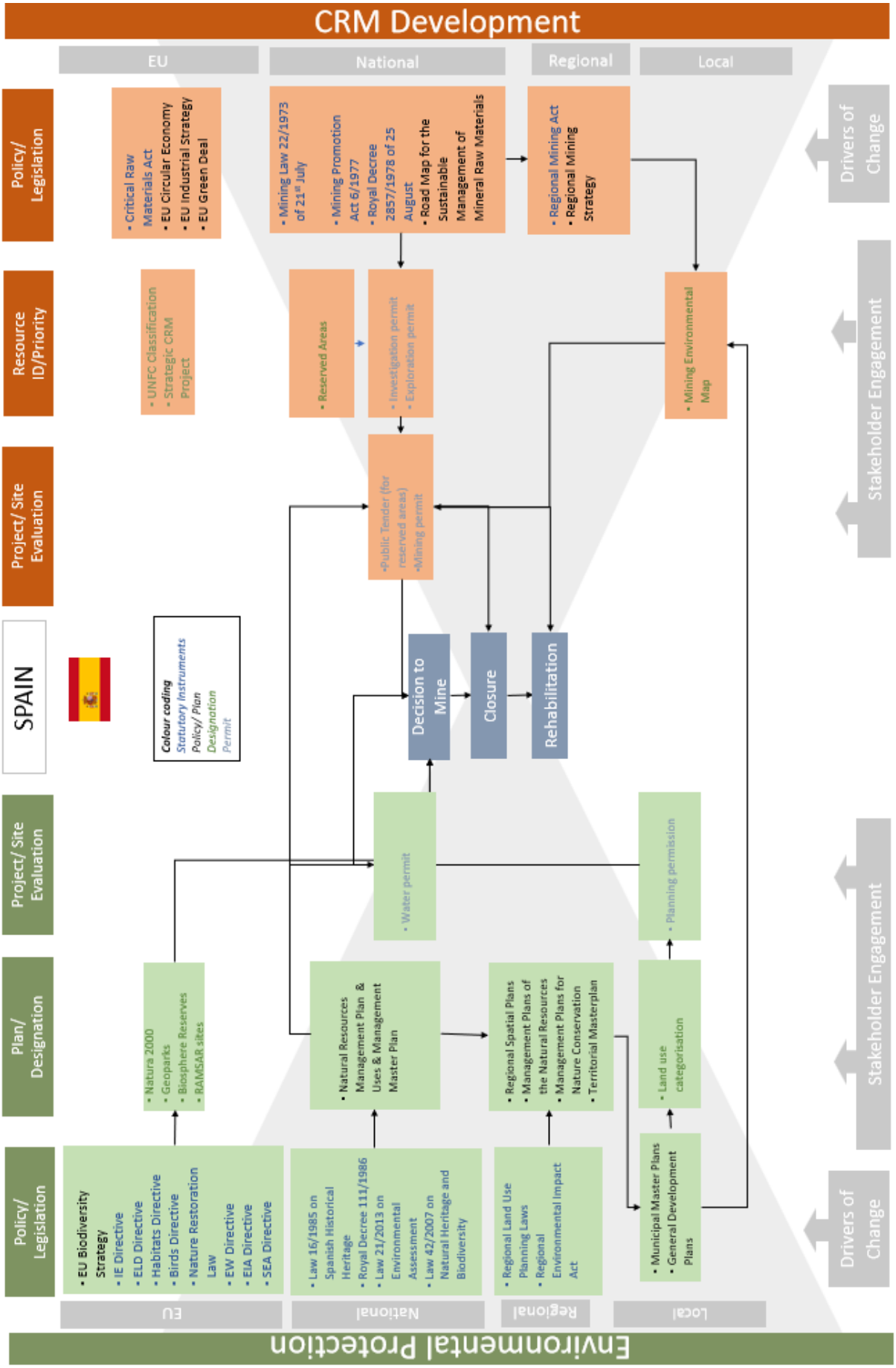


Figure 24: Regulatory Framework Spain

4.1.11 Sweden

Governance and Regulatory Framework

Sweden has three levels of government at the national, regional (counties) and local or municipal level. The national level, through relevant government ministries, is responsible for establishing the institutional framework and setting overall mining policy, land use policy and designations of protected areas. The Sámi Parliament (the Parliament of the Sámi indigenous peoples) also has a role in mining decisions, where it can express a legally non-binding opinion (statement) prior to the decision by the Mining Inspectorate in exploration and extraction permits if a potential project is located within their territory and reindeer herding rights exist. Relevant national agencies include the Naturvårdsverket (Swedish Environmental Protection Agency) responsible for coordination of the Natura 2000 network, the Mining Inspectorate who issues exploration and extraction licences, and the Land and Environmental Court, which is responsible for appeals and complaints. The Geological Survey of Sweden (SGU) is responsible for outlining mineral deposits, and for the regulations on groundwater management and the preparation of River Basin Management Plans and Measures under the WFD. Responsibility for implementation lies with the Water District Authorities. The Swedish Agency for Marine and Water Management (SwAM) also provides guidance on the WFD. SwAM has administrative responsibility for lakes, waterways and seas. SwAM has developed a strategy for sustainable water resource management with the objective to manage all water resources within a catchment area in a way that ensures the need of water by the environment and society. The Environmental Code regulates land use in Sweden and defines land uses, including mineral resources exploitation. The Environmental Code establishes geographical Areas of National Interest (ANI), which include areas of ecological interest, heritage, and recreation, industrial development and mineral development. These are designated by the responsible agency for the relevant sector/topic. The Swedish National Board of Housing, Building, and Planning (Boverket) provides guidance and support to municipalities and other planning authorities in implementing sustainable development principles in their planning processes.

At the regional level, the County Administrative Boards (CAB) are decentralised units of public administration with a close relationship to the Environmental Protection Agency and are responsible for developing proposals for new Natura 2000 sites, undertaking relevant surveys and implementing management and associated conservation measures. The CABs have overall coordination responsibility in the counties and coordinate crisis preparedness and climate adaptation responsibility regionally. They can decide to establish water protection areas and are responsible for supervising water operations, the municipalities' obligation to arrange water services, and water protection areas. The CAB can also prepare a regional water supply plan. They have a delegated role in environmental and Natura 2000 permitting. At the regional level there are also County Councils, which are elected bodies and are responsible for the preparation of regional development plans.

Municipalities are responsible for local land-use and physical planning. They are responsible for preparing statutory plans and issuing planning permissions for specific land use elements associated with mining development.

Plan Preparation and Designation

There is no national spatial plan. At the national level, the Environmental Code seeks to align sectoral policies and designations. This effectively involves a top-down system of designating protected areas. The land use planning process in Sweden is guided by a set of national planning principles that emphasize the importance of sustainable development, public participation, and environmental protection. The national planning principles also recognise the importance of regional cooperation and coordination in addressing land use issues that cross municipal boundaries. Boverket (the National Board of Housing, Building and Planning) provides guidance and support to municipalities and other planning authorities in implementing sustainable development principles in their planning processes. Under the Ordinance on Land and Water Management, etc. (SFS 1998:896), SGU may, after consultation with Boverket and the CAB, decide that a certain deposit constitutes an ANI. Thus far, SGU has decided that 141 deposits of valuable substances or materials are of national interest.

Regional plans (Regionplan) are developed by the elected County Councils: they are strategic plans that outline possible policy goals. They incorporate ANIs which are identified under the Environmental Code and the Ordinance on Land and Water Management. The County Councils, while consulted on the designations of the ANIs, do not propose them. Regional mineral strategies may also be prepared.

The local municipalities are responsible for the preparation of statutory local plans. These are Comprehensive Plans (Översiktsplan), which set policies, and Detailed Plans (Detaljplan), which establish zonings. These local plans take into account ANIs and detail how they are to be implemented at the local level. The State may intervene in the plan preparation process and subsequent permitting if the municipality does not take into account ANIs, if environmental standards are not met, or if there is a requirement for coordination between municipalities. Extensive public consultation and stakeholder engagement is undertaken as part of this plan preparation process. Plans prepared will be subject to an SEA process.

The Environmental Code is the principal tool for the designation of protected areas. Chapters 4 and 7 of the Code set out the broad categories of protected areas. These include National Parks, nature reserves, cultural reserves, natural monuments, habitat protection areas, wildlife and plant sanctuaries, environmental protection areas, water protection areas, and Natura 2000 sites (SPAs and SACs). These are the ANIs. There are no blanket prohibitions on mineral extraction except in National Parks. There are a number of government agencies responsible for identifying ANIs. The Swedish Environmental Protection Agency is responsible for designating Natura 2000 sites and the CABs are responsible for the management and maintenance of these areas. There are approximately 4,000 Natura 2000 areas in Sweden, with a total area of just over 6 million ha, or approximately 15 percent of Sweden's surface. CABs or local municipalities are responsible for designating nature reserves, cultural reserves, wildlife plant sanctuaries, and national monuments. Habitat protection areas are designated directly by the government, or a nominated authority. Under Section 28 of the Environmental Code, the Government may, following consultation with the Commission, cancel a designation if the area’s natural assets no longer justify the designation. Guidelines on the mineral development affecting Natura 2000 sites have been prepared by the Environmental Protection Agency.

The Cultural Environment Act (Kulturmiljölagen) establishes a legal framework for the protection and management of cultural heritage, including buildings, archaeological sites, and cultural landscapes. Under the Act, any activities that may impact cultural heritage sites, including mining and exploration activities, must be assessed for their potential impacts and may be subject to permits and conditions.

There are 68 RAMSAR sites in Sweden covering 665,474 ha, many of which overlap with other national designations. They are designated by the Swedish Environmental Protection Agency. There are 15 World Heritage Sites, of which 13 are cultural sites, one natural and one mixed site.

SGU prepare River Basin Management Plans, which are the subject of public consultation and stakeholder engagement. The Water District Authorities monitor the ecological status of waterbodies.

The Swedish Mineral Strategy (2013) is the main policy document on minerals. It is non spatial and does not focus on CRMs specifically.

Permitting Processes - Exploration

The state has an exclusive right to decide on permits for exploration (and extraction) of concession minerals. This includes all critical raw materials. Non-concession minerals and everything in unconsolidated sediments and soil belongs to the landowner. The Mining Inspectorate, which is a national body, is responsible for issuing exploration licences and concession licences under the Minerals Act. The Inspectorate also makes decisions on designation of lands for mining.

Mineral exploration is permissible on most protected sites, with the exception of Nature Parks. However, each case is dealt with on its merits. Exploration in Natura 2000 sites is screened for impacts upon site integrity. Specifically, a Natura 2000 permit may be required for mineral development affecting a designated

site. This is dealt with by the CAB and Environmental Court and is additional to the other environmental permits, planning permits and mining concessions. The Natura 2000 permit is considered in conjunction with the assessment of the application for the environmental permit under the Environmental Code.

The approval of the relevant CAB is required for certain circumstances (e.g. adjoining military areas, burial grounds, certain mountain areas). A holder of an exploration permit has the preferential right to an extraction permit (concession), which is required to extract and process minerals. The Mining Inspectorate must consult with the CAB when considering a concession application. The case must be referred to the government if there is a disagreement between the two bodies. In addition to the exploration permit and the plan of operations, the exploration work might also require permits due to nature or cultural heritage protection reasons. Exploration will generally not require an environmental permit. However, the Mining Inspectorate is responsible for monitoring exploration activities to ensure that they comply with the relevant regulations.

There is no legal timeframe for determining a permit. In practice, a period of less than three months will generally apply.

Extraction

The permitting procedure necessary for the mining of concession minerals consists of three main parts: a permit according to the Minerals Act (exploitation concession) from the Mining Inspectorate, a permit according to the Environmental Code (environmental permit) from the CAB or Land and Environmental Court and a permit under the Planning and Building Act. There is no legal obstacle to perform the permitting processes in parallel, but usually the procedure to obtain an extraction concession is undertaken before the application for an environmental permit is filed (EC, 2017).

The environmental permit considers all matters relating to the EIA Directive and emissions to water, handling and disposal of the mine waste, form and amount of the financial security that normally is required, limitation of atmospheric emissions, noise, vibrations, blasting and other disturbances. The assessment of the environmental permit will also consider all impacts from the mining operation on the relevant designated area. An EIA is undertaken in association with the environmental permit but must also accompany the mining concession application and the application for planning permission issued by the local municipality, as required. The planning permission issued under the Planning and Building Act relates only to the extraction lifecycle stage.

In the environmental permit the applicant must state how a potential reduction in chemical or ecological status of a waterbody under the WFD will be mitigated. In the monitoring work, the water authorities must state potential sources of contaminants.

Natura 2000 permits for mineral development cannot be granted by the CAB where the development alone or together with other ongoing or planned actions or activities may cause damage to a habitat under protection or cause a species under protection to be exposed to a disturbance that may significantly hinder the conservation of the species (Chapter 7 Section 28 of the Environmental Code). In some cases, exceptions can be granted with the government's permission (Chapter 7 section 29 of the Environmental Code). Changes to the scope of the mining activities may require a new Natura 2000 permit.

By way of example, a review of the Natura 2000 permitting process associated with mineral development and concession licences has recently been completed. The review was undertaken as there was uncertainty over when the Natura 2000 permitting process should occur. Various court decisions had indicated that the permit should occur at the same time as the issuance of mining concessions.

All developments require planning permission from the local municipality under the Planning and Building Act, which will be mainly at the mineral extraction stage. A balancing of environmental and policy matters is made within the assessment of the planning applications. The environmental permit issued by the CAB may override zoning provisions in the municipal plan. Various types of protected sites that may have been established under the Environmental Code are considered within the assessment and balanced against other

ANIs, including those relating to mineral resources. This balancing does not occur in the case of Natura 2000 sites, where all projects have to demonstrate that they do not impact upon site integrity. With the exception of National Parks, there are no blanket prohibitions on mineral extraction and each planning application is dealt with on its merits, having regard to the policies contained in the statutory plans. However, the application process may determine that mineral development is not possible having regard to protected areas and the potential environmental impacts associated with a specific project.

There are no clear data on how long it may take to secure all permits in Sweden. MINLEX recorded that on average the mining permit took 31 months, but this does not include the environmental permit or land use permit of Natura 2000 permit if required (EC, 2017). The environmental permit itself takes three to six years depending on the size of the mining operation.

Stakeholder Acceptance

In Sweden, much of the mining activity takes place in Sápmi, the traditional territory of the indigenous Sámi people (Raitio et al., 2020). There is a history of dispute during permitting processes due to potential land use conflicts between reindeer herding and mineral extraction (Beland Lindahl et al., 2024). There is a legal requirement to consult with Sámi communities as part of the permitting process. There is evidence of the use of CSR and social licence to operate approaches in Sweden. Generally, their use will depend on whether the company has been established for a long time of time in Sweden or not (Poelzer et al., 2020). The Swedish Sámi Parliament published a position paper in 2014 that sets out their expectations for mineral development in Sápmi (Sametinget, 2014).

