



# ERA-MIN 2

RESEARCH & INNOVATION PROGRAMME ON RAW MATERIALS  
TO FOSTER CIRCULAR ECONOMY

**Acronym:** ERA-MIN 2

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### Report on international cooperation with countries outside Europe

**WP 6:** Strengthening the raw materials research community

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**ERA-MIN 2** comprises a progressive, pan-European network of 21 public research funding organisations from 18 countries/regions (Argentina, Belgium-Flanders, Brazil, Chile, Finland, France, Germany, Ireland, Italy, Poland, Portugal, Romania, Slovenia, South Africa, Spain, Spain-Castilla y León, Sweden and Turkey).

Built on the experience of the EU project ERA-MIN (2011-2015), **ERA-MIN 2** aims to enhance and strengthen the coordination of research and innovation programmes in the field of non-energy, non-agricultural raw materials (construction, industrial and metallic minerals) to support the European Innovation Partnership on Raw Materials, the EU Raw Materials Initiative and further develop the raw materials sector, in Europe and globally, through funding of transnational research and innovation (R&I) activities.

**ERA-MIN 2** will support demand driven research on primary and secondary resources, and substitution of critical raw materials under a circular economy approach, to give the opportunity to the R&I community to apply to world-wide coordinated funding, gaining access to leading knowledge and new markets, while reducing fragmentation of R&I funding across Europe and globally. This will be achieved through one EU co-funded call for R&I proposals in 2017 and two additional calls, in 2018 and in 2019, designed and developed specifically for the non-energy, non-agricultural raw materials sector.

**Publishable summary:** This report will contribute to the international cooperation of ERA-MIN 2 with external stakeholders and related initiatives outside Europe. The report presents a list of key actors and projects in Latin American and Caribbean Region as well as in other non-EU countries and regions. This information is essential to enlarge the international cooperation activities promoted by ERA-MIN 2 beyond its consortium.

## TABLE OF CONTENTS

1. Introduction .....	4
2. Cooperation with other initiatives and projects .....	8
2.1 Observer Organisations .....	8
2.2. ERA-MIN 2 meetings and workshops .....	8
2.3. Initiatives In Raw Materials From Latin America .....	8
2.4. Raw Material related platforms/initiatives to EU Liaison Offices .....	8
2.5. Raw material related platforms/initiatives .....	8
3. Participation in conferences, workshops, and meetings .....	10
3.1 Upcoming Events:.....	12
4. networks with which ERA-MIN 2 should cooperate: .....	12
5. Next steps .....	13
6. Conclusions .....	13
Annex 1 - EU –CELAC Regional cooperation. Policy Context.....	14
Annex 2 - MAIN GEOLOGICAL SURVEYS IN CELAC .....	17
Annex 3 - Consultation on raw material related platforms/initiatives to EU liaison offices .....	23
Annex 4 - EU-Latin America Mineral Development Network Platform (MDNP) .....	28



## 1. INTRODUCTION

The main objective of this report is to describe the relevant non-EU countries and research programs and the existing and planned cooperation for joint activities important to ERA-MIN 2. In this sense, the main stakeholders and initiatives with which ERA-MIN 2 is cooperating or could cooperate with in the future will be listed, and why this cooperation is important for the ERA-MIN 2 project.

In addition, the next actions to promote engagement of ERA-MIN 2 with non-EU countries and existing initiatives and platforms will be presented. The identification of the non-EU countries/regions and actors interested in cooperating with ERA-MIN 2 and an evaluation of the implementation of joint activities will be taken into consideration. This will help to broaden the network of research funding organisations that provides support to research performing organisations in the raw materials sector.

The output of this deliverable will be a list of non-EU main stakeholders and initiatives to cooperate with: industry, academia, national/regional research programming organisations, implementing organisations like Geological Surveys, other non-European financing programmes and funded projects, the International Union of Geological Sciences (IUGS), the United Nations Environment Programme (UNEP), the Committee for Mineral Reserves International Reporting Standards (CRIRSCO), as well as other raw materials related Platforms and Industry Associations.

ERA-MIN 2 has already identified relevant on-going projects and initiatives outside Europe with which the project would like to establish strong and direct collaborations, as described in the Description of the Action (Annex 1 of the Grant Agreement and the *Table 1*).



