ERA•MIN 3

RAW MATERIALS
FOR THE SUSTAINABLE DEVELOPMENT
AND THE CIRCULAR ECONOMY

ERA-MIN3
2020-2025

Continue strengthening the mineral raw materials community through the coordination of research and innovation programmes on non-fuel and non-food raw materials (metallic, construction, and industrial minerals).

Deliverable 7.2

List of funded ERA-MIN and ERA-MIN 2 projects

(Public Report)

Date: 30th April 2022

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E R A•M I N 3

RAW MATERIALS FOR THE SUSTAINABLE DEVELOPMENT AND THE CIRCULAR ECONOMY

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List of funded ERA-MIN and ERA-MIN 2 projects

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ERA-MIN3 comprises a progressive, innovative and flexible pan-European network of 24 public research funding organisations from 15 EU MS countries (BNSF – Bulgaria; TA CR – Czech Republic; Business Finland – Finland; ETAg – Estonia; ADEME – France; ANR – France; JÜLICH – Germany; GSI – Ireland; MUR – Italy; NCBR – Poland; FCT – Portugal; UEFISCDI – Romania; CDTI – Spain; AEI – Spain; SAS – Slovakia; MIZS – Slovenia; Vinnova – Sweden), 3 EU MS regions (Hermesfond – Belgium/Flanders; FWO – Belgium/Flanders; SPW – Belgium/Wallonia; CFNA – Spain/Navarra), one EU Associated country (TUBITAK – Turkey), and two non-EU countries (PRIMA-Québec- Canada; DSI - South Africa).

Built on the experience of the EU project ERA-MIN (2011-2015) and ERA-MIN 2 (2016-2021), **ERA-MIN3** aims to support the objectives of the European Innovation Partnership on Raw Materials (EIP RM), the EU Raw Materials Initiative and further develop the raw materials (RM) sector in Europe through funding of transnational research and innovation (R&I) activities, fully aligned with initiatives to support the EU's transition to a Circular Economy in many fields, such as the Circular Economy Action plan, the Battery Action Plan, and the European Green Deal, by moreover answering to the United Nations Sustainable Development Goals. This will be achieved through one EU co-funded call for R&I proposals in 2021, one additional call in 2023 and a potential third one, designed and developed specifically for the non-fuel, non-food raw materials sector.

ERA-MIN3 scope of the joint transnational calls is needs-driven research on non-fuel, non-food raw materials (metallic, construction and industrial minerals) that clearly demonstrate potential to promote the sustainable and responsible supply, exploration, extraction, processing technologies, production, consumption and recycling of primary and secondary minerals and metals, as well as substitution of critical raw materials, in a circular economy. There is a focus on resource efficient production and recycling that has low environmental impact and is economically feasible in the short-term. A crucial challenge is to consider societal impact and public perception, health and safety issues related to the different stages of the whole raw materials value chain. New business models and digital technologies will be crucial for transferring research results to the market.

Publishable summary:

The present document contains the list of all funded projects under ERA-MIN and ERA-MIN2 calls divided in four different categories as established in the ERA-MIN Research Agenda. It also includes further categorisations based on the Mineral Category considering the definitions of the Strategic Implementation Plan of the European Innovation Partnership on Raw Materials and additional keywords based on further characteristics of the projects, such as the specific areas, used techniques and methodologies, or materials.

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1 INTRODUCTION

The core ERA-MIN consortium was created in 2011 for the first EU funded project ERA-MIN, followed by an expansion to new funding organisations for ERA-MIN 2 and now ERA-MIN3. In total, 7 Joint Transnational Calls have been gradually launched in the years 2013, 2014 and 2015 (under ERA-MIN), 2017, 2018 and 2019 (under ERA-MIN 2) and 2021 (under ERA-MIN3). Under the first six calls, a total of 57 projects were funded with a budget of €42 M.

These projects cover a wide range of different areas, fields of expertise, and of topics which have been changing and evolving from call to call. However, at the core of the structure planning of every ERA-MIN call, the *ERA-MIN Research Agenda* has been considered as the backbone to define the thematic priorities. Thus, in order to classify the different projects across all calls, it was decided to use the *ERA-MIN Research Agenda* categories, expanding the 4th category to cover broader aspects introduced in later calls, establishing the following 4 categories:

- Primary resources supply;
- Secondary resources supply (Recycling);
- Substitution of critical materials;
- Others (Design, public policy and circularity).