Data and Reporting

Like all other European GSOs, SGU collects and collates mineral data. It uses the PERC standard for reporting and uses standards derived from the INSPIRE directive. Sweden has a National Geodata Strategy that was developed by Lantmäteriet and other authorities and organisations as part of the Geodata Council. This strategy provides a jointly created and well-functioning infrastructure for all geodata management in Sweden. In relation to compliance with the INSPIRE Directive, Sweden had an excellent compliance rate when it comes to the percentage compliance on datasets interoperability (Minghini et al., 2020).

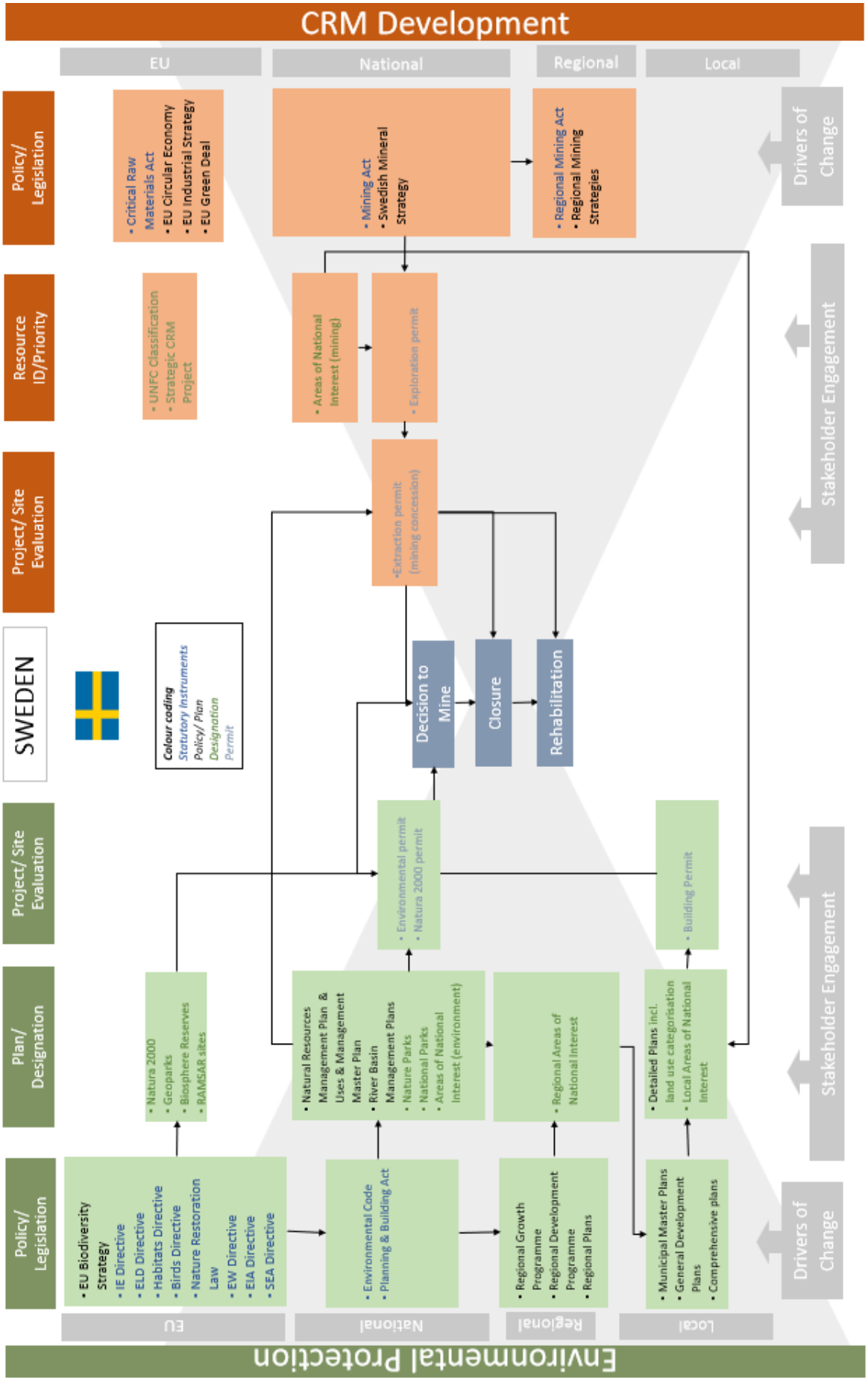


Figure 25: Regulatory Framework Sweden

5 Overall Review

5.1 Introduction

This section seeks to provide an overview and summary of the principal findings of the preceding sections relating to the policy and regulatory context, and the lessons learned from profiling individual countries. This section does not purport to be a comprehensive review of the regulatory instruments of MSs as this is beyond the scope of CIRAN. Rather, it considers some key themes and common challenges for existing regulatory regimes, particularly regarding emerging challenges for adapting these to meet future challenges arising from the need to extract CRMs and preserve existing and future EPAs.

5.2 Governance and Regulatory Framework

5.2.1 EU Level

Remit of Treaties

Under Articles 11 and 191 to 193 of the Treaty on the Functioning of the European Union (TFEU), the EU is competent to act in all areas of environmental policy, such as air and water pollution, waste management and climate change. Its scope for action is limited by the principle of subsidiarity and the requirement for unanimity in the Council in the fields of fiscal matters, town and country planning, land use, quantitative water resource management, and choice of energy sources.

Article 114 of the TFEU allows the European Parliament and the Council to adopt measures to establish and ensure the well-functioning of the single market. The CRMA has been issued pursuant to this provision of the TFEU.

Transposition of Directives and Regulations into National Legislation

Article 288 of the TFEU indicates that all Directives are legally binding acts of the EU, establishing a set of objectives which all MSs of the European Union must fulfil. MSs are required to implement Directives. The MSs are free to choose the manner they see fit to fulfil the required objectives. Transposition of Directives take place by the deadline set when the Directive is adopted. This is usually within two years. This is often done by national primary or secondary legislation. When a country does not transpose a Directive, the Commission may initiate infringement proceedings and bring proceedings against the country before the Court of Justice of the European Union (the non-enforcement of the judgment on this occasion can lead to a new conviction, which may result in fines). Transposition of single market Directives are tracked by the EC through a dashboard (EC, 2023i) and for all legislation through annual reports (EC, 2023g).

EU Regulations, such as the CRMA, are also legal acts as defined by Article 288 of the TFEU. They apply directly after their entry into force in MSs, without needing to be transposed into national law. They can create rights and obligations for individuals, who can invoke them directly before national courts; and they can be used as a reference by individuals in their relationship with other individuals, MSs and EU authorities. The CRMA (EC, 2024) comes into force 20 days after the 3rd of May 2024. MSs will need to review their regulatory regimes to ensure that they align with the requirements of the Act – refer to Section 6.2 of this report.

5.2.2 National Regulatory Systems

Section 4 of this report illustrates that there is a wide variety of regulatory systems that seek to resolve different policy objectives and translate higher level Directives and laws into the statutory plans and ultimately permits for development. The systems of governance at the national, regional and local levels are matters for MSs and have evolved reflecting constitutional, historic, cultural, social and economic factors. EU policy, Directives and Regulations must be translated by MSs within the framework of their widely divergent systems. Table 6 below summarises, for the profiled countries, whether they are centralised or decentralised, and the frequency of legal challenges within the system.

Table 6: Governance and Regulatory Frameworks for Profile Countries (EC; Gugarell et al. & Luodes et al.)

Country	Centralised/ Decentralised	Vertical degree of Integration	Legal Challenges
Austria	Mixed	Partially integrated	Infrequent
Belgium	Decentralised	Not integrated	None
England	Decentralised	Well integrated	Infrequent
Finland	Mixed	Well integrated	Frequent
France	Mixed	Partially integrated	Frequent
Ireland	Mixed	Well integrated	None
Italy	Decentralised	Partially integrated	Infrequent
Norway	Mixed	Partially integrated	No Information
Portugal	Mixed	Well integrated	None
Sweden	Mixed	Partially integrated	Infrequent
Spain	Decentralised	Not integrated	No Information

Centralised and Decentralised Regimes

Responsibilities for environmental protection are spread across different levels of government and through different agencies in all MSs. The MINLEX study (EC, 2017) considered this in some detail. Centralised regimes are those where exploration and extraction permits are issued by the national authority and where environmental assessments and other licences are granted principally at national level authority. By contrast, decentralised regulatory systems prevail in those MSs that have devolved mineral administrations at the regional or local level. Mixed regimes are those where there is a combination of national, regional and local level authorities responsible for permitting and designation of EPAs. The majority of MSs have mixed regimes (i.e. Austria, Finland, France, Ireland, Norway, Portugal, and Sweden). Federal systems and regionalised systems of devolved governance operate in several countries (i.e. England, Italy, Spain and Belgium), while Belgium has the only centralised regime (centralised per the regions of Flanders, Wallonia and the Brussels Region). While centralised regimes may be easier to adapt, local stakeholder concerns may be more difficult to address.

Vertical Level Integration

The regulatory framework diagrams for each country profile illustrate how higher-level policy objectives are integrated into lower-level policy frameworks and ultimately into permitting procedures. Guggerell et al. (2019) consider the nature of vertical policy integration whereby higher-level objectives are integrated into the decision-making process. This integration is categorised as 'well-', 'partially', and 'not integrated'. All profiled countries had either partially or well-integrated systems, although Belgium and Spain were deemed not to have integrated policy and decision-making frameworks. Vertical integration is particularly important where there are responsibilities devolved to regional authorities.

Legal Challenges

The case-studies illustrated that there are range of legal appeal mechanisms in relation to mineral development. There can be first party (developer) appeals against refusals, or third party (e.g. community groups, NGOs) appeals against grants of a permit (all jurisdictions). Some jurisdictions have third party rights of appeal to both a planning body and to the court system (e.g. in Ireland and the UK). There is also recourse to the European Court of Justice (ECJ). Appeals to the ECJ usually relate to issues arising from application of the Directives, particularly of the EIA and Birds/Habitats Directive. Appeals can be lengthy processes, time consuming and costly.

MINLEX (EC, 2017) classified 129 court cases relating to mineral development. It considered the full extent of topics ranging from security of tenure, state aid, financial regulations and other specific procedural matters. It should be noted that quarries, which were included in the review, accounted for an overwhelming majority (91%) of cases considered. It found that:

- Operators/developers represented 53% of submissions to court, followed by NGOs (14%), municipalities (10%), authorities (7%), civil groups (7%) and neighbours.
- 70% concerned the extraction phase, and 20% exploration stage, and 10% post extraction.

In relation to the grounds of appeal:

- 7.6% related to Natura 2000 sites;
- 4.8% nature conservation;
- 15.2% EIA studies;
- 4.8% ground water;
- 3.8% access to environmental justice; while
- The largest category was 21.1% relating to permitting administrative procedures.

Overall, this may suggest that impact upon protected areas and nature conservation was not a significant issue, but there is limited information relating to metal ore extraction and CRMs. However, when the interlinked environmental issues are combined, they represent 36.2% of the grounds and when combined with permitting procedures constitute 57.3%.

Derived from information in the MINLEX study, legal challenges have been classified as frequent, infrequent, or none in Table 6 above. It should be noted that the assessment includes information on extraction, including quarrying. France and Finland are shown to have frequent challenges, possibly reflecting the level of extraction, while the remaining countries experience either infrequent or no legal challenges.

There is no specific information on the number of projects actually affected by legal challenges, but industry representatives indicate that it is a key concern in relation to the certainty of the decision-making processes. The time involved in resolving such legal challenges would almost certainly go beyond the timeframes stipulated by the CRMA. Legal challenges can be lengthy and time consuming and present a threat to delivering CRM within the permitting timeframes expected. Based on historical experience, the timeframes foreseen in the CRMA appear to be overly optimistic.

5.3 Plan and Designation Processes

5.3.1 Strategic Planning and Designations

Across the countries reviewed for CIRAN, it has been observed that not all countries approach strategic mineral planning in a similar manner. While some countries undertake mineral planning at national level (Austria), others do it at regional or local level (England & Finland). Countries such as Austria undertake mineral planning nationally and spatially. The AMRP is the national plan providing details of the types and location of minable deposits which are also conflict-free (Gugerell et al., 2019). The EC (2017) found that as a result of the identification process, success rates for mining projects in Austria reach 100%.

A number of other countries use a form of mineral designation process that does not necessarily involve the preparation of a dedicated plan. For instance, Portugal, Norway and Spain identify at national level deposits of national or strategic importance. This then allows the appropriate authorities to monitor access and potential conflicts with other land uses in the event that it is worked in the future. Others carry out a similar process but at a more local level as in England or Italy. Some of the designated deposits in some cases include CRMs. This suggests that some countries may have better knowledge of at least some CRMs on their territory and that they are actively designating them and therefore protecting them.

5.3.2 Priority Project Mechanism

The designation of a deposit as being of national or strategic importance at any given level of government does not automatically translate to a specific deposit being put forward for development. Designations act, in most cases, as mere recognition of the value of a specific mineral. It allows the relevant authority to monitor and intervene as the case may be in the event of proposed land use conflict. Such designations

recognise that there may be competing societal needs and priorities and weigh them against each other. A designation of a mineral resource as being of strategic or national importance ensures that it is adequately represented in land use planning.

5.3.3 Environmental Designations

All of the country reviews include a range of environmental designations. All CIRAN countries except Norway have designations derived from the transposition of the Nature Directives, in addition to other designations derived from international obligations (RAMSAR, UNESCO Conventions, etc.) and from national obligations.

These are generally translated uniformly in land use planning processes and mineral planning processes. The transposition of the Nature Directives did not require the imposition of de facto bans on mining activities including exploration drilling. At national level, there is no such ban in any of the CIRAN countries. However, at lower levels, particularly regional or local, the adoption of certain zoning designations as part of land use plans (Spain) or legislation (Emilia-Romagna Region) resulted in the direct banning of mining activities in Natura 2000 sites. Similar bans exist in relation to national nature protection legislation, like in Ireland, Sweden and Finland, where any mining activities are banned from national parks.

Most countries, except England, Norway and France have at least one type of restriction on mining activities derived from an environmental designation.

5.3.4 Horizontal Integration

Where mineral spatial plans exist, these have generally been devised with the help of the relevant authorities for land use planning and environmental issues. All CIRAN countries have fully integrated environmental planning with land use planning and/or environmental planning with mineral planning. However, the degree of integration between the three spheres will depend on how detailed and spatially resolved a plan is. The less specific the mineral plan or strategy is, the less likely it will include specific mitigation measures. Ireland for instance has very limited integration of mineral planning with either land use or environmental planning. As a result, land use plans, which are essential tools in the permitting process, will invariably include mitigation measures devolving the details of environmental protection down to the EIA and Habitats Directive Assessment undertaken at project stage. While this ensures that in some respect, land use planning has accounted for both environmental and mineral interests, it can be particularly unhelpful in giving certainty to potential project promoters.