*Table 1 – List of initiatives and projects from outside Europe that could link with ERA-MIN 2*

Projects/Initiative relevant for ERA-MIN 2	Projects/Initiative area of focus	Specific interaction with ERA-MIN 2
<b>CYTED</b> (Intergovernmental Ibero-American programme on science & technology for sustainable development)/IBEROEKA	Multilateral programme between Portugal, Spain and 19 Latin American Countries (LAC). One of the actions areas is industry, including mining and metallurgy. IBEROEKA Call for innovation projects aims to foster joint enterprises in Ibero-American countries.	The partners FCT, MINCYT, CONICYT and MINECO can disseminate <b>ERA-MIN 2</b> joint calls to CYTED members and options for cooperation will be evaluated.  For example, a partnership with <b>ERA-MIN 2</b> to jointly support strategic projects in mineral raw materials, in a new CYTED Call in specific sectors, CYTED as the secretariat for future joint calls and/or minifora IBEROEKA in mineral raw materials field.
<b>ALCUE-NET</b> (INCONet between the European Union and Latin America and the Caribbean)	Latin America, Caribbean and European Union Network on R&I. Focused on four priorities: 1) Energy; 2) Information and Communications Technologies (ICT); 3) Bioeconomy; Biodiversity; 4) Climate change.	MINCYT is the ALCUE-NET coordinator and CONICYT, FCT and MINECO are partners. Through MINCYT, the <b>ERA-MIN 2</b> activities are disseminated to other LAC institutions that could be interested in associating to future joint calls and activities. ALCUE NET has had the role of technical secretary of the Senior Official Meetings in the bi-regional EU-CELAC political dialogue
<b>ERANET-LAC</b> (Latin America, Caribbean and European Union)	Aims to strengthen the bi-regional partnership in Science, Technology and Innovation ERANet-LAC 2nd Joint Call on R&I is open. Scope of the call: Biodiversity/Climate Change, Bioeconomy, Energy and Health and Information and Communication Technologies.	CONICYT, NCBR, MINCYT, FCT, UEFISCDI, MINECO and TUBITAK are partners and can facilitate the dissemination of ERA-MIN joint calls to Latin American countries and can raise awareness of <b>ERA-MIN 2</b> activities among the LAC partners of ERANET-LAC.
<b>CAAST-NET PLUS</b>	Advancing Sub-Saharan Africa-EU R&I for Global Challenges	DST and FCT are partners and can facilitate awareness of <b>ERA-MIN 2</b> to different African Countries.
<b>ERAFRICA</b>	ERAFRICA aims at promoting an unified European approach to collaborate with Africa in the field of science and technology research for innovation and sustainable development	FCT, DST and TUBITAK are partners and can raise awareness of <b>ERA-MIN 2</b> among the African countries.
<b>International Union of Geological Sciences (IUGS)</b>	IUGS promotes and encourages the study of geological problems, especially those of world-wide significance, and supports and	FCT has invited a representative as member of the ERA-MIN 2 Advisory Board



	facilitates international and interdisciplinary cooperation in the earth sciences.	
<b>United Nations Environment Programme (UNEP)</b>	UN Environment is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system, and serves as an authoritative advocate for the global environment.	According to the Communication and Dissemination Plan of ERA-MIN 2, the partner responsible for the establishment of the links with this project is FCT.
<b>Committee for Mineral Reserves International Reporting Standards (CRIRSCO)</b>	The aim of CRIRSCO is to contribute to earn and to maintain that trust by promoting reporting with high standards of the mineral deposit estimates (Mineral Resources and Mineral Reserves) and of the exploration progress (Exploration Results).	According to the Communication and Dissemination Plan of ERA-MIN 2, the partner responsible for the establishment of the links with this project is FCT.
<b>International Council on Mining and Metals (ICMM)</b>	ICMM is an international organisation dedicated to a safe, fair and sustainable mining industry, it brings together 25 mining and metals companies and over 30 regional and commodities associations.	According to the Communication and Dissemination Plan of ERA-MIN 2, the partner responsible for the establishment of the links with this project is FCT.
<b>World Resources Forum (WRF)</b>	WRF is an independent non-profit international organization that serves as a platform connecting and fostering knowledge exchange on resources management amongst business leaders, policy-makers, NGOs, scientists and the public.	According to the Communication and Dissemination Plan of ERA-MIN 2, the partner responsible for the establishment of the links with this project is FCT.
<b>Strategic Dialogue on Sustainable Raw Materials for Europe (STRADE)</b>	STRADE addresses the long-term security and sustainability of the European raw-material supply from European and non-European countries.	According to the Communication and Dissemination Plan of ERA-MIN 2, the partner responsible for the establishment of the links with this project is FCT.
<b>FORAM "Towards a World Forum on Raw Materials"</b>	The FORAM project contributes to consolidate the efforts towards a more joint and coherent approach towards raw materials policies and investments worldwide, by closely working with the relevant stakeholders in industry, European and international organisations, governments, academia and civil society.	FCT has attended the Workshop FORAM in Brussels on 29 <sup>th</sup> November 2016. ERA-MIN 2, represented by FCT, became a stakeholder member of the panel of the EU project FORAM. FCT has participated in the FORAM-INTRAW Workshop in Brussels, on 8 <sup>th</sup> November 2017. the
<b>Horizon 2020 CSA INTRAW</b> (International cooperation on Raw materials)	INTRAW project has been set up to map and develop new cooperation opportunities related to raw materials between the EU and other technologically advanced countries (Australia, Canada,	The European Federation of Geologists (EFG) is the INTRAW coordinator and is an Observer organisation of <b>ERA-MIN 2</b> facilitating international