Besides this main categorisation, further classification has been used to specify the type of materials considered in each project. For this the Strategic Implementation Plan of the European Innovation Partnership on Raw Materials has been considered to define the following 3 classifications:

- Ores and metals;
- Industrial minerals;
- Construction materials.

Finally, a more granular selection of keywords has been assigned to each project considering other relevant aspects such as: the subtopics, the concrete elements or materials being researched in each project, or the main techniques/methodologies being used.

Following the above-described methodology, the funded projects under all the calls of ERA-MIN and ERA-MIN2 were categorised. The final list of projects per category is presented in the following section.

Additionally, all these results have been integrated into an interactive Dashboard that is available on the ERA-MIN website, which allows for a detailed and user-friendly analysis of the statistical distribution of the project by all these different categories, as summarized at the end of this deliverable.

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2 ERA-MIN AND ERA-MIN 2 PROJECTS PER CATEGORIES

Primary Resources Supply

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2013	CELMIN	Utilisation of green chemicals in non/energy extractive industries: Preparation of modified nanofibrillar celluloses (NFC) for flotation, flocculation and dewatering, and water purification in mining industry	Finland (Business Finland), Romania (UEFISCDI), Portugal (FCT)	University of Oulu	None	Extraction, Green Chemicals, Mine rehabilitation
2013	GEOSULF	Utilization of sulphide mine tailings in geopolymer materials	Finland (Business Finland), Poland (NCBR), Portugal (FCT)	University of Oulu	Industrial minerals	Sulphide, Gold, Silver, Mine rehabilitation
2013	MAXI	Mineral Analysis using X-ray Imaging	Finland (Business Finland), Romania (UEFISCDI), Sweden (Vinnnova)	Teknologian tutkimuskeskus VTT	None	Mineral processing, X-ray
2013	SUSMIN	Tools for sustainable gold mining in EU	Finland (Business Finland), Romania (UEFISCDI), and Sweden (Vinnova), Poland (NCBR), Portugal (FCT)	Geological Survey of Finland	Ores and metals	Extraction, Gold, Sustainable Mining

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2014	BOFLUX	Characterisation of the impact, boron addition has on the physical and smelting properties of chromite slag	South Africa (DST), Finland (Business Finland)	Mintek	Ores and metals	Extraction, Boron, Chromium, Mineral Processing
2014	NewOres	Development of New models for the genesis of Rare Metal (W, Nb, Ta, Li) Ore deposits from the European Variscan Belt and valorization of low grade and fine grained ore and mine tailings	France (ANR), Portugal (FCT)	Université de Lorraine	Ores and metals	Exploration, Extraction, Tungsten, Tin, Lithium, Niobium, Tantalum, Mineral Processing
2014	StartGeoDelineation	State-of-the-art geophysical and geological methods for delineation of mineral deposits and their associated structures	Sweden (Vinnova), Finland (Business Finland)	Uppsala University	Ores and metals	Exploration, Iron, Rare Earth

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2015	HITEM	Highly sensitive receiver for measuring transient electromagnetic responses in Exploration for deep buried mineral occurrences	Germany (JUELICH) South Africa (DST), Finland (Business Finland)	Supracon AG	Ores and metals	Exploration, TEM, Precious metals, Platinum
2015	COGITO-MIN	COst-effective Geophysical Imaging Techniques for supporting Ongoing MINeral exploration in Europe	Finland (Business Finland), Poland (NCBR)	University of Helsinki	None	Exploration, Imaging, Characterisation
2015	REMinE	Improve Resource Efficiency and Minimize Environmental Footprint	Romania (UEFISCDI), Sweden (Vinnova), Portugal (FCT)	Luleå University of technology	None	Mine rehabilitation, Extraction, Mineral Processing

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2017	AMTEG	Advanced Magnetic full TEnsor Gradiometer instrument	Germany (JUELICH) Sweden (Vinnova), Spain (CDTI)	Supracon AG	Ores and metals	Exploration, Magnet, Iron
2017	LIGHTS	Lightweight Integrated Ground and Airborne Hyperspectral Topological Solution	France (ANR), Portugal (FCT), Germany (JUELICH)	Université de Lorraine	Ores and metals	Exploration, Drones, batteries, Lithium
2017	Gold_Insight	Tracing Gold-Copper-Zinc with advanced microanalysis	Ireland (GSI), Sweden (Vinnova	Trinity College Dublin	Ores and metals	Exploration, Gold, Copper, Zinc, Microchemical analysis
2017	REWO-SORT	Reduction of Energy and Water consumption of mining Operations by fusion of sorting technologies LIBS and ME-XRT	Germany (JUELICH), Chile (ANID), Sweden (Vinnova)	Fraunhofer Gesellschaft	Ores and metals	Exploration, X-Ray, Laser, Copper,