Table 7: Planning and Designation in the Profiled Countries

Country	CRM Resource Identification & Classification	Designated Areas for Safeguarding of Minerals	Priority Project Mechanism	Environmental Designations	Land Area Protected in % of Total	Exclusions from mining	Integration of Environmental Assessments (SEA & AA)	Compensation & Mitigation	(Horizontal integration) Integration of mineral planning, land use planning, and environmental designations
Austria	Framework fully in place	National and regional	Regional project priority system	Protected Landscapes, National Nature Reserves, National Parks & Natura 2000 sites	29.2%	Yes - based on any environmental designation	Standalone SEA and AA	No express compensation or mitigation	Moderately high level of integration
Belgium	Not in place	None	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	14.7%	Yes - based on any environmental designation	Standalone SEA and AA	No information	High level of integration (e.g. through land use plans)
England	Not in place	Local	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	26.1%	No - coexistence on merits	Standalone SEA and AA	Designated plans require mitigation	No integration
Finland	Framework fully in place	Local	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	13.3%	Yes - based on one (e.g. national parks)	No information	No information	Moderately high level of integration
France	Not in place	None	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	28.0%	No - coexistence on merits	Integrated SEA and AA	No express compensation or mitigation	Medium level of integration
Ireland	Not in place	None	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	13.9%	Yes - based on one (e.g. national parks)	Standalone SEA and AA	No express compensation or mitigation	No integration
Italy	Framework fully in place	Regional and local	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	21.4%	Yes - based on Natura 2000 sites	No information	No information	Medium level of integration
Norway	Preparation of framework commenced	National	No minerals priority system	(Not in EU)	17.5%	No - coexistence on merits	No information	No information	Medium level of integration

Country	CRM Resource Identification & Classification	Designated Areas for Safeguarding of Minerals	Priority Project Mechanism	Environmental Designations	Land Area Protected in % of Total	Exclusions from mining	Integration of Environmental Assessments (SEA & AA)	Compensation & Mitigation	(Horizontal integration) Integration of mineral planning, land use planning, and environmental designations
Portugal	Not in place	National and regional	General national mineral priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	22.4%	Yes- based on any environmental designation	No information	No information	Moderately high level of integration
Sweden	Not in place	None	No minerals priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	15.0%	Yes - based on one (e.g. national parks)	Standalone SEA and AA	No information	No integration
Spain	Not in place	National	General national mineral priority system	Regional and National Protected Landscapes, Nature Reserves, National Parks & Natura 2000 sites	28.0%	Yes- based on any environmental designation	Standalone SEA and AA	No information	No integration

5.4 Administrative Permitting Processes

5.4.1 Exploration Stage

As found by EC (2017) there are generally fewer authorities involved in the determination of exploration permits than there would be for mineral extraction. Most countries only have one permit determined by one authority. Those who have more, usually have an EIA permit or a Natura permit (in the case of Sweden). Another aspect to consider is, whether the applicant is looking to undertake prospection (e.g. identification of deposit) or exploration (e.g. to obtain more information about a known deposit). Countries such as Ireland have one permit for each phase, whereas other countries such as Austria or Spain split the phases into two different permits. In most countries, having secured an exploration permit will act as a priority guarantee for the project promoter over other potentially interested parties to obtain a mining permit.

Generally, regulatory decision-making periods are quite short: up to three months in Italy, Spain and Sweden and four to six months in Austria and Portugal. Otherwise, periods can be well in excess of a year as is the case in Ireland, France and Finland. There is also no rule as to whether competent authorities are legally bound to make a decision within a set period. Some countries are not legally bound but apply 'good practice targets' (Austria). Other countries such as Spain do have a legal timeframe to abide to but can effectively 'stop the clock' as needed to request additional information, which can result in decision-making periods being lengthened. In addition, whether a case gives rise to community scrutiny can lead to slower decision-making (See Irish example in Luodes et al. (2024)).

Table 8: Planning and Designation in the CIRAN Countries

Country	Number of Exploration Permits	Time for Exploration Permits
Austria	Two	4-6 months
Belgium	One	4-6 months
England	One	No data
Finland	Two	16-18 months
France	One	36 months
Ireland	One	13-15 months
Italy	One	0-3 months
Norway	One	No data
Portugal	One	4-6 months
Sweden	Two	0-3 months
Spain	Two	0-3 months

5.4.2 Extraction

Centralised approach vs. decentralised approach

For extraction permitting, the situation is generally more complex across the board than for exploration. Securing mining rights will often depend on ownership of the minerals. In the case of England, it will be defined by who owns the land. The Crown Estate owns certain minerals such as gold or silver but not CRMs. However, it does own a significant portion of estates around England. As a result, the means and process pursued in England will depend on who owns the land, more than on who owns the mineral.

In decentralised countries with strong regional governments, such as Spain, Italy, Austria or France, the decision will be made regionally by either the regional authority in charge of mining or by a representative of the State at regional level. This generally allows for better coordination of national directives with regional circumstances.

The number of permits will vary greatly between countries, but also the level at which decision-making takes place. In general, permitting falls under three themes: mining, land use and environment. There is a fourth theme: indigenous communities, but this is only relevant in the Nordic countries. Certain countries such as

Belgium have completely concentrated decision-making for all permits to regional government. Others such as Spain and England are completely decentralised and relying on the regional and/or local mining authority to make decisions on mining applications. France operates a hybrid system where the Prefect makes decisions as a regional representative of the State but does so in collaboration with local agencies and local authorities. The other CIRAN countries such as Austria, Finland, Norway and Ireland operate a mixed system with authorities at different levels of the government hierarchy delivering permits. The Nordic countries with a Sámi community have a dedicated authorisation required from the Sámi parliament, except Sweden.

Number of Permits and authorities

Unsurprisingly, where there are more authorities involved, there also are more permits to be obtained. Very few countries require only one permit. Flanders, in Belgium, although not actively pursuing underground mining, has an integrated permit that covers all aspects. France recently amended the Mining Code to ensure that it would integrate all elements of the environmental permit which would have been covered by the Environmental Code. As of yet, no mining project has completed the process under the new system, but several projects are at various stages including the EMILI project presented in Luodes et al. (2024). Italy also integrates all permits into a singular one which is delivered by the regional authority. Most CIRAN countries require three permits, one each to cover land use, mining and environment. As noted in the preceding sections, the Nordic countries may require an additional authorisation to be granted by the Sámi parliament, if the mine site is on Sámi land.

Overall, this report found that on average 3.3 permits would be needed prior to the opening of a mine. Belgium, France and Italy require one permit; England two; Austria, Ireland[12] and Portugal three; Sweden four, Norway five and Finland seven.

Timeframe

In some cases, the procedures are bound to a legal timeframe. However, the application by law of a timeframe does not guarantee it is adhered to. Belgium, Portugal and England are the best performers in relation to the turnaround for delivering permits and all deliver within a year. In Belgium, the timeframe is set by the legislation framing the integrated environmental permit. It is less clear whether there is a legal requirement in England. Portuguese legislation does not impose a timeframe.

According to EC (2017), the time for a permit to be issued in France took around three years. However, this number applied prior to the enactment of the new Mining Code, so it is unclear how long it will take now. Austria also needs three years and Ireland four years. Ireland is at risk of seeing extended timeframes as there is no legal requirement but rather a target timeframe. As a result, in recent times, permitting procedures for any kind of development in Ireland can be prolonged by an extra year or two due to delays in securing the land use permit if it has been appealed.

The other CIRAN countries all experience much longer timeframes: Spain needs seven years; Sweden eight years and in Finland it can take nine to ten years. In Spain, the issue stems from the fact that while there are legal timeframes imposed, there is no true incentive to comply. As a result, Spanish authorities use ‘stop the clock’ methods whereby they pause the timeframe indefinitely to request more information. Finland and Sweden do not have legal timeframes imposed.

Sequencing

As noted in the preceding section, some countries use a multi-authority system with several authorities delivering standalone permits. Others have more or less integrated systems that are operated through a digital platform or through inter-agency arrangements. Indeed, in some cases, while the applicants submit to one organisation, this organisation works with others to assess and consider all aspects of the project with a view to deliver one permit for all aspects or to deliver fewer permits for all aspects. EC (2017) found that a number of countries already used a form of one-stop-shop.

[12] This number does not include the need to secure derogation or a grid connection authorisation.

One aspect this project investigates is the scheduling and/or synchronisation of permits. Ireland for instance operates on a fully sequential basis, with each permit acting as the gateway to the next. This also applies in Austria, England, Finland, and Sweden. Other countries, particularly those that are using either an integrated permitting system, such as Belgium or those using one-stop entry points, such as Portugal or France avail of significantly shortened timeframes due to the collaborative approach between authorities and therefore synchronised approach to permitting. In these cases, permitting is not necessarily forced into a gateway system and several permits can be progressed simultaneously through interagency cooperation and collaboration.

EIA

The issue of scheduling has particular importance for EIAs. In most countries, AA is integrated with the EIA. Some countries, such as Ireland and England have standalone AAs, although these are undertaken at the same time and by the same authorities undertaking the EIA. In addition, some countries require EIA to be undertaken as a part of one or more permits. This is the case in Ireland and Finland. It is noted though that while EIAs are undertaken multiple times, they can have a different scope depending on the competent authority undertaking the assessment. The applicants must submit the same EIAR, which may be amended as needed depending on the aspect of permitting covered. It is important to note that delays may be inbuilt into the preparation of EIARs due to the need to carry out extensive survey work to provide for the best available scientific evidence. This is even more relevant in the case of greenfield mines where there is no or limited preexisting knowledge or data. Such problems are also exacerbated where the competent authority lacks the adequate knowledge to carry out the EIA.

Derogation from Directives (IROPI)

The use of derogation is rare across the countries reviewed by CIRAN. Most relevant cases identified concerned quarry operations. All cases were unsuccessful due to difficulties in demonstrating the public interest. Otherwise, there has been an uptake in the use of derogation procedures due to the deployment of offshore renewable energy.

Table 9: Permitting for Extraction in the Countries Reviewed by CIRAN

Country	Mining Licence/ Concession	Separate Environmental Licences (IPC/ IE/ Waste/ Water)	Land Use Permit	Natura 2000 Permit	Number of Extraction Permits	Average Time for All Extraction Permits	Integration of Environmental Assessments (EIA and AA)[1]	Streamlining of EIA Processes	Streamlined Permitting Processes	Regulatory Means of Permitting Integration	Active Use of Derogation Procedures
Austria	Yes - Regional	Yes - Regional	Yes - Regional	Yes - Local	3	3 years	Separate assessments	Single EIA for entire project	Fully sequential processing of permits	Initial single point of entry one-stop agency through which applicants/applications are guided	Rarely used
Belgium	No - Other system in place	No- Integrated with another permit	No- Integrated with another permit	No - Integrated with another permit	1	> 12 months	Integrated assessments	Single EIA for entire project	Fully parallel processing of permits	Initial single point of entry one-stop agency through which applicants/applications are guided & online platform	Rarely used
England	No - Other system in place	Yes - National	Yes - Local	No- Integrated with another permit	2	> 12 months	Separate assessments	No data	Fully sequential processing of permits	No integration	Sometimes used
Finland	Yes - National	Yes - National	Yes - Local	Yes - National	7	9+ years	Separate assessments	Multiple EIAs for different permits	Fully sequential processing of permits	No integration	Never used
France	No- Integrated with another permit	No- Integrated with another permit	None	No- Integrated with another permit	1	3 years	Integrated assessments	Single EIA for entire project	Fully parallel processing of permits	Formal direct interagency consultation at permitting stage	Sometimes uses
Ireland	Yes - National	Yes - National	Yes - Local	No- Integrated with another permit	3	4 years	Separate assessments	Multiple EIAs for different permits	Fully sequential processing of permits	No integration	Rarely used
Italy	Yes - Regional	No- Integrated with another permit	No - Integrated with another permit	No- Integrated with another permit	1	> 12 months	Integrated assessments	Single EIA for entire project	Fully parallel processing of permits	Initial single point of entry one-stop agency through which applicants/applications are guided	Rarely used

Country	Mining Licence/ Concession	Separate Environmental Licences (IPC/ IE/ Waste/ Water)	Land Use Permit	Natura 2000 Permit	Number of Extraction Permits	Average Time for All Extraction Permits	Integration of Environmental Assessments (EIA and AA)[1]	Streamlining of EIA Processes	Streamlined Permitting Processes	Regulatory Means of Permitting Integration	Active Use of Derogation Procedures
Norway	Yes - National	Yes - National	Yes - Local	No AA in Norway	5	No data	No AA in Norway	No data	No data	No integration	No AA in Norway
Portugal	Yes - National	Yes - National		No-Integrated with another permit	3	> 12 months	Integrated assessments	Single EIA for entire project	Fully parallel processing of permits	Initial single point of entry one-stop agency through which applicants/applications are guided	Rarely used
Sweden	Yes - National	Yes - Regional	Yes - Local	Yes - Regional	4	8 years	Separate assessments	Single EIA for entire project	Fully sequential processing of permits	No integration	Never used
Spain	Yes - Regional	Yes - Regional	Yes - Regional	Yes - Regional	4	7 years	Integrated assessments	No data	Fully sequential processing of permits	No integration	

5.4.3 Stakeholder Engagement and Societal Acceptability

Educational Programmes and Promotion

SCRREEN2[13], funded under Horizon 2020 worked on the promotion of CRM. In particular it promotes the criticality aspect of such minerals. Limited evidence was found of state or regional authorities actively promoting CRMs and providing education on their role in the green economy. This deliverable will not make any judgement on whether this is being adequately carried out. The lack of information could be due to language barriers. It is noted that the Geological Survey Ireland has actively promoted the role of CRMs in the green economy on social media. The start of this educational campaign appears to have coincided with the publication by GSI and its parent department, DECC, of a report titled *Green Metals: Demand Arising from Decarbonisation of Energy and Transport Sectors* (O'Donnell & McGrath, 2023).

Project Stage Engagement

All countries have public engagement as statutory requirement in permitting procedures, inter alia due to obligations derived from the various environmental Directives. The Nordic countries have greater requirements if projects are located in Sámi territory and often require the express approval of the Sámi parliament before they proceed.

Community Gain Programmes

Community gain programmes or community benefits agreements can take different forms. They can consist of social investment programmes, funding for activities, infrastructure or service provision, etc. In some cases, it is argued that the provision of employment and local business contracts form part of community benefits. In the context of this report, the former are viewed that are required as part of the permitting process, and the latter are viewed as economic multipliers and are not considered herewith.