ERA-MIN 2

RESEARCH & INNOVATION PROGRAMME ON RAW MATERIALS  
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	<p>Japan, South Africa and the United States, addressing: R&amp;I, exploration, extraction, processing and recycling practices, management and substitution of critical raw materials, raw materials policies and strategies, joint educational and skills programmes, etc.</p> <p>INTRAW has recently launched the European Union's International Observatory for Raw Materials as a definitive raw materials intelligence infrastructure.</p>	<p>cooperation as well as cooperation with other EU funded projects.</p> <p>FCT as partner of INTRAW is ensuring cooperation with ERA-MIN 2.</p> <p>FCT became founding member of the International Raw Materials Observatory.</p>
<p><b>International Union of Geological Sciences (IUGS)</b></p>	<p>With 121 national members, the Union aims to promote development of the Earth sciences through the support of broad-based scientific studies relevant to the entire Earth system; to apply the results of these and other studies to preserving Earth's natural environment, using all natural resources wisely and improving the prosperity of nations and the quality of human life; and to strengthen public awareness of geology and advance geological education in the widest sense. <b>Commissions:</b> Geoscience Education, Training &amp; Technology Transfer (COGE), International Commission on GeoHeritage (ICG); History of Geological Sciences (INHIGEO); Commission for Geoscience Information (CGI); Stratigraphy (ICS); Tectonics and Structural Geology (TECTASK); Global Geochemical Baselines (GGB). <b>Joint Programs:</b> International Geoscience Programme (IGCP); International Lithosphere Program (ILP); 35th International Geological Congress (IGC); 36th International Geological Congress (IGC); Isotopes and Geochronology (TGIG). <b>Task Groups:</b> Global Geoscience Professionalism (TGGGP); Task Group on Geohazards (TGG). <b>Initiatives:</b> Initiative on Forensic Geology (IFG).</p>	<p>A representative of IUGS could be invited as member of the Advisory Board of <b>ERA-MIN 2</b>.</p>
<p><b>World Resources Forum</b></p>	<p>WRF envisions the world where influential decision-makers, established civil societies, key industrial players, leading scientists and the empowered public interact and communicate on setting the agenda and developing solutions on sustainable use of resources worldwide.</p>	<p>A representative of WRF could be invited as member of the Advisory Board of <b>ERA-MIN 2</b>.</p>



As mentioned in the Grant Agreement, at the beginning of ERA-MIN 2 there were 2 non-EU Observer organisations and the expectation was to extend up to 6 at the end of the project. The current 2 non-EU Observer organisations are: the *Fonds de recherche du Québec – Nature and technologies* (Canada- Québec region) and FONDECYT (Peru) that are willing to explore options for future cooperation with ERA-MIN 2.

ERA-MIN 2 will also work on developing relationships with other non-EU countries (e.g. Canada, USA, Australia, Japan, Peru, Colombia, Mexico and Uruguay) throughout the project and encourage their association to joint activities (e.g. joint calls).

## 2. COOPERATION WITH OTHER INITIATIVES AND PROJECTS

### 2.1 OBSERVER ORGANISATIONS

As an observer organisation, FRQNT (Québec/Canada) has associated to additional joint calls 2018 and 2019.

### 2.2. ERA-MIN 2 MEETINGS AND WORKSHOPS

The Call Steering Committee meeting to select the pre-proposals to stage 2 (submission of full proposal) and the Network Steering Committee meeting to discuss the progress of the project on June 28-29<sup>th</sup> 2017 have been attended by representatives of the Ministry METI and funding agency NEDO (Japan) which demonstrated interest in becoming Observer of ERA-MIN 2.

### 2.3. INITIATIVES IN RAW MATERIALS FROM LATIN AMERICA

In the **Annex 1** of this report it is described the main lines of the EU –CELAC regional cooperation and policy context followed by the list of the main geological surveys in Latin America (**Annex 2**).

### 2.4. RAW MATERIAL RELATED PLATFORMS/INITIATIVES TO EU LIAISON OFFICES

The consultation on raw material related platforms and/or initiatives to EU liaison offices in Canada, Japan and USA has been detailed in **Annex 3**.

### 2.5. RAW MATERIAL RELATED PLATFORMS/INITIATIVES

The EU-Latin America mineral development network platform (MDNP) (more information can be found in **Annex 4**) strives for the establishment of a network platform for continuous and structured cooperation on a basis of mutual benefit between EU and Latin American authorities, industry, business (including SMEs), academia, geological surveys and other relevant entities for the non-energy extractive industries, in the fields of technology, consulting services,





infrastructure, investment, trade, training and skills, health and safety, good governance and other relevant areas of the mining value chain (from exploration to mining, rehabilitation and post-closure).