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2018	MIWACUT	Investigating the microwave assisted cutting of carbonate rocks	Turkey (TUBITAK), Romania (UEFISCDI)	Hacettepe University	Industrial minerals	Extraction, Carbonate, Microwave
2018	AUREOLE	tArgeting eU cRitical mEtals (Sb, W) and predictibility of Sb-As-Hg envirOnmentaL issuEs	France (ANR) Spain (AEI), Portugal (FCT)	Bureau de Recherches Géologiques et Minières	Ores and metals	Exploration, Antimony, Tungsten, batteries, data-driven research
2019	nanoBT	Application of nano-bubble technologies to mining industry operations	Greece (GSRT), South Africa (DST), Canada (FRNQT)	Technical University of Crete	Ores and metals	Extraction, nano-bubles, Green chemistry
2019	MOSTMEG	Predictive models for strategic metal rich, granite-related ore systems based on mineral and geochemical fingerprints and footprints	Portugal (FCT), France (ANR)	Faculdade de Ciências da Universidade de Lisboa	Ores and metals	Exploration, data-driven research, Antimony, Tungsten
2019	D-Rex	Deposit-to-Regional Scale Exploration	Sweden (Vinnova), Finland (Business Finland), Czech Republic (TACR), Slovakia (SAS)	Luleå University of Technology	Ores and metals	Exploration, data-driven research, geophysics

Secondary Resources Supply (Recycling)

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2014	AMDREY	Extraction of Rare Earth Elements from Acid Mine Drainage	Spain (AEI), France (ADEME), South Africa (DST), Finland (Business Finland)	Agencia Estatal Consejo Superior de Investigaciones Científicas	Ores and metals	Extraction, Rare Earth, Yttrium
2014	ENVIREE	ENVIronmentally friendly and efficient methods for extraction of Rare Earth Elements from secondary sources	Sweden (Vinnova), Poland (NCBR), Romania (UEFISCDI), Portugal (FCT), France (ADEME), South Africa (DST),	Chalmers University of Technology	Ores and metals	Extraction, Recycling, Rare Earth, Mineral Processing
2014	EXTRAVAN	Innovative extraction and management of vanadium from high vanadium iron concentrate and steel slags	Sweden (Vinnova), Finland (Business Finland), France (ADEME)	MEFOS	Ores and metals	Extraction, Recycling, Vanadium, Steel, Mineral Processing

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2015	BIOCriticalMetals	Recognition of microbial functional communities and assessment of the mineralizing potential (bioleaching) for high-tech critical metals	Portugal (FCT), Romania (UEFISCDI), Argentina (MINCyT)	University of Coimbra	Industrial minerals	Extraction, Mine rehabilitation, Mineral Processing, Indium, Gallium, Tellerium, Tungsten
2015	BATRE-ARES	Battery Recycling – Achieving Rare Earth Separation	France (ADEME), Portugal (FCT)	LEPMI (CNRS Délégation Alpes)	Ores and metals	Recycling, Battery, Rare Earth, Yttrium
2017	MaXycle	Circular economy, magnet recycling, NdFeB magnets, end-of-life magnets, Eco-labelling	Slovenia (MIZS), Germany (JUELICH), Sweden (Vinnova)	Jozef Stefan Institute	Ores and metals	Recycling, Magnet, Rare Earth
2017	BIOMIMIC	Innovative biotechnological methods for effective mining of secondary material	Sweden (Vinnova), Germany (JUELICH), Ireland (GSI)	Research Institutes of Sweden	Ores and metals	Recovery, End-of-life, Aluminium, Biotechnology
2017	RecEOL	Recycling of End-of-Life Products (PCB, ASR, LCD)	Ireland (GSI) Belgium (Hermesfonds /VLAIO), Germany (JUELICH), Spain (CDTI)	University College Cork / Environmental Research Institute	Ores and metals	Recycling, WEEE, Indium, Tantalum
2017	INSTanT	INNOVATIVE SENSOR TECHNOLOGY FOR OPTIMIZED MATERIAL RECOVERY FROM BOTTOM ASH TREATMENT	Belgium (Hermesfonds /VLAIO), Germany (JUELICH)	Vlaamse Instelling voor Technologisch Onderzoek	Construction materials	Recycling, End-of-life, bottom ash, construction