Ireland and England have by law several forms of community gains. Mining developers are required to pay financial bonds for local authority infrastructure, and/or to provide infrastructure and/or services to affected communities. These are legally binding and must be determined as part of the land use planning process with the local authority. Portugal has a similar programme in place whereby some of the royalties can be routed towards the benefit of local communities to improve their welfare and wellbeing.

Community Ownership Model

None of countries reviewed operate a community ownership model. The closest contender is Portugal where some of the royalties are rerouted to the local communities themselves. There is however no system that allows for local stakeholders to buy shares in local mining projects, as it exists in the wind energy industry.

Consenting Authority Outlook

At least four countries display very strong political support toward mining for CRMs. Italy, France, England and Portugal have all seen their governments express positive support for the (re)opening of mines on their territory. Belgium stands out as the only CIRAN country with no political support for CRM mining or mining altogether. Political support for CRMs will be crucial to the development of a European supply chain.

5.4.4 Expertise, Data and Tools

Mineral Resource Reporting

The use of one or more CRIRSCO derivates for mineral reporting, prevails for companies operating our a CIRAN country except in Belgium (due to lack of mining projects) and in Italy which uses its own national system. At state level, two governments, Norway and Finland, also use the UNFC reporting system.

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[13] SCRREEN2 has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 958211.

CRM Data Availability

In general, there are good CRM data available. However, the degree to which it is processed and ready to use will vary across the GSOs. Ovaskainen et al. (forthcoming) has reviewed the availability of CRM data across Europe. The British Geological Survey recently completed significant work on reprocessing existing data with a view to identify CRM exploration areas (Deady et al., 2023).

In relation to environmental data, all the CIRAN countries except England and Norway must comply with the INSPIRE Directive. The countries are at different stages of progress, meaning some countries have more compliant datasets than others.

To understand the quality of data, the research was based on the JRC Technical report looking to establish a new monitoring baseline for INSPIRE (Minghini et al., 2020). Many of the CIRAN countries fall short of the requirements imposed by the INSPIRE Directive when it comes to organising their environmental data. In turn, this can make the understanding of environmental constraints more difficult, particularly when used by another party. In essence, the new monitoring baseline found that several CIRAN countries have poor dataset interoperability. This means that datasets are difficult to use by parties other than the originating organisation. Furthermore, it may be assumed that this may create additional work for those involved in the preparation of EIAR due to difficulties in using existing data.

Use of Data & GIS

All countries have publicly accessible databases and viewers on environmental and minerals data. Some GSOs are more forward-looking and are actively developing new digital tools to support databases and viewers on exploration and extraction activities (France and England). Almost all GSOs of the CIRAN partner countries collaborate with other European GSOs in European-funded projects.

There are wide disparities in data management across the countries. The monitoring of the INSPIRE Directives (Minghini et al., 2020) shows that Ireland, Sweden and Spain have a near perfect compliance scores when considering dataset compliance. Conversely, other countries, including countries with otherwise good knowledge of the raw materials and specifically their CRMs, have low scores. As stated above, it is expected that issues pertaining to data operability can cause delays in the EIA process. It may also be that it makes the identification of relevant resources difficult for authorities tasked with plan/policymaking.

5.4.5 Cross-Sectoral Appraisal

Table 10 below provides the summary appraisal across the CIRAN countries. It seeks to make a judgement on whether countries apply a balanced approach between mining and environmental protection.

Table 10 was built to around the two main themes: environment and CRM mining. Corresponding risks were identified under the two spheres focus of the assessment and are articulated around similar risks that may impinge upon the achievement of overarching objectives.

Under the EPA theme, the risks are:

- **Not reaching the 2030 target for protected areas**: the 2030 target means the requirement to legally protect a minimum of 30% of the EU's land area as required under the EU 2030 Biodiversity Strategy. This target is compared to the percentage of land protected per country (EU, n.d.). For Norway, information from Europarc is used (Europarc Nordic-Baltic, 2021).
- **No restrictions**: this is based on whether the country applies bans on mining activities in protected sites (any designations).
- **Environmental data compliance with INSPIRE**: this is based on the 2019 dSi2 score (data conformity) reporting by the countries (Minghini et al., 2020).
- **Fragmented environmental assessments/permits:** this is based on the number of permits and environmental assessment required.

Under the CRM theme, the risks are:

- **No exploration data for resource identification:** this is based on EDGI/MIN4EU data showing the number of datasets available. These data are the same data used as in Ovaskainen et al. (forthcoming).
- **No CRIRSCO / UNFC classification:** this is based on the type of mineral reporting used by the country.
- **No CRM prioritisation or protection:** whether a country uses a prioritisation or identification method for CRM.
- **No CRM extraction arising due to permitting risks:** based on consideration of whether extraction is politically supported and/or whether the country has a history of judicial review.

Overall, the appraisal found that most countries were applying a balanced approach to reconciling mining and environmental protection, with some moderately favouring environmental protection. Belgium scored higher on environmental protection as effectively it is neither encouraging nor supporting mining.

The table gives a representation of the 'AS IS' situation. As of the first half of 2024, no countries have yet applied the requirements of the CRMA but also have not been required to apply those derived from the Nature Restoration Law (PE-CONS 74/23).[14] It is therefore expected that the situation will be exacerbated over the coming years, with increasing requirement to search, identify and mine CRMs, but also to protect environmentally sensitive sites if regulatory frameworks were to remain the same.

Score	Meaning	Range
1	Very strongly favours mining v environmental protection	1-1.4
2	Strongly favours mining v environmental protection	1.5-2.4
3	Moderately favours mining v environmental protection	2.5-3.4
4	Balanced environmental protection & mining	3.5-4.4
5	Moderately favours environmental protection v mining	4.5-5.4
6	Strongly favours environmental protection v mining	5.5-6.4
7>	Very strongly favours environmental protection v mining	6.5-8

[14] At the time of drafting, the text of adopted regulation had not been published.

Table 10: Overall Cross-Sectoral Risk Appraisal

	EPA Criteria				**CRM Criteria**				**Overall Appraisal**
Risks	Not reaching 2030 target for protected areas	No restrictions	Environmental data compliance with INSPIRE	Fragmented environmental assessment(s)/permit(s)	No CRM prioritisation or protection	No CRIIRSCO/ UNFC resource classification	No exploration and data for resource Identification	No CRM extraction arising from permitting risks	Total
Weight	1	1	1	1	1	1	1	1	Total
Austria	7	6	1	4	2	5	1	4	3.8
Belgium	3	7	2	4	7	7	7	7	5.5
England	7	1	1	6	3	5	5	4	4.0
Finland	3	7	1	6	2	4	2	6	3.9
France	7	1	1	2	7	5	3	4	3.8
Ireland	3	2	6	6	7	5	5	7	5.1
Italy	6	5	4	4	7	6	4	4	5.0
Norway	4	4	2	6	2	4	2	4	3.5
Portugal	6	6	2	5	3	2	2	4	3.8
Sweden	4	2	6	7	7	5	2	6	4.9
Spain	7	6	6	6	2	5	2	4	4.8

6 Emerging Issues for Streamlining of Decision-Making

6.1 Introduction

This section builds on preceding sections by highlighting the areas that are of key concern and those that need to be addressed if all of the EU's environmental and mineral extraction objectives are to be met. It reflects the pillars under which the information has been gathered and assessed. These points can be taken as inputs into WP6 with a view to establishing how systems can be better streamlined. Any policy recommendations that may be proposed must have regard to the constraints imposed by the EU treaties, the principles of subsidiarity, and the proportionality of the actions as outlined in the working document to support the CRMA (EC, 2023d). The key concerns and barriers identified through this task are framed with those principles in mind.

The Nature Directives are largely coherent internally and with each other and provide opportunities for adequate implementation via close cooperation between different stakeholders. However, Luodes et al. (2024) indicate the challenges of bringing forward mining projects in protected areas. The MINLEX study (EC, 2017) already indicated that the industry has reported implementation problems such as, inter alia, "overly restrictive" approaches in the implementation of the Directives´ provisions by MSs, particularly in relation to Natura 2000 sites.

Barriers to faster and more effective balanced decision-making have been identified through impact assessment accompanying the CRMA (EC, 2023e) and through previous studies (MINLEX and MINLAND). The results of the fitness for purpose assessment undertaken in the task confirm many of these barriers, but also reveal others that may hinder the extraction of CRMs, while at the same time ensuring environmental protection. The impact of these barriers is likely to become exacerbated with increasing demands on the regulatory systems to deliver greater levels of CRM extraction in shortened timeframes as required by the CRMA.

6.2 Governance Frameworks

At the EU level, Articles 35 and 36 of the CRMA establish a European Critical Raw Materials Board bringing together the relevant expertise from the Commission and MSs to analyse and monitor markets, assess risks and advise on mitigation strategies, assist with strategic projects and coordinate strategic stockpiling. It will also assess strategic project status. This Board will in turn rely on a network of MSs agencies to support it in the performance of its functions.

National governance and regulatory frameworks are a prerogative of individual MSs. The country profiles provided in Section 4 illustrate that MSs' legislation and practice is diverse, with roles and responsibilities allocated for different sectors over different levels of government. The MSs must nonetheless comply with the requirements of EU Directives. Several countries were identified as having well integrated vertical policy and policy frameworks (e.g. Ireland, Austria), while others are less integrated (e.g. France), reflecting the systems of national, regional and local government functions. Permitting functions in relation to mineral licensing, environmental licensing or land use planning can be centralised, decentralised or mixed (refer to Table 6). Again, this is a function of the governance systems in place. The requirements of the CRMA and other environmental directives may influence the governance structures while the transposition of these requirements is a matter for the MSs. The focus is therefore on identifying barriers that can be removed, either partially or fully, through changes in administrative systems and best practices. Such practices relate to **coordination of different sectoral policy frameworks** through appropriate goal setting at the higher levels so that these can be applied in a vertical manner, translating EU policy on sustainable development, energy transition and the circular economy to national, regional and local levels.

Chapter 2 of the CRMA relates **to the designation and implementation of strategic projects**, which are deemed to be of importance to the EU. Article 11 requires that all permits for extraction should be secured

within 27 months. Considering the existing timeframes of the countries examined, which were generally from under a year to up to ten years to secure all permits, this presents a very significant challenge to regulatory regimes. The CRMA focuses on the processes for the designation and permitting of identified strategic projects. However, there is still a need to streamline decision-making processes in relation to those CRM projects that are not deemed to be strategic, or that fail to meet the relevant criteria. Due consideration needs to be given by MSs to whether they want to develop two streamlined systems: one for strategic projects and a second one for all other CRM and mining projects. The extent and nature of deposits/resources that may exist will inform the type of administrative governance that will be required in planning and permitting.

Governance and regulatory systems need to be developed to reflect not only the policy and regulatory requirements of the EU, but also to ensure societal acceptability. **Public consultation, stakeholder engagement and ultimately societal acceptability are integral parts of a governance and regulatory framework and need to be reflected in statutory provisions of MSs' systems**. This is to ensure compliance with commitments and requirements under the Aarhus Convention (UN, 1998) and the associated Directive on Public Participation (EC, 2003). Section 113.5 below further considers softer, non-statutory approaches to ensuring acceptability to stakeholders.

Importantly, **capacity, resources and expertise** must be available in MSs to ensure that governance systems deliver on the EU policy objectives relating to mineral development. This is required at all levels from policy development to environmental assessment as part of the permitting process, and environmental management and monitoring programmes (EMMPs).

6.3 Resource Identification, Spatial Planning and Designation

6.3.1 Exploration Programmes and Mineral Classification

Ensuring a robust evidence base to plan for CRMs is essential. It facilitates an assessment of viable projects and allows strategic planning to be undertaken at an EU-wide level. Presently, there are wide disparities in the systems used across the EU in relation to mineral classification. Companies operating in most of the CIRAN countries are using one or more CRIRSCO derivates, including the JORC code, PERC, N143-101 and Russian Modified system, except Italy and Belgium. The CRMA introduces a requirement under Article 19 for national exploration programmes to include mineral mapping at a suitable scale along with the processing and gathering of data. In addition, it indicates that occurrences be categorised using the UNFC classification. There are very few countries currently using the framework. This presents a challenge for the MSs in relation to putting in place the structures required to deliver on these programmes and systems of classification. Data management is considered in further detail below in section 6.6.

6.3.2 Planning for CRMs in Land Use Plans and Mineral Plans

A critical element of any effective, well-designed and streamlined decision-making process is to reduce conflicts between mineral development and environmentally protected areas through carefully prepared spatial plans by the relevant competent authorities. Article 13 of the CRMA now requires that MSs must ensure that the national, regional and local authorities in charge of the preparation of plans, including zoning, spatial plans and land use plans, include provisions for CRM resource protection. It gives the preference to '*artificial and built surfaces, industrial sites, brownfield sites, and where appropriate, greenfield sites not usable for agriculture and forestry*'. Spatial plans can prioritise/zone CRM project development where appropriate, having regard to the location of environmentally protected areas. They are also subject to SEA and public consultation.

The CRMA allows for the list to be updated every three years. As can be seen from Table 3 of this report, the list can change significantly, with additions or deletions. With the move towards securing more complex supply chains, the list may well be expanded rather than reduced with associated implications for the obligations of MSs in relation to regulatory regimes for CRMs.

Furthermore, spatial plans may exclude mineral development having regard to environmental designations. This may impact upon identified resources, so that a decision may be made early in the decision-making process *not to mine* for environmental reasons. There are certain protected areas (e.g. national parks in Ireland, Sweden and Finland) in which mining is prohibited categorically. Early exclusion can introduce certainty into the process, avoid undue cost and expense in bringing forward individual projects, and also reinforce the case for areas that are identified/zoned for CRM project development.

The case-studies (Luodes et al., 2024) show that protected areas do not necessarily exclude mining activities. For example, Natura 2000 sites do not automatically exclude mineral development. Often each development is assessed on its merits having regard to the potential impact on the designated site. The designations of Natura 2000 sites under the Habitats and Birds Directives do not provide guidance on what complementary development can be accommodated. The main objectives of the designation are to prevent activities that could significantly disturb species or damage the habitats for which the site was selected and to take positive measures, if necessary, to maintain and restore these habitats and species to improve their conservation status. The parameters and considerations for development that potentially affect protected sites must be elaborated in other policy documents, namely spatial and use and/or mineral development plans.

Greater certainty can be provided at an earlier stage in the process as to whether a CRM project is acceptable or not from a nature conservation perspective. Currently, there is a tendency to defer key decisions on whether to mine or not until the permitting stage (e.g. in Ireland, Finland and Sweden). This deferral of decision-making may be done through generic policies such as 'the project shall demonstrate that it does not adversely affect a Natura 2000 site'. However, to give greater certainty at the plan/policy stage, there is a requirement for a **more in-depth level of assessment of the potential impacts upon a protected site**. This will require greater resources for the preparation of plans by relevant authorities and reflecting the more detailed level of assessment in the SEA, WFD assessment and Habitats Directive Assessment of the plan. The plan then provides the framework for applications at the permitting stage. This may assist in **de-risking** individual projects to a certain extent prior to the permitting stage, although there will always be a consenting risk no matter how supportive the policy/plan framework is in supporting an individual project. The MINLEX study (EC, 2017) found, for example, that Austria achieved a nearly 100% site permitting success rate within zones designated as "*raw material priority areas*". It is also likely to assist in shortening the permitting timeframes, as more detailed assessments are carried out earlier in the process.