Other non-EU initiatives open to explore in future months are: the EU-Canada Mineral Investment Facility, and the International Raw Materials Observatory.

Regarding to the EU-Canada Mineral Investment Facility, in January 2017 the EU commissioned a Study to assess the viability of a strategic platform in order to foster a more structured cooperation between Canada and the EU across the non-energy extractive industry (NEEI) value chain. This could lead to a better investment framework, increased investment flows, stronger business links and a robust dialogue on all aspects of the sector such as sustainability, public perception and the regulatory framework. This is envisioned through the form of the strategic platform to be an EU-Canada Mineral Investment Facility (EU-Canada MIF), or an alternative model of structured co-operation. In November 2017, a feasibility study for this initiative was submitted.

The International Raw Materials Observatory (INTRAW) is a new independent, apolitical, international not-for profit organisation, set up to enhance worldwide cooperation on mineral raw materials' research & innovation, education & outreach, industry & trade and recycling, management & substitution of strategic raw materials. The launch of the International Raw Materials Observatory as a definitive raw materials knowledge management infrastructure was on 7<sup>th</sup> November 2017 in Brussels during the Raw Materials Week. The Observatory is the main outcome of the EU Horizon 2020 funded project INTRAW (2015-2018) with technologically advanced countries such as Australia, Canada, Japan, South Africa and the United States. The Observatory will work on the future of Europe, supported by a sustainable use of its resources and, today, INTRAW has already come up with 3 scenarios for the state of Raw Materials management in the EU in the year 2050.

FCT has joined, as a founding member, the INTRAW observatory that will offer its members foresight dialogues with key influencers and match-making services for organisations active along the minerals materials value chain.



### 3. PARTICIPATION IN CONFERENCES, WORKSHOPS, AND MEETINGS

Before and after the official start of the project, ERA-MIN 2 consortium and activities have been presented in international conferences, workshops, and meetings with other projects and initiatives, such as:

- 12-14<sup>th</sup> April 2016, Lisbon, **PIMBIS - Portugal International Mining Business & Investment Summit And Exhibition 2016**, ERA-MIN 2 presentation by FCT
- 25-26<sup>th</sup> April 2016, Santiago do Chile, **EU-Latin America Dialogue on Raw Materials: enhancing the co-operation** included in EXPOMIN 2016, ERA-MIN 2 presentation by FCT
- 28-29<sup>th</sup> June 2016, Brussels, EU-Advanced mining countries Raw Materials Diplomacy event - Workshop **Exchange of best practices on mining policies and technologies: challenges in the current state of the global economy**, ERA-MIN 2 poster
- 29<sup>th</sup> November 2016, Brussels, **6<sup>th</sup> EU-US-Japan Trilateral Conference on Critical Raw Materials**, ERA-MIN 2 poster presentation
- 8<sup>th</sup> December 2016, Tokyo, **12<sup>th</sup> ADEME-NEDO Joint Workshop**, ERA-MIN 2 presentation by ADEME
- 14<sup>th</sup> March 2017, Rio de Janeiro, *Chamada publica conjunta ERA-MIN 2017 – Matérias-primas para o Desenvolvimento Sustentável e Economia Circular*, ERA-MIN 2 presentation by Dina Carrilho
- 8-9<sup>th</sup> May 2017, Buenos Aires, **EU-Latin America Dialogue on Raw Materials: consolidating the co-operation'** conference, MINCyT has made a presentation of ERA-MIN 2 and preliminary call results
- 27-28<sup>th</sup> June 2017, Angers, **ERA-MIN 2 Call Steering Committee and Network Steering Committee meetings**, 5 representatives of NEDO and one of METI have attended the meetings and presented the Japanese policy and their research priorities to ERA-MIN 2 consortium
- 7<sup>th</sup> November 2017, Brussels, **3<sup>rd</sup> EU Advanced Mining Countries Conference 2017**, FCT has participated at the **matchmaking session** to make awareness of ERA-MIN 2 to the SENIOR TRADE & INVESTMENT MANAGER at GOVERNMENT OF WESTERN AUSTRALIA-EUROPEAN OFFICE and to the Senior researcher at National Institute of Advanced Industrial Science and Technology (AIST, Japan)8<sup>th</sup> November 2017, Brussels,

**Roundtable on the challenges of international collaboration on mineral raw materials**, co-organised by the International Raw Materials Observatory and FORAM Project, FCT has participated.