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2017	Li+WATER	Membrane electrolysis for resource-efficient lithium and water recovery from brines	Argentina (MINCYT), Belgium (FWO), Sweden (Vinnova)	Universidad Nacional de Jujuy	Ores and metals	Recovery, Lithium, batteries,
2017	FLOW	Lightweight alkali activated composite foams based on secondary raw materials	Slovenia (MIZS), Finland (Business Finland), Italy (MIUR)	Slovenian National Building and Civil Engineering Institute	Industrial minerals	Recycling, aluminosilicates, alkaline activation
2017	BASH-TREAT	Optimization of bottom ash treatment for an improved recovery of valuable fractions	Germany (JUELICH), Italy (MIUR), Sweden (Vinnova)	Hamburg University of Technology	Construction materials	Processing, bottom ash, data-driven research
2017	Deasphor	Design of a product for SUBSTITUTION of phosphate rocks	Portugal (FCT), Brazil (Finep), Italy (MIUR), Poland (NCBR), Romania (UEFISCDI), Sweden (Vinnova), Turkey (TUBITAK), France (ADEME)	Faculty of Sciences of Porto University	Industrial minerals	Recycling, Substitution, Phosphorous
2017	MINTECO	Integrated eco-technology for a selective recovery of base and precious metals in Cu and Pb mining by-products	France (ANR), Romania (UEFISCDI), Turkey (TUBITAK), Romania (UEFISCDI), Poland (NCBR)	The French Geological Survey	Ores and metals	Recovery, Copper, Lead, Zinc, Gold, Silver,
2017	SUPERMET	Recovery of Precious Metals from Spent Catalysts by Supercritical CO2 Extraction Assisted by Polymers	France (ANR and ADEME), Romania (UEFISCDI), Germany (JUELICH)	Ecole Nationale Supérieure de Chimie de Montpellier	Ores and metals	Recovery, Precious Metals, supercritical CO2

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2017	MetRecycle	Recycling of metals using functionalized magnetic nanoparticles (FMNP)	Slovenia (MIZS), Sweden (Vinnova), Argentina (MINCYT), France (ANR)	Institute for Environmental Protection and Sensors (IOS) Ltd	Ores and metals	Recycling, Rare Earth, Magnet, Heavy Rare Earth,
2018	Sb-RECMEMTEC	Electro-electrodialysis technology on the copper minerals processing industry to the recovery of antimony from mining tailings and recycling the solution media	France (ANR), Brazil (Finep), Chile (ANID), Spain (AEI)	Universidade Federal do Rio Grande do Sul	Ores and metals	Recovery, Copper, Antimony, Membrane separation
2018	MiCCuR	Microbial Consortia for enhanced Copper Recovery	Sweden (Vinnova), Germany (BMBF), Chile (ANID), South Africa (DST)	Linnaeus University	Ores and metals	Recovery, Copper, Biotechnology
2018	RedOxRec	Reduction/ Oxidation Recycling	Germany (BMBF), Belgium (FWO), Slovenia (MIZS), Italy (Calabria Regione)	Robert Bosch GmbH	Ores and metals	Recycling, End-of-life, hydrometallurgy, LCA
2018	NEXT-LIB	Novel Circular Economic Approaches for Efficient Extraction of Valuables from Spend Li-Ion Batteries	Sweden (Vinnova), France (ADEME), Finland (Business Finland), Portugal (FCT)	Swerim AB	Industrial minerals	Recovery, Lithium, Graphite, batteries,
2018	Siderec	Siderophores assisted Biorecovery of Technology Critical Elements: Gallium (Ga), germanium (Ge) and indium (In) from end-of-life products	France (ANR), Chile (ANID), Germany (BMBF)	Institut de Physique du Globe de Paris	Industrial minerals	Recycling, Germanium, Indium, Gallium. End-of-life