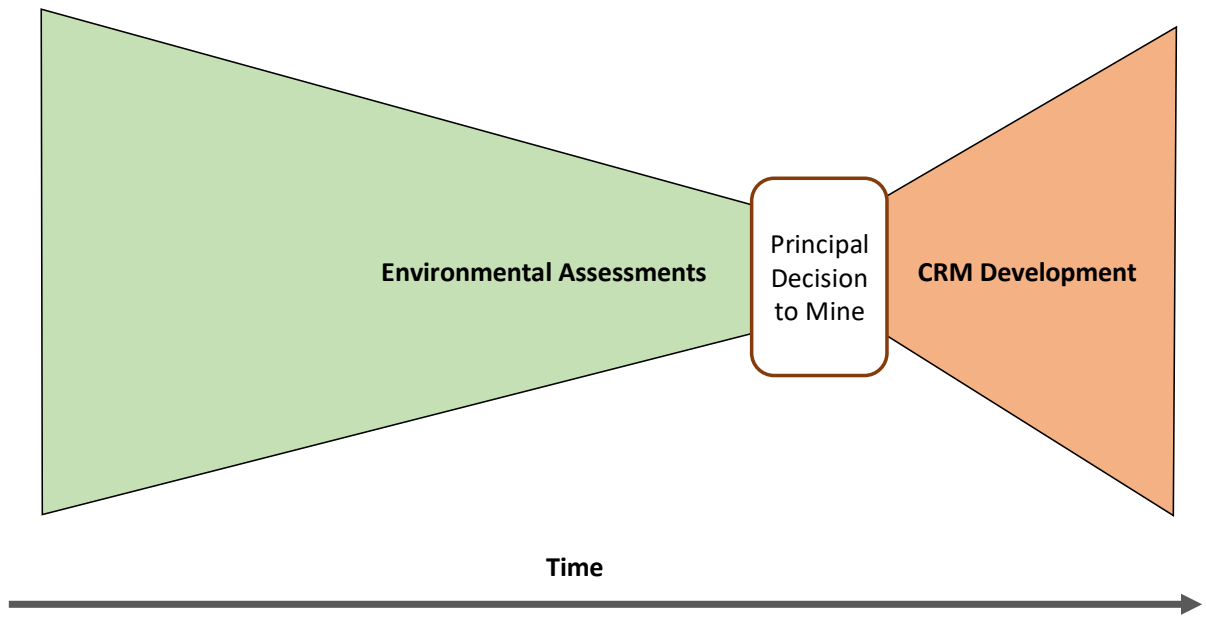

Figure 26: Existing Situation

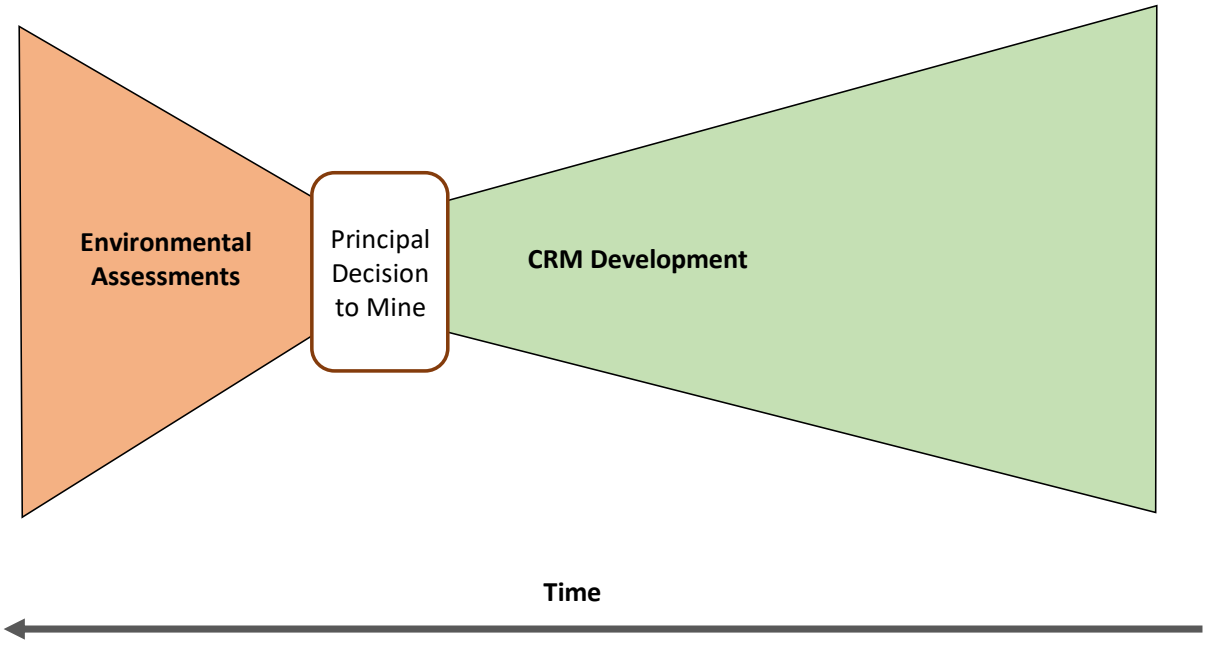

Figure 27: Desired Situation

However, it should be noted that there is the potential for spatial planning practices to actually create significant delays in the permitting process. A reason for this is that in order to accommodate a particular project, a spatial plan may have to be amended for the mining operation, as is done in some countries. A survey by IMA-Europe found that any requirement to change a spatial plan from non-mining to mining was a significant bottleneck in the process.

There is also scope to identify and collect important survey information through the assessment processes at the plan preparation stage, which will assist in the development of projects that go through the exploration and extraction life cycle stages.

The SCRREEN Project highlighted that in 2018 no MSs were specifically defining CRMs as a special mineral group (Guenter et al., 2018) within their regulatory systems. However, the country review section (Chapter 4) illustrates that several countries (England, Sweden, Finland & Norway) are now specifically accounting for some CRMs within their legislative mineral and planning systems. However, given the CRM's status and importance, it will be important to give added priority status to CRMs in the formulation of environmental and spatial plans.

6.3.3 Designation of Protected Areas

SACs and SPAs constitute Natura 2000 sites. Many MSs made the initial designations in 1980s and 1990s. Designation of SACs under the Habitats Directive (92/43/EEC) is based on scientific analysis. Annex III of the Directive prescribes the criteria for designation, which relate to: the importance of the site for its habitat or species; how representative is the example of the relevant habitat present on the site; how isolated the population of the relevant species on the site is; the intactness of the habitat on the site; and other ecological factors. Similarly, the criteria for designation of SPAs under the Birds Directive (2009/147/EC) relate to certain threshold numbers of a recorded species. There is no balancing with other factors (e.g. existence of CRMs) within the designation process. It is left to the plan/policy preparation and CRM permitting stages to resolve these conflicts. In addition, certain anomalies have been identified in the case-studies (Luodes et al., 2024), namely that boundaries of Natura 2000 sites, as originally designated by national governments, were not principally determined on the basis of ecological and habitat criteria, as stipulated in the Directives, but by other criteria such as boundaries, natural features, etc.

As stated above, assessments focused on nationally environmentally protected sites may be able to take a balancing of considerations into account. Such balancing may include social and economic factors, but this will be dependent upon the legislative basis for national designations.

The proposed Nature Restoration Law (EC, 2024e) requires that nature restoration measures should cover at least 30% of the EU's land and sea areas, and all ecosystems in need of restoration by 2050. The EU 2030 Biodiversity Strategy requires 30% coverage. Chapter 4 of this report indicates that between 13.3% and 29.2% of land area of those MSs examined have already been designated as protected areas. The policy objectives of expanding CRM extraction may coincide and therefore conflict with a significant increase in the land area covered by EPAs. However, a fuller appraisal would be required to determine the actual implications of implementing the targets as set out in the Nature Restoration Law, particularly in relation to the overlap between CRM occurrences and EPAs.

6.3.4 SEA, AA, and WFD Coordination

There are a number of environmental assessments that apply to the spatial plan stage, and Article 13 of the CRMA requires a coordination of assessments. The principal one is the SEA. Undertaking the SEA procedure encourages a more integrated and comprehensive approach to spatial planning early in the project development phase. For example, applying the SEA procedure allows relevant national authorities to plan for the development of CRM projects, while factoring in the environmental obligations and identifying the cumulative environmental impacts at an early stage. It also allows for or pushes the consideration of alternatives in plan-making. The outcomes in turn provide a basis for the subsequent project development and permitting procedures. This also translates into fewer conflicts at the individual project permitting stage, both in substance and in terms of public acceptance.

The other assessment that is of particular relevance is the Habitats Directive Assessment. This assessment ensures that there are no adverse effects of a plan on the protected site's integrity. However, if potentially adverse effects are identified, alternatives must be considered and mitigation proposed. A plan may progress to adoption if it is deemed necessary and is so for *imperative reasons of overriding public interest* (IROPI). Due consideration may be given to whether this removes the need for an IROPI case at the permitting stage. The assessment undertaken pursuant to the WFD needs also to form part of the preparation of spatial plans.

The coordination of all these assessments is key as can be seen in figure 28. The different assessments have different stages, purposes, criteria and outcomes. However, there should be a sharing of data between assessments, coordination of activities and timeframes, and a sharing of expertise with a view to create synergies and to avoid duplications and contradictions. Thus, there is a potential for joint assessments, but this can be challenging given the different nature and scope of the assessments, and the need to coordinate different government agencies.

6.3.5 Planning for Shared Use and Compensation

Generally, planning for co-location and sharing of space is resolved through the spatial plan preparation process and at the permitting stage. The lessons of other 'green' sectors (e.g. offshore renewable energy) can be utilised in the development of best practices for the co-existence of CRM exploration and extraction with protected areas. Some of the principles that may be considered are: nature inclusive design, partial exclusions and potential for biodiversity enhancement as part of mining projects (Pardo et al., 2023). Many of these principles are adopted in any event in mineral development and permitting, although guidance is not as well developed, as it is for renewable energy development.

A key consideration as part of plan-making is compensatory measures that can be proposed at the spatial plan stage. This may result from identified potential loss or impact on environmentally protected areas at the plan stage. The relevant competent plan making authorities may, in conjunction with mine owners, develop compensation packages at an early stage in the process, for example through identification of a compensatory habitat, although that will require agreement of other landowners, or may require a land purchase by the relevant state authority.

6.4 Streamlining Administrative Procedures

Administrative barriers, complex systems and poorly aligned and coordinated procedures present a significant challenge in the development of CRMs and may inhibit extraction. These barriers result in lengthy delays of between four and nine years for mineral development projects, thus undermining objectives regarding industrial development, green transition and security of supply. Environmental protection also requires effective administrative procedures, if objectives of environmental protection and enhancement are to be met. These are generally met through designating areas for protection, or through the preparation of management plans to secure the conservation objectives, as in the case of SACs designated under the Habitats Directive, or measures required to ensure good quality status under the WFD. However, the administrative processes required to support environmental protection are not, to any large extent. Refusal of permits for development which may otherwise result in the deterioration of a protected site, will, while not enhancing its status, defend the current status. Therefore, permitting is viewed as a key element in the overall defence of protected areas. This section focuses on permitting of CRM extraction, with particular reference to the interaction with requirements for nature preservation.

6.4.1 Fragmentation

The MINLEX report (EC, 2017) highlights the fragmentation of regulatory systems across the EU, with a wide number of laws relevant to the European non-energy extractive industry. The permitting framework included mining legislation, nature conservation, land use planning, cultural heritage, environmental legislation, water management, transport and other legislation. Spain has the highest number of relevant laws (112) followed by Italy (96), and the UK (69). The average was 40. In contrast, the Czech Republic has the lowest (7). Individual laws do not necessarily generate a requirement for a separate licence, but reflect the fragmentation of the regulatory system. The number of permits for the countries is examined in Chapter 4 above. It shows the number of laws in place, but also the administrative divisions of MSs. For instance, Spain, Italy and the UK all have decentralised administrations, with many regional laws, which constitute a significant part of the total. In addition, the UK encompasses the laws of its constituent countries. Centralised and mixed regimes (e.g. Ireland, Portugal, Sweden, France) tend to have fewer laws, and associated permits.

While there is a level of fragmentation of regulatory systems and the number of permits required is a reflection of the system of governance in each MS, it is important that there should be coherent mechanisms of vertical and horizontal coordination of policies and the assessment of different permits. The need for this coordination is more acute where the number of permits and relevant laws/regulations are high.

6.4.2 Timelines

Lengthy permitting timeframes constitute a significant barrier to the exploration and extraction of CRMs. Legal time for authorities to conclude on applications varies significantly across the EU (EC, 2017). Some countries have statutory timeframes within which to provide a verdict on applications for permits, while others do not. For exploration licences, delays may vary from three months in Italy to six months in Austria and Portugal and up to two years in France. Statutory timeframes for extraction permits are longer, given the complexities of the assessments and consultations that are required. Spain and Ireland have an objective of two months, Belgium has four and six months, Austria six months, and France three years. These timeframes are usually expressed as statutory objectives, and very often there will be requests for further information, appeals and potentially judicial reviews that add delays. This gives rise to a divergence between stated and real timeframes.

Chapter 5 considers the cumulative timeframes for all permits. It must be borne in mind that many systems require licences to be issued in sequence (e.g. mineral concession, planning/land use, environmental permit) which adds to the overall length of the process. For exploration licences, this is generally on average between four and six months, and for extraction between three and four years. There are individual examples of mining projects that took up to nine years to develop. It will vary depending upon whether an EIA and/or other assessments are required. It should be noted that that there are pre-application procedures that need to be followed (e.g. consultations with authorities and environmental baseline studies and preparation of

EIARs). There are no data or information available for the permitting of processing plants or for the decommissioning stages.

The consent may also be subject to appeals or legal proceedings, which are beyond the control of the regulatory authority and fall under the remit of MSs' judicial, as opposed to administrative systems. The specified timelines present significant challenges for consenting authorities. Other sectors facing a similar challenge have also examined how to shorten timeframes of different permitting stages. A study on streamlining renewable energy projects sought to reduce the delay of wind energy projects by a half and solar by three quarters. The focus was on the permitting and legal challenges stages.