- **PDAC 2018 Convention**, March 4-7<sup>th</sup>, Toronto, Canada – 4 promotional slides about ERA-MIN 2 were displayed at the European Commission booth;
- **WP3-T3.3 PROMOTING THE ALIGNMENT OF R&I FUNDING PROGRAMMES, INCOBRA 2<sup>nd</sup> SCOPING WORKSHOP**, March 26-27<sup>th</sup>, São Paulo, Brazil – FCT presented a workshop “Training Session on Joint Call Process” to the different States in Brazil showing ERA-MIN Joint calls as a case study;
- **METS 2018**, 10-12<sup>th</sup> April, Madrid –MINECO did a presentation about the ERA-MIN funded projects during the Workshop 6: RTD and Innovation;
- First and second **EU-Canada Raw Materials Stakeholders Forum Steering Committee** meeting, 2018 (Brussels) – FCT representing ERA-MIN2 as a Forum member joined both meetings. The Forum informs the first and second governmental EU-Canada Bilateral Dialogue on Raw Materials under the CETA agreement.
- **The ESASTAP 2020: Horizon 2020 Information Sharing Session on Funding Opportunities**, 11th October 2018, Johannesburg - DST, ERA-MIN 2 partner presented the ERA-MIN Joint Call 2018.
- **PDAC 2019 Convention**, 3-6<sup>th</sup> March, Toronto – FCT as ERA-MIN 2 project coordinator was invited by the EU to provide materials for the EU booth and to be directly involved at the booth and make a presentation at the EU Business and the Networking and Business Breakfast “Opportunities in the EU mineral and mining sector” on 5<sup>th</sup> March. More than 300 flyers will be distributed.
- Third **EU-Canada Raw Materials Stakeholders Forum Steering Committee** meeting, 6<sup>th</sup> March 2019 (Toronto) – FCT representing ERA-MIN2 which is a member of Forum has participated.
- **9th Trilateral EU-US-Japan Conference on Critical Raw Materials**, 19<sup>th</sup> Nov. Brussels – FCT participated at this Conference which was by invitation only.
- **PDAC 2020- Worlds Premier Mineral Exploration and Mining Convention** , 2—5<sup>th</sup> March, Toronto (Canada)- FCT was present at the EU booth where flyers and Project catalogues were distributed. A presentation “ERA-MIN – Public-public partnership

coordinating research and innovation programmes on raw materials” at the EU Exploration and Mining Technology Seminar on March 3.

- **Webmeetings with Ukraine representative** moderated by FCT.

The majority of the events were made public at the ERA-MIN 2 [website](#).

### 3.1 UPCOMING EVENTS:

- A training session on exploitation organised by **ENRICH Association** in Brazil on 24th November 2020, in which FECYT/AEI and FCT will participate after answering to a survey.
- **PDAC 2021**, a virtual event

### **4. NETWORKS WITH WHICH ERA-MIN 2 SHOULD COOPERATE:**

- International Raw materials Observatory (INTRAW)
- EU-Latin America Mineral development Network Platform (MDNP)
- ENRICH Association in Brazil after the end of the Centre for Europe-Brazil Business and Innovation Cooperation (CEBRABIC) H2020 project (2017-2020)
- INCOBRA – Increasing International STI Cooperation between Brazil and European Union
- EU-CELAC Platform for Funding Agencies<sup>1</sup>
- CYTED - Intergovernmental Ibero-American programme on science & technology for sustainable development
- EU-Canada Mineral Investment Facility
- FORAM - Towards a World Forum on Raw Materials
- STRADE project - Strategic Dialogue on Sustainable Raw Materials for Europe
- IUGS - International Union of Geological Sciences
- UNEP - United Nations Environment Programme
- CRIRSCO- Committee for Mineral Reserves. International Reporting Standards
- ICMM - The International Council on Mining and Metals

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<sup>1</sup> <https://www.eucelac-platform.eu/members>



## 5. NEXT STEPS

ERA-MIN 2 may also come to develop relationships with other countries that have signed political agreements and/or letters of intent for raw materials through Raw Materials Diplomacy, e.g. Mexico, the EuroMed countries (Morocco, Tunisia, and Egypt), and Greenland.

ERA-MIN 2 will invite funding organisations from other countries and regions with a funding programme relevant in the raw materials sector to join the future Joint Calls.

The targeted third countries already identified are: Canada, USA, Australia, Japan, Peru, Colombia, Mexico and Uruguay, among others

## 6. CONCLUSIONS

This report accounts for the large number of existing institutions, organizations, networks, platforms and projects outside Europe that can be used to promote, disseminate and channel joint calls for the ERA-MIN 2 project. The field comprised by ERA-MIN 2 is of great importance in the priorities related to the socioeconomic development of CELAC, North America and other regions. Thus, further involvement with these countries-and/or regions should be achieved.

It could be interesting to investigate if political contexts arise in other non-European regions, such as the one that takes place in the CELAC region, which has been one of the most analysed in this last period (see Annex 1). It is not only relevant to continue the survey of key actors for the tasks of promotion, dissemination and financing of calls, but also to explore bi-regional political context channels in the political dialogue processes where the ERA-MIN 2 topics can be addressed from the capacity building, mobility and research infrastructures fields.