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2018	LIMEX	Innovative Membrane Extraction of Lithium for Spent Lithium-Ion Battery Recycling	France (ANR and ADEME), Portugal (FCT), Sweden (Vinnova)	CNRS	Ores and metals	Recovery, Lithium, batteries, End-of-life
2018	RECEMENT	Re-generating (raw) materials and end-of-life products for re-use in Cement/Concrete	Turkey (TUBITAK), Romania (UEFISCDI), Slovenia (MIZS)	Sabanci University	Construction materials	Recovery, Cement, Concrete, End-of-life,
2018	LICOBAT	LIthium and Cobalt recovery from batteries coming from the reverse logistics chain of WEEE	Brazil (Finep), Italy (Calabria Regione)	Centro da Tecnologia da Informação 'Renato Archer'	Ores and metals	Recovery, Cobalt, Lithium, Batteries, WEEE, hydrometallyrgy
2018	SupplyPBM	Securing the Supply chain for rare earth Polymer-Bonded Magnets by recycling	Germany (BMBF), France (ADEME and ANR)	Fraunhofer ISC, Project Group IWKS	Ores and metals	Recycling, Magnets, Rare Earth, End-of-life, polymers
2019	RETECH	Recovery of rare earth elements from complex ores in Turkey and their potential use in high tech industrial applications	Turkey (TUBITAK), Romania (UEFISCDI)	RARE EARTH ELEMENTS RESEARCH INSTITUE	Ores and metals	Recovery, Rare Earth, magnet, Neodynium
2019	ReFina	Novel methods for enhanced recovery of metals and minerals from fine incineration ash	Czech Republic (TA CR), France (ADEME), Belgium (Hermesfonds /VLAIO)	Institute of Chemical Process Fundamentals, Czech Academy of Sciences	Ores and metals	Recovery, bottom ash, Waste-to-energy, Aluminium, Copper

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2019	REVIVING	REVIVING – revisiting mine tailings to innovate metals bio recovery	Portugal (FCT), Romania (UEFISCDI), France (ANR)	University of Coimbra	Ores and metals	Recovery, mine tailings, biotechnology, Copper, Manganese, Zinc, Molibdenum, Tungsten, Magnesium
2019	REEScue	Integrated process for the recovery of Rare Earth Elements and Scandium from Bauxite Residues	Greece (GSRT), Turkey (TUBITAK), Romania (UEFISCDI)	National Technical University of Athens	Ores and metals	Recovery, Rare Earth, Scandium, hydrometallurgy
2019	BaCLEM	Bio-assisted Closed loop recycling of E-Mobility Metals from waste PCBs and Li-Ion Batteries	Turkey (TUBITAK), Belgium (SPW-Wallonia), France (ANR)	Suleyman Demirel University (SDU)	Ores and metals	Recycling, Lithium, Batteries, biotechnology
2019	SMART-G	Smart Geopolymers	Belgium (Innoviris and Hermesfonds /VLAIO), Portugal (FCT), Greece (GSRT), Poland (NCBR)	Vrije Universiteit Brussel	Construction materials	Recycling, Residues, geopolymerization
2019	ANTISOLVO	Antisolvent precipitation to extract the value from end-of-life Nd-Fe-B magnets	Belgium (FWO), Sweden (Vinnova), Slovenia (MIZS)	KU Leuven	Ores and metals	Recycling, End-of-life, Magnets, Neodynium, ion exchange

Substitution of Critical Materials

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2014	RAREASH	Assessment of Possible Recycling Directions of Heavy & Rare Metals Discovered from Combustion Waste Products	Romania (UEFISCDI), Portugal (FCT), Poland (NCBR)	University Politehnica Bucharest	Ores and metals	Recovery, Recycling, Substitution, Rare Earth, Mineral Processing
2015	CHARPHITE	Coal char as a substituting material of natural graphite in green energy technologies	Portugal (FCT), Romania (UEFISCDI), Argentina (MINCyT), Poland (NCBR) South Africa (DST)	University of Porto	Industrial minerals	Substitution, Coal, Graphite

Others (Design, public policy and circularity)