The practical measures for speeding up permit-granting procedures for renewables are also considered by the EC (EC, 2022c) and many of the concepts, which are similar to the challenges of CRM project development in protected areas, are considered in the following sections. The experience of the TEN-E Regulation (EC, 2022d), which includes very similar provisions for permitting, decreased the average duration of permitting procedures (including the pre-application stage) for trans-European electricity infrastructure projects from more than six years in some Member States to four years. In addition, the EC Directorate General for Energy has produced a good guidance document on 'Simplification of permission and administrative procedures for RES installations' (EC, 2023f).

Article 11 of the CRMA indicates that there should be an objective of 27 months for *strategic projects* and this period can be extended by three months in exceptional circumstances. While statutory new timeframes may be introduced, to make them effective and real, administrative systems for validation, statutory consultation, further information requests, assessment and decision-making would have to be restructured. This is not an insignificant administrative procedure that may be applicable only to a small number of projects. The experience of implementing the RED Directive II from (EC, 2018a) which imposed on renewables permitting timeframes similar to the ones for CRMA, found that by 2023 only two countries had introduced the required deadlines.

6.4.3 Strategic Project Definition and Designation

Article 6 of the CRMA sets out the criteria for the designation of Strategic Projects at the EU level, which are projects that:

- Would make a meaningful contribution to the security of the Union's security of supply of SRM;
- Are or will become technically feasible within a reasonable timeframe and in which there is sufficient level of confidence in the expected production volume; and
- Can be implemented sustainably.

The criteria are relatively loose and may include a wide range of medium and large-scale projects at different value chain stages of extraction, refining and recycling. The impact assessment for the CRMA estimates that 120-180 Strategic Projects (SP) (or 12 SPs per SRM) divided equally per value chain stage could potentially receive support by 2030. This equates to 24-36 project per year. The current report is principally interested in the extraction phase, which would translate to between eight and 12 projects per year. The spatial distribution of the extraction projects across the EU is obviously dependent on the occurrences of CRMs in different countries. Ovaskainen et al. (forthcoming) show that there is a high concentration of currently known occurrences in Portugal, Finland, Norway, Austria, France, Spain, and Sweden. It could be then that these countries would bear a higher proportion of the anticipated requirements than other countries. These occurrences or deposits would have to be viable or could become viable under the UNFC classification.

The process for designation is explained under Article 7 of the CRMA. A project promoter may submit the application to the European Commission, which then refers the case back to the MSs in whose jurisdiction the project is located, which has the right to veto the proposal. Individual countries will have to establish or adjust their regulatory systems in preparation for the possibility that SPs may be proposed in their jurisdictions. Scenarios may emerge whereby individual countries resist or reject CRM projects on the basis

that their permitting systems cannot accommodate the timeframe and other requirements needed to facilitate SPs.

6.4.4 Environmental Assessment Procedures (EIA, AA and WFD)

Inconsistent and cumbersome transposition of the EIA Directive has been highlighted in the MINLEX study (EC, 2017), which indicates that it could act against a level playing field in the EU's internal market. Some MSs have set lower thresholds for mandatory EIAs under Annex II of the Directive (e.g. Spain and France). This has led to a large number of projects being subject to a full EIA, which triggers a series of associated regulatory and administrative requirements in relation to consultation and assessment.

While EIAs and AAs can become useful tools in finding innovative ways to mitigate impacts and have introduced new and low impact technologies (e.g. in French, Austrian and Norwegian case-studies (Luodes et al., 2024), the length and complexity of EIARs is well recognized. The length of assessments is due, in part, to the failure to define the spatial and topical scope of EIAs at the outset. Scoping can be particularly complex in relation to conservation objectives for Natura 2000 sites. Article 12 of the CRMA seeks to reduce the time taken by competent authorities to issue a scoping opinion to 30 days, which may contribute to the reduction of overall volume and length of EIARs. However, there is always the residual concern on the part of the developer, that by narrowing the scope of an EIAR, they inadvertently leave a topic out, and that this may be the subject of a judicial review. Comprehensive EIAs and AAs tend to increase the overall length and cost of permitting procedures and lower the predictability of the process outcome. The MINLEX study (EC, 2017) found that when an EIA is required for an extraction permit, the process may be prolonged (on average) by between one and three years (in comparison to a permitting process without the need for an EIA). In some cases, such as for Sweden, the granting of the environmental permit (after evaluating and approving an EIA) can even be longer (from three up to six years) for the longest.

AA is the key assessment in relation to the impacts upon the Natura 2000 sites. Responses to the last Fitness Check of the Nature Directives by EU extractive associations highlighted several good practices and procedures (EC, 2017d). Natura 2000 sites have been designated on former extraction sites. Best practice is as early engagement between developers and conservation NGOs as possible. However, the MINLEX study (EC, 2017) notes that developers observed, on occasion, that competent authorities took an overly restrictive approach to development that could impact upon a Natura 2000 site.

Water protection has key importance in permitting, as watercourses can be a main pathway for pollution dispersion from extractive sites. A principal target of the WFD (Article. 4.1) is to achieve good ecological status of all surface and groundwater bodies. WFD assessments are now an important part of the environmental assessments that need to be undertaken for new mining operations. Under Article 13(1) of the Extractive Waste Directive 2006/21/EC (EC, 2006a) the operator of a facility has to take the necessary measures to meet EU environmental standards, in particular to prevent, in accordance with Directive 2000/60/EC, the deterioration of current water status (EC, 2000). This can be done, inter alia, by:

a) Evaluating the leachate generation potential, including contaminant content of the leachate, of the deposited waste during both the operational and after-closure phase of the waste facility, and determining the water balance of the waste facility.
b) Preventing or minimising leachate generation and surface water or groundwater and soil from being contaminated by the waste.
c) Collecting and treating contaminated water and leachate from the waste facility to the appropriate standard required for their discharge.

The requirement for such measures can only be reduced if an assessment of environmental risks shows that the waste facility poses no potential hazard to soil, groundwater or surface water (Article 13(3)). Mitigation measures should be technically feasible, not disproportionately costly and should be in accord with specific reference guidance (e.g. Best Environmental Practice (BEP), BAT). There is, however, no requirement for specific compensatory measures, as there is under the Habitats Directive.

Article 12 of the CRMA requires coordination and joint assessments to reduce and ensure coherence and consistency. Figure 28 below illustrates how the processes of data collection, screening, scoping and decision-making between EIA, Habitats Directive Assessment and WFD assessments can be coordinated and streamlined (EC, 2017). It is noted that there is already a requirement for joint or coordinated assessments under Article 2(3) of the EIA Directive 2014/52/EU (EC, 2014).

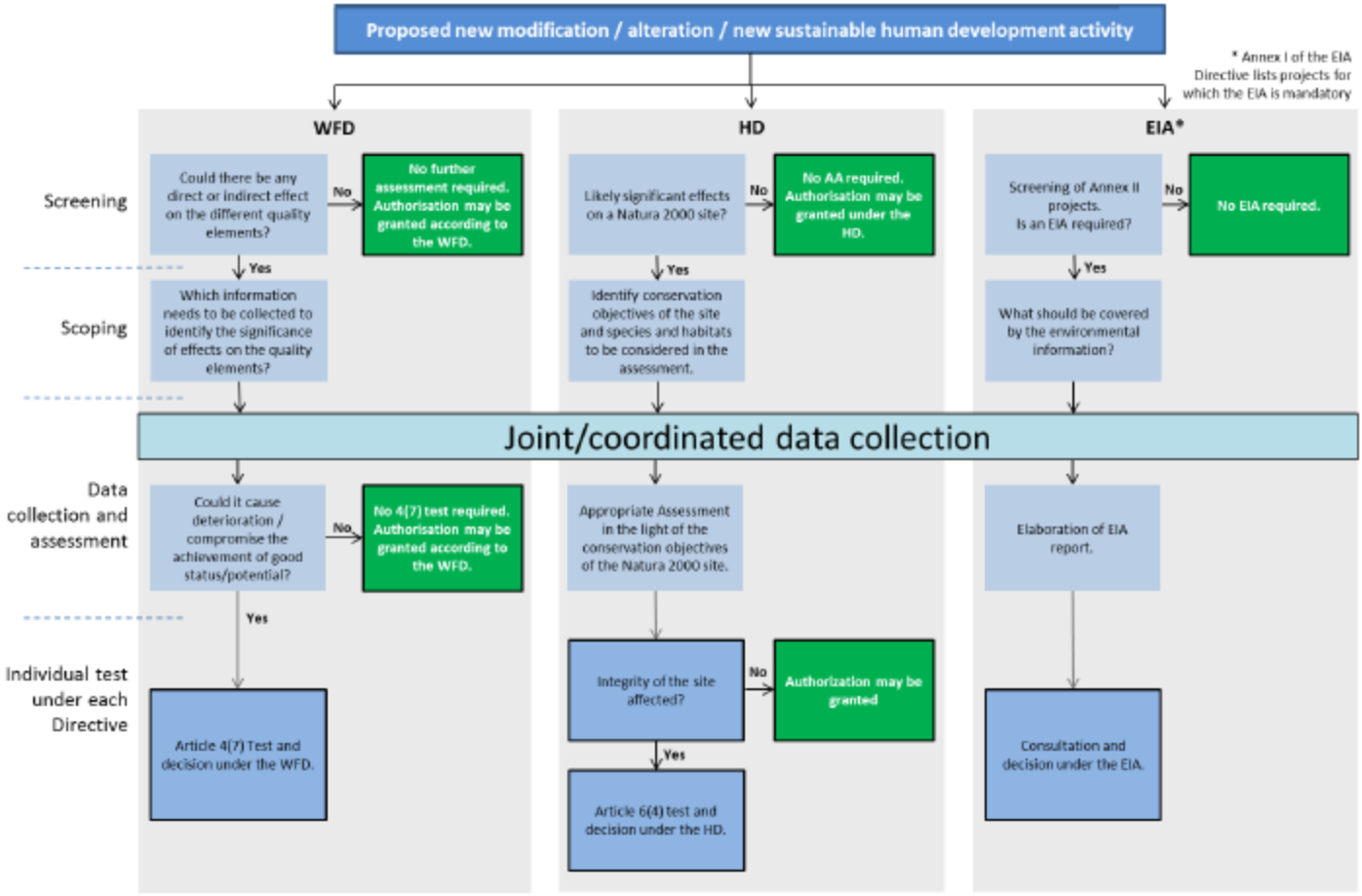

Figure 2812: Streamlining of WDF, AA and EIA assessments (EC)

The legal test for each Directive is however different. While there is no prohibition of mining in Natura 2000 sites, it must be demonstrated beyond any scientific doubt that there will be no adverse effects upon site integrity. This high bar requires a significant robustness of assessment or risks legal challenge. If there is any doubt, the IROPI procedures must be followed. Similarly, when the WFD requirements of having to demonstrate that no adverse effect on the status of relevant water bodies can be met, a derogation procedure may need to be invoked. An EIA on the other hand may conclude significant effects on the environment, but consent may still be granted as a result of taking into account other, namely societal and economic factors (e.g. to ensure supply of critical raw materials).

The various life cycle stages of CRM project development give rise to different environmental effects. Exploration, involving drilling and minimal water discharges generally does not give rise to significant adverse effects upon protected sites' conservation status. Any effects identified can usually be effectively mitigated. Screening for EIA and AA at this stage can rule out the need for elaborate and lengthy environmental assessments.

The principal significant effects arise during extraction and can relate to impacts upon biodiversity due to dust, noise, disturbance, and to impacts upon groundwater and local/regional hydrology. The source-pathway-receptor model of assessment, whereby the source (i.e. the mine), pathway (e.g. water, air), receptor (protected site or waterbody) can result in very wide spatial area (including depth) that needs to be considered. A protected site, even at a considerable distance from the mining operation, may need to be the

subject to the same level of assessment as if they mine were located within the protected area itself, when there is a relevant (potential) pathway.

Environmental effects during remediation and closure must also be taken into account. Best practices for dealing with mining waste (Garbarino et al., 2018) are being continually improved and with the use of these, environmental risks can be mitigated to a large degree. It must also be emphasised that likely environmental effects can also have positive effects, which can include the potential designation of protected sites in old mining areas (e.g. the tungsten mine at Mina de Barruecopardo, Spain) (Luodes et al., 2024).

6.4.5 IROPI and Derogation Procedures

Derogation procedures are required under the WFD (2000/60/EC) and the Birds/Habitats Directive (2009/147/EC) where there are potential effects upon water body status or the conservation of objectives of Natura 2000 sites. Under these Directives consent may only be issues when there are IROPI.

Article 4(7) of the WFD sets out the conditions for derogations in the event of new modifications to the physical characteristics of a body of surface water or change to the water-level of groundwater bodies resulting from new development including mineral extraction. Consideration should be given to whether the benefits to the environment and to society of achieving the objectives set out in the WFD are outweighed by the benefits to human health, to the maintenance of human safety or to sustainable development due to the changes (Article 4(7)(c)). Unlike derogation procedures under the Birds/Habitat Directive for Natura 2000 sites, justification of a project under Article 4(7) WFD does not have to be referred to the Commission. There are no specific requirements to apply mitigation measures under the WFD (other than practical steps), but good practice would indicate that such measures should be applied (EC, 2017). Procedures for WFD derogation need to be sufficiently robust so as to avoid the risk of legal challenge.

There were no examples from the case studies (Luodes et al., 2024) of IROPI procedures under Article 6(4) of the Habitats Directive being utilised. Indeed, the literature review did not reveal any IROPI cases for mineral development in the EU (other than unsuccessful attempts for quarries). To date, it may be that it is difficult to demonstrate overriding *public* interest in such projects as they have been deemed private developments. However, Article 7 of the CRMA now gives a legal basis for justifying claims for IROPI in the case of Strategic Projects. It is unclear, however, whether CRM projects that are not designated as Strategic Projects will also benefit from this legislative underpinning. There are specific procedures to carry out the tests for IROPI. These must be adhered to in relation to:

a) The consideration of alternative solutions;
b) The IROPI statement;
c) Compensatory measures; and
d) Notification to the Commission by MS.

As these applications of IROPI for mineral development are likely to be new for many countries, novel procedures will have to be developed.

6.4.6 Clear Roles and Duplication of Procedures

The country analysis has revealed that MS processes are not only complex but also may not be wholly transparent for both authorities and developers. The introduction of the CRMA in MSs may give rise to additional permitting procedures. There is an opportunity to rationalize existing permits, particularly in MSs that are likely to have to deal with a number of Strategic CRM projects. This would require MSs to review their individual overall framework of permits, and identify if any can be removed, rationalised or amalgamated. Duplication of permitting adds to complexity, costs, additional fees and time burdens. It also has the potential to give rise to inconsistencies and conflicts between permits.

As seen in Table 9, many of countries reviewed have a sequential approach to permitting. As the CRMA establishes timeframes for all relevant permits, revised arrangements are likely to be required, whereby

parallel permitting, particularly for land use, environmental licencing, and possibly grid connection, would need to be introduced. This is likely to be one of the main means of streamlining processes where SPs are to be accommodated. This may significantly alter inter authority communications and consultations, but in particular, environmental assessments of different authorities for different permits.