## ANNEX 1 - EU –CELAC REGIONAL COOPERATION. POLICY CONTEXT

### Background

Launched in 2010, the Community of Latin American and Caribbean States (CELAC) is now the EU's counterpart for the bi-regional partnership process. The organisation encompasses for the first time all 33 sovereign LAC countries, representing roughly 600 million people.

Within the EU-CELAC process, cooperation in R&I<sup>1</sup> was confirmed as a political priority in all EU-CELAC Summit statements. It is also the first item on the Action Plan agreed by EU-CELAC political leaders in 2010 in Madrid and later updated in 2015 on the occasion of the EU-CELAC Summit in Brussels, where Heads of States and Government had called for a strengthened cooperation in R&I.

At the last **EU-CELAC Summit** in 2015, the EU and CELAC leaders highlighted the value of EU-CELAC cooperation in the field of science, technology and innovation and called for a strengthened cooperation and moving towards an **EU-CELAC Common Research Area**.

### EU-CELAC cooperation in Science and Technology

Cooperation between the European Union and the Community of Latin America and Caribbean States (EU-CELAC) in the field of Science, Technology and Innovation is a key pillar of the overall EU-CELAC Action Plan.

The EU-CELAC cooperation in R&I is governed by the **Joint Initiative on Research and Innovation (JIRI)**, which was endorsed at the 2010 bi-regional R&I Ministerial meeting in Madrid. Under the JIRI, Senior Officials from both regions meet on an annual base to update common priorities, encourage mutual policy learning and ensure the proper implementation and effectiveness of cooperation instruments.

The 2010 Madrid Summit gathered for the first time research ministries from both regions and set in place a governance structure for the EU-CELAC Research and Innovation policy dialogue through the **Joint Initiative for Research and Innovation (JIRI)**.

The **Senior Officials Meetings (SOM)** of EU and CELAC representatives ensure regular bi-regional dialogue on R&I to consolidate EU-CELAC cooperation under the JIRI by updating common priorities, encouraging mutual policy learning and ensuring the proper implementation and effectiveness of cooperation instruments through biannual Action Plans. Under one EC-funded



FP 7 project (ALCUE-NET), five thematic areas were defined as common priorities and Senior Officials thematic working groups (SOM WGs) have been in place since 2011 under the JIRI, co-lead by a country from each region, in the field of Energy, Information and Communications Technology, Bio-economy, Biodiversity & Climate Change and Health. An additional horizontal group under JIRI discuss of framework conditions to support mobility of researchers and joint programmes. However, the dialogue conducted under the JIRI, with the support of the EC project – ALCUE NET, pointed out the urgent need to deepen and strategically re-focus bi-regional R&I cooperation.

As a result, the Common Research Area (CRA) was launched in 2016 as policy framework for our R&I cooperation, expanding beyond the existing project based cooperation. The CRA builds on three strategic pillars which are: 1) mobility of researchers, 2) access to research infrastructures and 3) jointly addressing common challenges.

#### **FIFTH SENIOR OFFICIAL MEETING (SOM) ON SCIENCE AND TECHNOLOGY**

At the fifth Senior Officials Meeting under the Joint Initiative for Research and Innovation in March 2016, JIRI delegates committed towards the EU-CELAC Common Research Area built on three key pillars which are:

- **Increased mobility of researchers** between the two regions through the instruments of the European Research Council, Marie Skłodowska-Curie Actions and Horizon 2020 in general, but also the Erasmus + programme, and relevant Latin American and Caribbean schemes.
- **Improved access to research infrastructures** through important projects like the submarine cable linking Latin America and Europe, but also in thematic areas such as health and environment. A first step in opening up research infrastructures of global nature would imply a proper mapping of research infrastructures.
- **Jointly addressing common global challenges** by opening national programmes and coordinating EU and CELAC research agendas, as well as by increasing synergies with instruments of external cooperation. Strengthened cooperation is supported mainly through Horizon 2020 but also via participation in multilateral fora such as the Belmont Forum, the GACD and GLOPID-r.



### SIXTH SENIOR OFFICIAL MEETING (SOM) ON SCIENCE AND TECHNOLOGY

A year later (14<sup>th</sup> March 2017) the sixth Senior Officials Meeting in Research and Innovation agreed on concrete policy mechanisms to implement the priorities discussed under the Common Research Area such as:

- Setting-up an EU-CELAC Research Infrastructures (RI) working group to support policy coordination and exchange of information on RI;
- Development of a CELAC Mobility portal, providing information on national jobs and funding opportunities for researchers. The creation of the portal is based on commitment from CELAC and is capitalising on the EURAXESS experience;
- Targeted cooperation with CELAC countries under Horizon 2020 in the fields of Health (chronic diseases), Climate change and sustainable urbanisation.
- As a follow-up to the 2016 Santo Domingo Declaration's call for further promoting sustainable development and economic growth, the EC has launched an independent policy advice initiative aiming at supporting CELAC countries in implementing the 2030 Agenda / Sustainable Development Goals through R&I. The policy advice should lead to better structure of the national R&I policies and thereby support regional integration and further enhance the EU-CELAC R&I dialogue.