Call	Acronym	Title	Participating Countries	Coordinator	Mineral Category	Keywords
2017	MONAMIX	New concepts for efficient extraction of mixed rare earths oxides from monazite concentrates and their potential use as dopant in high temperature coatings and sintered materials	Romania (UEFISCDI), Italy (MIUR), France (ANR)	National R&D Institute for Nonferrous and Rare Metals	Ores and metals	Design, Rare Earth, Substitution
2018	MINECO	New Eco-innovative Materials for Mining Infra	Portugal (FCT), Finland	Kajaani University of Applied Sciences	Construction materials	Design, Recycling, Sulfidic tailings
2019	ELiMINATE	End-of-life Li-ion battery management integration and technology evaluation	South Africa (DST), Sweden (Vinnova), Turkey (TUBITAK)	Stellenbosch University	Ores and metals	Recovery, Lithium, Batteries, Hydrometallurgy, LCA
2019	PROPER	New sustainability metrics to improve recycling PROcess PERformances regardingresource use, environmental impacts and economic benefits	France (ADEME), Belgium (Innoviris)	BRGM	None	Circularity, Data driven research, recycling, LCA

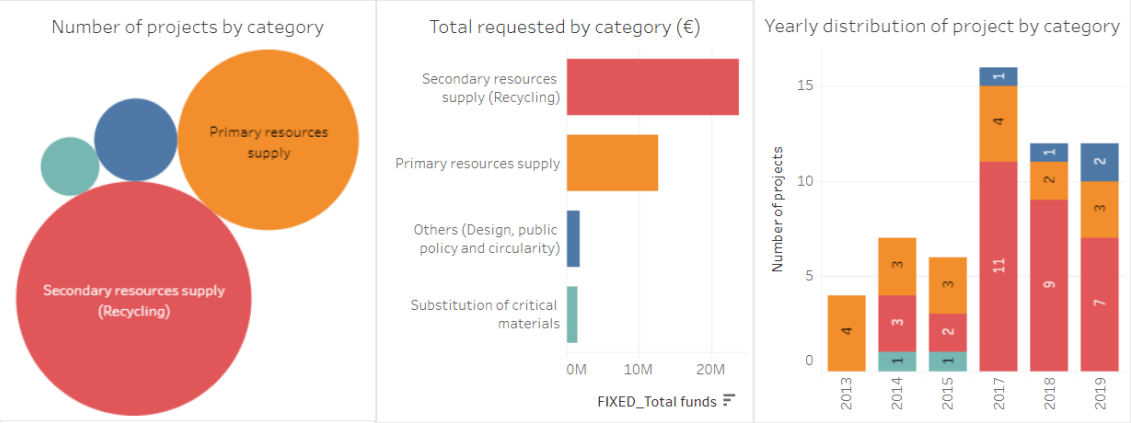
3 DASHBOARD

All this data has been collated into a dashboard that facilitates the statistical analysis of the projects funded throughout ERA-MIN. This dashboard will be continuously updated with the upcoming calls and serve as tool disseminate the funded projects of ERA-MIN.

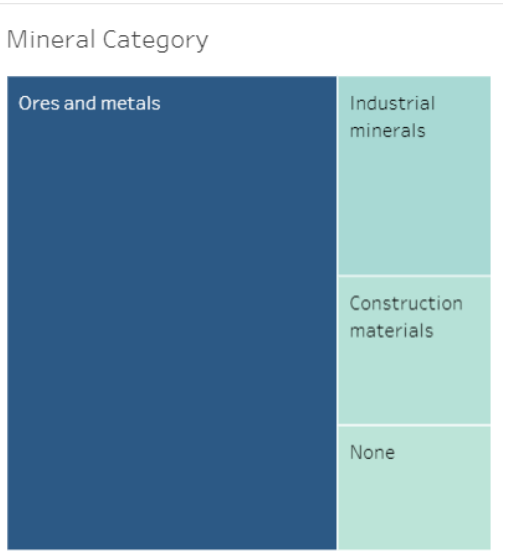
3.1 STATISTICAL ANALYSIS

The overall picture shows close to €42 M awarded to 57 research projects in all six calls, with and average funding per project of €700,000.

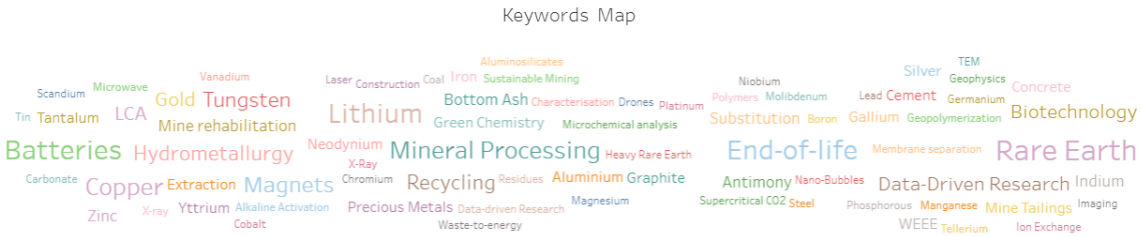
By categories, it is clear that *Secondary resources supply* has gathered most of the funds across all calls. However, it can be seen this what not the case in the ERA-MIN calls, and it was only after ERA-MIN2 first call in 2017, that it surpassed *Primary resources supply*:



By mineral category, Ores and metals clearly represent the majority of the projects with over 70% of all projects related to these kind of materials:



With regards to the most popular keywords are: *Rare Earth, End-of-life, Batteries* and *Lithium*:

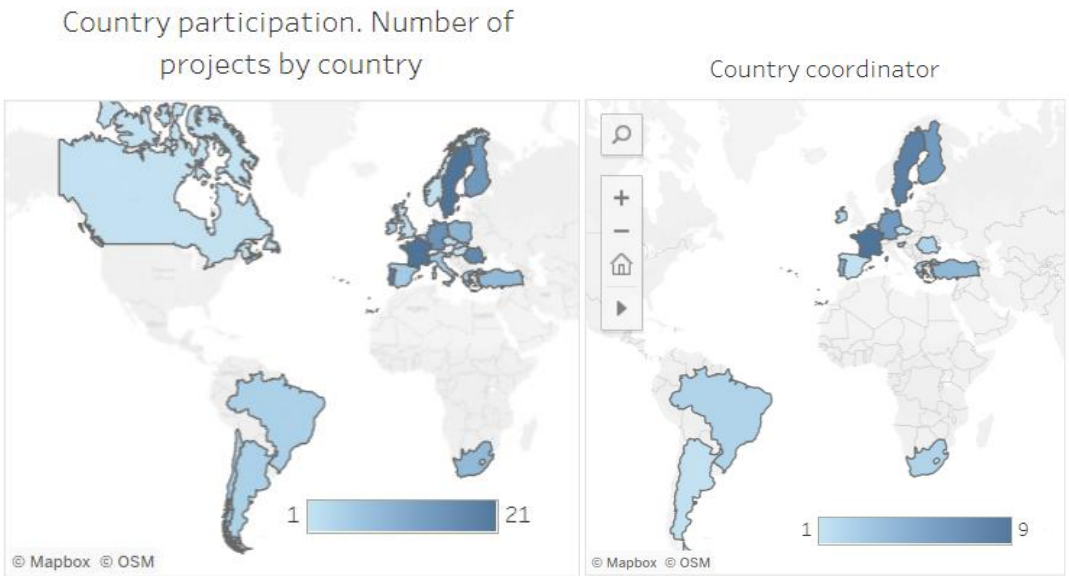


The last two are heavily interrelated and share almost all the projects, with all nine projects related to *lithium* also including *batteries* and only one project related to *batteries* of a different material.

Rare-Earth is the most repeated keyword, with 11 projects tackling these kinds of materials, whilst being closely followed by *End-of-*life. Interestingly, whilst *Rare-Earth* projects are more or less evenly distributed throughout time, all 10 projects related to *End-of-life* projects have been exclusively funded in ERA-MIN2 categories, which makes sense considering the similar distribution of the projects by category.

Finally, if we consider the geographical distribution of the projects, we can see France and Sweden, clearly dominating the landscape with 37 partners in 21 projects and 34 in also 21 projects respectively. But Sweden, has supported these projects with a significantly large amount of funding than France (€5.7M vs €3.8M).

Next in line is Portugal, who participated in less projects (19), but has supported more partners (41 partners) than the top two countries with over €3M in funding. Germany follows with 15 projects for 32 partners, but with the highest amount of funding, just over €7.5M. It is also worth mentioning the almost €3.7M provided for projects from the non-EU countries of Canada, Brazil, South Africa, Argentina, Chile, and Turkey, supporting over 26 projects in total.



4 FINAL CONSIDERATIONS

To conclude, the current deliverable sets the stage for an interesting perspective of what has been up to now the topology of the funded projects under both ERA-MIN and ERA-MIN2 call for proposals. More importantly, it also gives way to a tool that will help also analyse the future projects to be funded under ERA-MIN3 and hopefully other raw materials related initiatives and the projects they fund. This will allow to identify gaps and trends in the research funded and help programming future initiatives with more informed knowledge as to where the best opportunities for the raw materials sector are.