Design of processes should therefore consider the:

- Sequencing of processes.
- Clearly assigned responsibilities of relevant authorities, statutory consultees and other stakeholders to tie in with functioning of a one-stop shop.
- Clear timeframes for each permitting stage and implications of not adhering to the deadlines.
- Early integration of environmental concerns, particularly in relation to protected areas.
- Depending on the complexity and stage of the project (exploration, extraction, closure), the process should include a multi-layered approach from initial screening and consideration of the relationship between CRMs and protected areas, to upfront integration of mitigation and compensatory measures.

It is important to note, however, that the processes required to implement the necessary changes into national legislation and associated administrative procedures can take years in themselves, as laws need to go through parliaments. On this basis, it may be too late for the expressed purpose of the CRMA.

6.4.7 Extensive and Overlapping Documentation

There are challenges due to the preparation of very long and voluminous environmental assessments. In addition to these assessments, there is often documentation required in relation to plans, particulars, details, socio-economic studies, stakeholder engagement reports and other reports. The same reports can, on occasion, be duplicated for different permits (e.g. Ireland, England & Spain). The use of online application portals can assist in reducing the volume of printed materials facilitating statutory consultations and allowing for easy display online. The move towards digital applications is now common in most jurisdictions, but some still require hard copies to be submitted (e.g. France, Ireland & England).

6.4.8 One-Stop-Shop or a Single Contact Point

The aim of a One-Stop-Shop or a single contact point is to reduce the complexity of permitting for project developers and increase efficiency and transparency of processes. Such One-Stop-Shops do, in any event, represent good practice for the mineral development sector and have been required under the Renewable Energy Directive II (2018/2001/EU) for instance indicates that five of the 11 countries reviewed had some form of One-Stop-Shop. The MINLEX study (EC, 2017) revealed that of the 28 states examined, seven had already established One-Stop-Shops for mineral permitting, principally focused on the EIA coordination.

Article 9 of CRMA requires the designation of One-Stop-Shops for the coordination and submission of applications for Strategic Projects. The designated authority will:

- Be responsible for facilitating and coordinating the permit-granting process for CRM projects.
- Act as the sole point of contact for the project promoter in the permitting processes.
- Facilitate promoters to submit all documents relevant to the permitting process in electronic form.
- Take into account submitted studies and avoid duplication.
- Facilitate dispute resolution where they concern the permitting process.
- Be adequately staffed and resourced, including financially, technologically and technically.

The CRMA will require an expansion to cover MSs, but also a change in the remit of such One-Stop-Shops. Given the extent of the overlap between CRMs and protected areas, due consideration should be given to integrating the relevant authorities responsible for nature protection in the relevant areas. This will have implications for the way in which applications for permits are processed and the communications with relevant bodies responsible for issuing consents.

6.4.9 Pre-Application Consultations

There are usually pre-application stages in a project, where promoters meet with regulators, other relevant state bodies and the community to discuss various aspects of the project prior to submission. These can be formal statutory processes with regulators (e.g. Ireland & England) or less formal and non-statutory (e.g. Austria, Spain, Finland & Portugal). Each permit has its own individual consultation process, with different parties being consulted in different manners. The aim of the process is to improve the planning system by strengthening community participation at an early stage and better responding to local views on the proposed developments. Examples of public engagement activities include visits, information packs, meetings and public exhibitions. These activities should take place from the exploration phase of a project. There is usually some form of formal engagement required with certain bodies in relation to the preparation of an EIAR.

6.4.10 Legal Challenges

Legal challenges can be a significant obstacle to the timely delivery of CRM projects as stipulated by the CRMA. Lengthy, expensive and procedures with uncertain outcome can deter investors. Legal challenges form part of the permitting process and, therefore, streamlining this stage to reduce time of uncertainty must now be considered an important element in the overall streamlining of decision-making processes. Many challenges relate to protected areas and environmental issues. Article 9(4) of the Aarhus Convention (UN, 1998), requires that MSs must provide adequate and effective remedies, including injunctive relief as appropriate, and should be fair, equitable, timely and not prohibitively expensive. This effectively limits the costs incurred by members of the public engaged in statutory processes concerning the right to information on the environment (Irish Supreme Court Heather Hill v. An Bord Pleanála & Attorney General, 2022). This facilitates members of the public or NGOs in taking legal action against permits for mining developments where they relate to issues of environmental protection. This might not otherwise be the case in civil actions of this sort, where costs associated with legal cases may be far higher. Streamlining of legal challenge procedures at local, regional, national and EU level will benefit the delivery of projects in all sectors.

6.5 Stakeholder Engagement & Societal Acceptability

A mining project will to a greater or lesser extent permanently alter the area in which it is located. It can also have both positive and negative impacts on a wide range of receptors. Therefore, a wide variety of stakeholders will have a view on this project. There may be diverging views over who is a ‘stakeholder’, but it is good practice to assume that everyone who claims to have an interest should be considered as such. The position stakeholders voice may vary considerably depending on what kind of impacts, negative and positive, they perceive. Such impacts can be visual and aesthetic, land-use and changes to nature and environmental, public health, and socio-economic, such as changes to property values, social fabric and economic opportunities for local communities. These suggest that there needs to be a fair trade-off between benefits received and impacts experienced (Tost et al., 2021). This requires, in part, that to achieve societal acceptability, there needs to be trust between the parties that promises are delivered upon and that, importantly, concerns, especially local ones, are on an equal footing as other, more strategic, concerns. Tost et al. (2021) found that risk is reduced when a developer aims for a higher level of Social Licence to Operate (SLO) (i.e collaboration) between the parties. A maximum of interested parties, or stakeholders, should be able to gain from the agreement, therefore reducing risks of challenges or obstacles.

The CIRAN case-studies (Luodes et al., 2024) illustrate, in particular, that a key concern for stakeholders is the impact upon protected sites. While these are the concerns of mainly local stakeholders, more geographically remote stakeholders may voice their concern on, for instance, an ethical basis. Consumers and others who may benefit indirectly economically from extraction operations are not generally involved directly at the project stage, but their interests may be reflected through higher level policy, which sets the framework for mineral extraction.

The degree to which an extractive project is in line with stakeholder interests is reflected by the aforementioned SLO. An SLO is basically an informal expression of trust between all stakeholders concerned.

The importance of an SLO over the period of life stages of a mine is well recognized (Lesser et al., 2021). Key elements of a successful SLO model relate to legal and procedural fairness, effective engagement and benefit sharing. Such principles can help inform and shape relevant procedures for stakeholder engagement. The MIREU project deliverable *Social Licence to Operate (SLO) Guidelines for Europe* (Tost et al., 2021) recommended clearly defining roles of authorities in granting permits, strengthening existing EIA provisions relating to community participation, establishing consistent and transparent dialogue between stakeholders, incorporation of feedback into project delivery and promoting social impact assessments as part of the permitting process. Seeking and maintaining the SLO over the whole life cycle of an extractive operation is not only an expression of corporate responsibility, but also a key element of de-risking investments into the extractive sector (Falck, 2016). The CIRAN project also investigates inclusion and knowledge co-creation with the aim to define/improve standards for mining activities in environmentally protected areas.

6.5.1 Forms of Engagement

Consultations play an important role in ensuring that all concerned parties have access to relevant information, as required under the Aarhus Convention (UN, 1998), facilitating third party and environmental NGOs' rights to input into the process. Sharing information is also good practice and essential for a successful SLO process (Tost et al., 2021).

Statutory Consultation

The country profiles and case-studies (Luodes et al., 2024) indicate that there are statutory consultations in relation to the designation of protected areas and in the formulation of spatial land use plans as well as mineral plans. As the spatial locations of the mineral deposits are fixed and the environmental designations are determined by the value of the baseline environments, much of the consultation will relate to shared use, exclusions, and mineral prioritisation as in Finland, Austria and England.

In addition, the permitting process for most of the consents involved some of the issues of legal fairness and procedures that have been highlighted in the preceding sections. Any streamlining of permitting processes will also need to have due regard to the streamlining of consultation procedures. It remains to be seen, how stakeholders will react to this streamlining mandated by the CRMA in the view of the ethical dilemmas posed for some by increased raw materials needs caused by the imperative to reduce the use of fossil fuels.

Education and Information

Notwithstanding the statutory consultation procedures on plans and strategies, on a regional and local level, the understanding of the importance of CRMs due to the nexus between decarbonising our economies, maintaining economic development and ensuring security of their supply is often not present. For example, not all citizens may understand the direct connection between a CRM mine and reduction in fossil fuel use. However, this understanding is a basis for societal acceptability. The first step is a participatory process in which robust and independent information is provided. While all relevant promoters of a project or resource exploitation can have a role to play in this dissemination, active participation by public bodies can lend a high level of independence and objectivity to the process.

Open Ended Engagement During Plan-Making

Stakeholder participation is most successful if it is done at an early stage and prior to a draft plan being put on display. Early engagement, often on a non-statutory basis can assist in building an understanding of the issues and concerns prior to the preparation or drafting of policy documents. It must however be acknowledged that on occasion, it is challenging to engage local stakeholder and communities directly affected during this stage of the process. A lack of engagement at this stage entails the risk that challenges and resistance are stored up and may/will surface during the permitting stage for an individual project. It is common in such processes (and not only in the minerals sector) that concerns are only voiced when a perceived threat is imminent.

At this early stage, any significant compensatory measures can be examined and brought forward as may be demanded by stakeholders. If, for example, it is the case that potential significant effects upon a Natura 2000 site cannot be ruled out, compensatory habitats may be considered as part of spatial or mineral plans.

Participation at Project Planning Stage

The planning of individual projects is the stage which benefits significantly from early engagement with all relevant stakeholders. However, engagement with local stakeholders can and should start well before this, namely during the exploration stage. Mining companies are active in local communities and there is the opportunity to build relationships with key community leaders, groups, and potentially influential individuals prior to any decision to progress to the extraction permitting stage is taken. The practice of non-statutory engagement and consultation by the mining companies is common in all jurisdictions, but is extensive in Austria, Sweden and Norway. It is less extensive in France and Ireland, which in the case of the latter may be explained by the fact that nearly all mining activity relates to the exploration stage with limited environmental effects. Typical public consultation plans in the UK include public exhibitions, provision of a website, community liaison officer, community forum to include local community groups. These measures are additional to the statutory consultations required for the permitting stage itself. It should be noted that Article 6(1)(d) of the CRMA now requires a promoter of an SP to prepare a plan for submission to the Commission containing measures to facilitate public acceptance including, where appropriate, the establishment of recurrent communication channels with the local communities and organisations, including social partners, the implementation of awareness-raising and information campaigns and the establishment of mitigation and compensation mechanisms.

6.5.2 Securing Stakeholder Acceptance

While statutory consultations and non-statutory engagement and participation, such as those detailed above are important, a review of literature and an examination of other sectors suggest that allowing community groups and NGOs to have a stake in a project contributes to its societal acceptability. There are different ways in which such models can be integrated into the statutory framework of individual MSs.

Corporate Social Responsibility (CSR)

The definition of CSR is wide ranging and has evolved over time. Although there is no specific definition of CSR for the mining industry, in general, it is defined as the commitment of a company regarding the environment and society and to provide local communities with benefits, mainly on a voluntary basis (Abuya, 2016; Slack, 2012). This action, however, is undertaken on the part of individual mining companies rather than mandated by regulators. Some regulatory regimes require mandatory community benefit programmes that can also assist in building stakeholder acceptance. CRM projects are likely to have to comply with the proposal for a *Directive on Corporate Sustainable Due Diligence* (CSDD), which seeks to ensure that large developments, adequately address human rights and environmental impacts due to their own operations and value chains. CSDD does not develop the requirement to produce information on the environmental footprint of critical raw materials which could promote greater social acceptance of CRM projects.

Community Benefits

Financial gains can be obtained through taxation, levies or fees for mining concessions and all can assist in fostering societal support. Taxes and levies at the national level may not be as successful at securing local stakeholder and community support. Tailored mechanisms at the local level, which are specifically targeted to local needs are those that are most beneficial. There is a mix of statutory and non-statutory community benefit programmes in Austria, Portugal and England, while other jurisdictions rely on statutory systems for collecting funds for local benefit, as for example in Ireland. This is integrated into the permitting requirements, with a commitment required up front to provide financial support for specific communities or community projects. Funds for infrastructure investment (e.g. in roads or rail) which are required to serve mining projects may also benefit local communities, but these are often seen as necessary infrastructural upgrades/maintenance to service the developments proposed.

Examples of other community gain programmes include training and employment opportunities for those in the local communities. Other typical actions are voluntary contributions to local sporting clubs and amenities. These constitute ongoing commitments, but are usually discretionary on the part of the mining companies. Consideration may be given to putting these initiatives onto a statutory footing and integrating them more effectively into the regulatory regimes of the MSs. Requirements to prepare community and stakeholder engagement reports for permitting purposes, as for example, in Portugal assists in integrating community and stakeholder engagement into the statutory processes. The community report may set out how the project's development will affect the local community and how local community participation will be assured throughout the project's lifetime.

The renewable energy sector has developed extensive experience of statutory community gain funds that may be considered in the context of mineral development and in particular CRMs (Energy Transmission Commission, 2023). One may add, that in general communities appreciate when senior and upper management reside in the community. In this sense, management wears the hat of the mine and that of the community, so that they profit as individuals themselves of community benefit programmes. These agreements are often referred to as benefit-sharing agreements, local-level agreements and community development agreements. They can relate to a wide range of matters, including compensation, revenue sharing education, employment, consultation, environmental compensation measures, and social and cultural heritage impacts (Kung et al., 2022).

Shared Ownership and Monetary Compensation

The formal adoption by states of major international instruments, such as the United Nations Declaration on the Rights of Indigenous Peoples A/RES/61/295 (UNDRIP) and the voluntary adoption by states and business of the UN Guiding Principles on Business and Human Rights (UN, 2011) has catalysed (voluntary) industry standards that have shaped the relationship between mining and indigenous peoples globally. One element in rethinking relationships has been to provide stakeholders with the opportunity to acquire equity in the operation, either as a community or individually. However, these shared or co-ownership models were mainly put in place in areas with a significant number of indigenous people and mainly in developing and emerging economies (Kung et al., 2022), although they have also featured also in Canada, New Zealand and Australia. Conversely, engagement with the Sámi in Norway, Finland and Sweden has principally been in relation to conflict resolution and none of the regulatory regimes examined foresaw shared ownership models.

A basic model is comprised of the community entity holding shares in a company and as a shareholder participating in the business by contributing funds, sharing profits, risking losses and voting in general meetings. Other models are utilised in the renewable energy sector, wherein Danish operators, for instance, are obliged to pay neighbours/communities an annual bonus corresponding to a specified part of the capacity of the plant.