## ANNEX 2 - MAIN GEOLOGICAL SURVEYS IN CELAC

- **Association of Ibero-American Mining and Geology Services (ASGMI)** is a non-profit organization, with its own legal status, registered in the National Register of Associations of Spain in the Group 1<sup>st</sup>, Section 1<sup>st</sup>, National Number: 601455, or by virtue of the abovementioned Register dated December 11<sup>th</sup> 2012. See directory: [http://www.asgmi.org/?page\\_id=804](http://www.asgmi.org/?page_id=804)

- **Argentina: Argentine Geological Mining Service (SEGEMAR)** is the result of the integration of different national state agencies since 1885 that generated the information matrix of geological resources and mining of the nation. Since its creation in 1996, SEGEMAR as a decentralized entity is responsible for generating geological-mining, territorial and environmental information. See: <http://www.segemar.gov.ar>

- **Argentine Chamber of Mining Entrepreneurs (CMEA)**. Its mission is to contribute towards the development of Argentina's mining industry through the coordination with several key players in the industry, society and the State. CMEA was established in August 1991, as a result of the efforts undertaken between the representatives of the Argentine Association of Mining Entrepreneurs (1957), the Chamber of Metal Mining (1982) and the Confederation of Argentine Mining (1972), who decided to dissolve the last two, and modify the designation and bylaws of the first one, with the members of the dissolved entities being incorporated into the new one.

The new entity is made up of the Portland Cement Manufacturers Association, the Buenos Aires Province Stone Chamber, Fomicruz, and the Mining Chambers of the provinces of Santa Cruz, Córdoba, Chubut, Jujuy, Mendoza, Salta and San Juan, mining companies, Suppliers of mining inputs and services, legal and accounting services.

Associated companies cover the entire scope of the mining activity. The leading companies in international mining are represented in the CAEM, as well as the medium-sized mining of the same origin and the small international exploration companies, focused almost solely on metallic mining.

In addition, the small and medium-sized Argentine mining companies that are represented are mainly involved in the mining of non-metals, rocks for application and construction materials. The wide scope of supplier companies - from mining equipment manufacturers to

the suppliers of technical, legal and financial inputs and services- are also taken into account.

See: <http://www.caem.com.ar>

• **List of Chambers in Argentine Provinces :**

Salta Mining Chamber - [www.cmsalta.com.ar](http://www.cmsalta.com.ar);

Buenos Aires Province Stone Chamber - [www.camaradelapiedra.org.ar](http://www.camaradelapiedra.org.ar);

Argentine Republic Marble, Stone and Granite Chamber;

Córdoba Mining Business Chamber (CEMINCOR) - [www.cemincor.org.ar](http://www.cemincor.org.ar);

La Pampa Province Mining Business;

Mendoza Chamber of Mining Businessmen (CAMEM) - [www.camem.com.ar](http://www.camem.com.ar);

Jujuy Mining Chamber - [www.camaramineradejujuy.com.ar](http://www.camaramineradejujuy.com.ar);

Neuquén Mining Chamber;

Río Negro Mining Chamber (CAMIR) - [www.camir.net](http://www.camir.net);

San Juan Mining Chamber - [www.camaraminerasj.com.ar](http://www.camaraminerasj.com.ar);

Santa Cruz Mining Chamber (CAMICRUZ);

and Chubut Mining Chamber (CAMIC).

• **Bolivia: Geological Mining Service (SERGEOMIN)** is a decentralized state institution, created by virtue of Act No. 535 of 28<sup>th</sup> of May 2014, whose main purpose is to generate the basic geological information of the country; therefore it constitutes a pillar of national development. It is an entity of "advice to the Bolivian State in all matters related to the earth sciences". See <http://www.sergeomin.gob.bo>

• **Brazil: Serviço Geológico do Brasil (CPRM)** was established in 1969 as a public – privat company, with close links to the Ministry of Mining and Energy, and with a strategic mission to organize and systematize the geological knowledge of the Brazilian territory. See <http://www.cprm.gov.br/>

• **Chile: National Geology and Mining Service (SERNAGEOMIN)** is the technical body in charge of generating and providing information on basic geology, resources and geological hazards of the national territory, for the welfare of citizens and to serve the Requirements of the country, and to regulate and supervise the compliance with the standards and regulations

regarding mining property and security in order to contribute to the development of a sustainable and socially responsible mining activity. See <http://www.sernageomin.cl/>

- **Colombia: Colombian Geological Service** has the mission to contribute towards an economic and social development through research in basic and applied subsurface geoscience, the potential of its resources, the evaluation and monitoring of threats of geological origin, the management of comprehensive geo-scientific knowledge, the nuclear and radioactive research and control, taking into account the priorities of the policies of the National Government. See <http://www2.sgc.gov.co/>