6.5.3 Impact of Project Type and Stage on Stakeholder Engagement

Brownfield mines involving expansion of existing mines, or the reopening of older mines, generally have a better experience of engagement with key local stakeholders, which includes communities directly engaged in mining or receiving other benefits (e.g. the tungsten Mina de Barruecopardo in Spain and Hemerdon mine in England). However, for new mining projects on greenfield sites, or even those at the exploration stage, there can be greater challenges in securing acceptance owing in part of the fear of the unknown, or the lack of any experience of mining within local areas and their actual impacts upon local amenities, communities and nature areas.

6.6 IT, Spatial Data, Reporting & Expertise

The availability and management of data is key to an evidence-based approach to resource identification, quantification and spatial planning. The use of information and communications technology and digital tools will be key to managing these requirements in addition to facilitating online management of permits and application processes.

6.6.1 Spatial Data

Article 18 of the CRMA requires the implementation of national exploration programmes for CRMs, which need to be updated every 5 years, in order to increase the available information on their occurrences across the EU. This should include measures to display data on scalable maps, based on data gathered through new exploration, predicative mapping, and re-processing of existing survey data. The ORAMA project on optimizing the quality of information on CRM highlighted the challenges posed by primary raw materials related to data availability, geographical coverage, accessibility, harmonisation, interoperability, quality, and thematic coverage. The reporting of primary mineral resources and reserves statistics is currently carried out by a wide variety of systems, standards or codes that are not directly comparable (Wagner et al., 2019). This is also reflected by the assessment undertaken for this report on the different systems used for classification.

ORAMA recommended the adoption of the UNFC which is also put forward by the CRMA. This was deemed to fit within the framework of the INSPIRE compliant data service. The UNFC not only takes into account sustainable resource management having regard to geological knowledge and raw materials potential, but also environmental and societal conditions. This data and evidence base, therefore, has the potential to not only support resource identification, but to also facilitate the integration of this information into the formal spatial and mineral planning frameworks, thus supporting efficient decision-making at the planning stage and during permitting processes. Templates for information required will be prepared pursuant to the CRMA. Although bridging documents between different resource reporting codes and UNFC are available (UNECE, 2024), this will present challenges for the national geological surveys and statistical offices, who have to adapt their current data collection, management and reporting requirements.

Digital tools for spatial planning purposes have been developed in MSs, but the extent and use differ on a national, regional and local level. Interoperability with other digital tools, including those that could be developed for CRM purposes, is key to integrating them for the purposes of spatial planning, where early consideration of the overlap with protected areas can be given and various techniques for weighting of different environmental constraints can be utilised. Interoperability of tools is important on two levels. Nationally, interoperability of tools would allow comprehensive CRM planning to take land use and environmental constraints into account. At a European level, interoperability of tools would allow, at Union level, for a comprehensive understanding of resources and their status. This in turn, can inform supply chain planning at a macro-level.

6.6.2 Common IT Platforms for Permitting

Use of online systems for the permitting process is also a key consideration with a view to streamlining processes and decision-making. Article 17 of the CRMA requires MSs to provide the information on administrative permitting processes relevant to CRM projects online and in a centralised and easily accessible manner. This relates to CRMs in general. Article 8(4) indicates that project promoters should be allowed to submit all documents relevant to the permit granting process in electronic form. Online platforms can be used to facilitate statutory consultations and exchange of application information with relevant authorities, which include for example, those responsible for providing input into decisions that affect protected areas. However, the preamble to the CRMA states that Regulation (EU) 2018/1724 (EU, 2018b) will apply: "*In particular, it should be ensured that project promoters of Strategic Project can access and complete any procedure related to the permit granting process fully online, in line with Article 6(1) of and Annex II to Regulation (EU) 2018/1724"* (para. 23). This Regulation applies to all permits, but from the information obtained for this report, only Belgium appears to have developed systems which fully comply with this requirement. Furthermore, the review of countries' systems indicates that on average, 3.3 permits are required for the extraction stage. Coordination and implementation of online application submissions for multiple applications to different authorities will be a challenge for MSs.

Common platforms for online submissions will be a key feature of the One-Stop-Shops. The volume of permits relating to CRM applications and in particular to strategic projects will be quite low in most MSs, in comparison to the permitting volumes for all other classes and types of development which must be catered

for. MSs will have to further consider how these requirements align with their broader systems of permitting that deal with large volumes of applications under the same legislation and frameworks.

6.6.3 Skills in Industry and Competent Authorities

It will be necessary for MSs to develop the relevant expertise to implement specific tasks required for both CRM extraction and processing, but also to ensure the appropriate protection of the environment. Capacity and expertise will need to be enhanced where necessary, or existing resources appropriately utilised by promoters, competent authorities, and civil society groups.

Owing to the decline of mining in most European countries, the skills base has been greatly eroded over the past decades together with the capacity to constantly replenish that skills base, referring to the fact that mining, mineral processing and related departments have been closed in many (technical) universities. This not only affects the industry itself, but also the competent authorities, who need to be staffed at an appropriate level with people, who have the necessary knowledge and skills to responsibly carry out permitting procedures. Rebuilding this skillset in support of the ambitions of the CRMS will take years, if not decades. In order to convince school-leavers that there is future (in Europe) in mining-related professions the capacities in existing university departments need to be rapidly rebuilt, perhaps by attracting additional faculty from outside Europe. Industry can enhance their skillset in the short-term by attracting qualified engineers and scientists from abroad. This is more difficult for national competent authorities due to language and (administrative) cultural barriers.

As noted before, an important skills and responsible permitting issue is that in many MSs mining regulators have been subsumed into environmental regulators, where often mining experts have not been replaced after retirement. Staff members with a background in environmental sciences or related subjects then put in charge of permitting procedures may consider it as their task to prevent mining, rather than to ensure that it is done responsibly and to the highest standards. Even if the administrative structures, MSs will have to ensure that the responsible departments are adequately staffed.

7 Conclusions

This report carried out a cross-sectoral appraisal to understand how the CIRAN countries approach the balancing of environmental and mining interests. It found that most of the countries were applying a balanced approach to reconciling mining and environmental protection, although there may be some that moderately favour environmental protection. This means that in appearance, most CIRAN countries have fit-for-purpose regulatory frameworks. This may not be the case if all MSs were reviewed, however.

The previous sections provided an overview of the existing regulatory framework, highlighting existing requirements while also introducing those of newer legislation, specifically the CRMA and the Nature Restoration Law. As of the first half of 2024, no countries have yet applied the requirements of the CRMA and have also not been required to apply those derived from the Nature Restoration Law (PE-CONS 74/23). Some countries may have taken steps ahead of the entry in force, such as adopting UNFC reporting, but generally all MS will need to consider the respective requirements and adopt them into their own national framework.

The report includes a series of bow-tie diagrams which show how some countries have simpler legal frameworks, with fewer pieces of legislation influencing the lifecycle of CRM projects and how some have clear hierarchical coherence. What the bow-ties do not show are the less tangible aspects of political support and societal acceptability, which are undeniable factors in how successful a project might be.

As a conclusion to this report, it is questioned whether the need to apply new requirements will offset the delicate balance, where it exists, between mining, especially for CRMs, and environmental protection. This report considers that it is likely that pressure points will be exacerbated over the coming years, with increasing requirements to search, identify and mine CRMs, but also to protect environmentally sensitive sites if regulatory frameworks are to remain the same. In particular, the following issues were considered:

- Governance frameworks.
- Resource identification, spatial planning and designation.
- Streamlining of administrative procedures.
- Stakeholder engagement and societal acceptability.
- IT systems, spatial data, reporting and expertise.

There are specific areas which will require improvement in any event, if the European Union is to pursue CRM projects. Existing permitting processes in certain countries can be lengthy and riddled with risks for potential mining projects. These risks are, in part, derived from overly complex procedures, a lack of political support, and importantly lack of societal acceptability of such projects. The issue of acceptability is not a new issue for the mining industry but appears more prominent when combined with environmentally sensitive areas.

This report will provide input to other work carried out as part of CIRAN, specifically work focused on best practice in permitting procedures undertaken as a part of Work Package 2 and on efficient policymaking as part of Work Package 6. Importantly, it shows the areas on which to focus to allow for streamlining of the cross-sectoral policy framework as envisaged under this Coordination and Support Action.

Appendix I - Provisions of Regulation (EU) 2024/1252 (Critical Raw Materials Act)

Article	Summary of Provisions – Relevant D3.1 provisions elaborated
Chapter 1 – General Provisions	
1	The general objective is to establish a framework to ensure the Union's access to a secure, resilient and sustainable supply of critical raw materials by lowering risk of supply, monitoring and mitigating risk and ensuring free movement of CRMs.
2	Provides definitions. The raw materials value chain means all activities and processes involved in the *exploration*, *extraction, processing* and *recycling* of raw materials. Permit-granting process' means a process covering all relevant permits to build and operate a critical raw material project, and assessments, and procedures from the acknowledgment that the application is complete to the notification decision.
Chapter 2 – Strategic and Critical Raw Materials	
3-4	Establishes lists of strategic raw materials (SRMs) and CRMs. SRMs include CRMs and are recognised as a higher level of importance. Lists will be updated every 3 years.
Chapter 3 – Strengthening the Union Raw Materials Value Chain	
5	By 2030, the Union's extraction capacity should be able to produce at least 10% of the Union's annual consumption of SRM. The Union should also be able to reach a processing capacity (including all intermediate steps) of 40% and a recycling capacity of at least 25%.
6	The concept of Strategic Projects is established. They are projects: • that would make a meaningful contribution to the security of the Union's supply of SRM; • are or will become technically feasible within a reasonable timeframe and in which there is sufficient levels of confidence in the expected production volume; • can be implemented sustainably, particularly as regards 'the monitoring, prevention and minimisation of environmental impacts, the use of socially responsible practices, including respect of human and labour rights, quality job potential and meaningful engagement with local communities and relevant social partners, and the use of transparent business practices with adequate compliance policies to prevent and minimise risks of adverse impacts on the proper functioning of public administration, including corruption and bribery.'
7	The article sets out the process for the application and recognition of Strategic Projects. The promoter will submit the application to the Commission and will include, inter alia, a business plan, a public acceptance plan, and resource identification, and for extraction projects a rehabilitation plan. A template will be produced and the Commission will take into account the opinion of the Board established under the Act and issue a decision within 90 days.
8	Sets out reporting obligations of MSs, including progress on permit granting procedures.
9	This article establishes a requirement for a single point of contact. This means that:

Article	Summary of Provisions – Relevant D3.1 provisions elaborated
	• This authority will be responsible for facilitating and coordinating the permit-granting process for CRM projects. • It shall act as the sole point of contact for the project promoter in the permit processes. • Project promoters shall also be allowed to submit all documents relevant to the permitting process in electronic form. • Facilitate dispute resolution where they concern the permitting process. • This authority shall be adequately staffed and resourced, including financially, technologically and technically.
10	When a project is designated as a Strategic Project, it is considered to be of 'public interest or serving public health and safety, and may be considered as having an overriding public interest' so long that the conditions in the Habitats Directive, WFD and Birds Directive are met. The MS where the project is located shall then ensure the taking of measures for an efficient and timely delivery. The project promoter shall create and maintain a public website providing regular updates and information on the environmental, social and economic impacts.
11	This article sets out the duration of the permit granting process as follows: • 27 months for Strategic Projects involving extraction. This can be extended by three months in exceptional circumstances. This is reduced to 21 months for projects which have entered the process prior to the designation as a Strategic Project. • 15 months for Strategic Projects involving only processing or recycling. This can be extended by one month in exceptional circumstances. Other timeframes are set out and the role of the single point of contact is established in the permit granting process, particularly in relation to processing of applications by other relevant competent authorities. Timeframes for further information requests are set out.
12	This article is focused on environmental assessment and authorisations. In particular, the single point of contact shall seek a scoping opinion from the competent authority within a period of 30 days. It also requires that assessments required under the Habitats, Water, Waste, Birds, Industrial Emissions, EIA and SEVESO directives be undertaken in a joint or coordinated manner. The national competent authority shall coordinate the various individual assessments. Under a joint procedure, a single environmental assessment under all relevant EU legislation shall be carried out by the competent authority and then issue a decision on the assessment within three months. It also caps public consultation to not more than 90 days. Under a coordinated procedure, the competent authority shall coordinate the relevant assessments under EU legislation.
13	In particular, this article relating to planning, requires that MSs should ensure the national, regional and local authorities in charge of the preparation of plans, including zoning, spatial plans and land use plans include provisions for CRM with priority given to 'artificial and built surfaces, industrial sites, brownfield sites, and where appropriate planning, greenfield sites not usable for agriculture and forestry'. It also requires that such plans also use combined assessments under the Habitats and Strategic Environmental Assessment (SEA) Directive. Those should, where relevant, address the impact on potentially affected water bodies and verify whether the plan would cause the deterioration of the status or would hamper the achievement of good status or good potential. The requirements of the Marine Strategy Framework Directive (MSFD) also apply, including land-sea interactions as referred to in the Maritime Spatial Planning (MSP) Directives.

Article	Summary of Provisions – Relevant D3.1 provisions elaborated
14	Applies the provisions of the Aarhus Convention.
15-17	These articles make provisions for accelerating strategic projects, coordination of financing and facilitating offtake agreements.
18	Relates to the online availability of information on administrative processes, including permit granting procedures.
19	Requires that each MS prepares a national exploration programme for the general exploration of CRM within a year of the entry in force of the regulation. The aim of these programmes is to increase the availability of information relating to CRM. The information should include the UNFC for resources where available.
Chapter 4 – Risk Monitoring and Mitigation	
20	The article requires monitoring and stress testing in relation to trade flows, supply and demand and the concentration of supply; and production and production capacities at the different stages of the value chain at Union and global levels. The result of the stress test, which includes the availability of supply or of an alternative supply, shall be made freely available.
21	There is a requirement to monitor and report utilising the UNFC classification.
22-23	Makes provisions for report and coordination of strategic stocks.
24-25	These articles set out provisions in relation to joint purchasing and company risk procedures.
Chapter 5 – Sustainability	
26-29	Provisions are made in relation to national measures on circularity, recovery of CRMs from extraction waste, and recycling of magnets.
30-31	Covers certification of environmental footprints throughout the lifecycle stages of a project in accordance with certain criteria.
32-34	These articles relate to free movement, conformity and market surveillance and harmonisation with EU legislation.
Chapter 6 – Governance	
35-36	Establishes the European Critical Raw Materials Board and confirms its composition, role and functions
37	Sets up mechanisms for international cooperation and strategic partnerships.
Chapter 7 – Delegated Powers and Committee Procedure	
38-39	Empowers the Commission to adopt delegated acts and establishes relevant committee procedures
Chapter 8 – Amendments	
40-43	Provides for amendments to other regulations.
Chapter 9 – Final Provisions	
44-49	These articles relate to monitoring, reporting, confidential information, penalties, evaluation and commencement.

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