- **Costa Rica: Geology and Mining General Directorate (DGM)** was created more than sixty years ago, by Act 6797, known as the Mining Code. Among the fundamental functions it's worth mentioning the preparation of the national geological map, the promotion of the development of the national mining, the carrying out of studies and scientific and geological investigations. See <http://www.geologia.go.cr>

- **Cuba: Palaeontology and Geology Institute** dedicated to research in geology, specifically in mineral deposits, regional geology, stratigraphy and Palaeontology, tectonics, mineralogy and petrology, geophysics, environmental geology, and geological mapping, digital image processing. See [https://www.ecured.cu/Instituto de Geolog%C3%ADa y Paleontolog%C3%ADa](https://www.ecured.cu/Instituto_de_Geolog%C3%ADa_y_Paleontolog%C3%ADa)

- **Ecuador: Geological Metal Mining National Research Institute (INIGEMM)** is a new institution created under the Mining Act passed in 2009. Currently, it is an agency under the Ministry of Mining and its mandate is to generate, organize and manage scientific and technological and Geological-mining-metal information nationwide. See <http://www.inigemm.gob.ec>

- **El Salvador: Directorate for Hydrocarbons and Mines (DRHM)**, the Ministry of Economy, through the Hydrocarbons and Mines Regulatory Department, was empowered by the Act regulating the transportation and distribution of oil products, the Natural Gas Act and the



mining law that regulates the main activities of these sectors.  
See <https://www.edrhym.gob.sv/drhym/>

- **Guatemala: General Directorate for Mining** regulates the mining and energy sectors, and promotes proper utilization of natural resources. They have created a multidisciplinary team that is highly lectured in those subjects and that by complying with the national legislation and policy, promote sustainable development for the benefit of society. See <http://www.mem.gob.gt/>

- **Honduras: Honduran Institute for Geology and Mining (INHGEOMIN)** implements National Policy related to the mining sector, thus ensuring the proper application of the mining processes through an effective and efficient administration, for a sustainable environmental and economic development thus generating social welfare. See <http://www.inhgeomin.gob.hn>

- **Mexico: Mexican Geological Service (SGM)** is a decentralized organism, under the federal government with its own property and legal status , governed by the Mining Act and ascribed to sectoral to the Secretariat for Economy through the Under Secretariat for Mining. See <https://www.gob.mx/sgm>

- **Nicaragua: Directorate General for Mines** is a Ministry of State exercising control over the energy and oil sectors and geological resources; it has the primary responsibility for formulating, coordinating and implementing laws, policies, regulations and strategic plans for the promotion and development of these resources following sustainability criteria and in accordance with the Policies issued by the Government for Reconciliation and National Unity and the National Plan for Human Development to contribute to the economic development of the country and to improve the living conditions of the Nicaraguan population. See [http://www.mem.gob.ni/?page\\_id=122](http://www.mem.gob.ni/?page_id=122)

- **Panamá: National Directorate for Mineral Resources**, is an entity under the Ministry of Trade and Industry responsible for promoting the development of the mining industry as a substantial element in the socioeconomic and industrial development of the country. A

collaborative environment between the public and the private sectors is the basis for the framework inspired by the principles of transparency, sustainability, innovation or social and environmental responsibility, thus meeting the current challenges posed by the commercial integration and the free trade. See <http://www.mici.gob.pa/subcategoria.php?cid=16&sid=53>

• **Paraguay: Directorate of Mineral Resources (DRM)** whose functions are to locate, study, classify, evaluate, and propose the use of Mineral Resources within the national territory by controlling and supervising the compliance with contracts for hydrocarbons or mining concessions; and by providing assistance and technical advices in response to inquiries made to the Ministry from official or private sources on exploration or mining, quarry exploitation, classification of mineral and related cases. The Directorate of Mineral Resources has an *Information and Dissemination Centre* (CID) fully computerized with the support of the German government through a German Cooperation. The most relevant activity of this agency is to give support to other departments, as well as attention to the public in general in all aspects related to the dissemination of these subjects information. See <http://www.ssme.gov.py>

• **PERU: Metal Mining Geological Institute (INGEMMET)** is a Decentralized Technical Public Entity from the Energy and Mines Peruvian Sector, with legal status and administrative, economic and technical autonomy granted in accordance with internal public law. at the main goals are to obtain, store, record, process, manage and efficiently disseminate the geoscientific information as well as the materials related to basic geology, subsurface resources, geological hazards and geo- environment. See <http://www.ingemmet.gob.pe>

• **Dominican Republic: National Geological Service (SNG)** is a dependency of the Ministry of Economy, Planning and Development. The SNG was created thanks to funding from the European Union and will be useful for the mining sector, in the construction of infrastructure, hydraulic resources, identification of seismic risks and disaster prevention, urban and rural planning, and for the country's scientific-technological development. Website unavailable.

- **Dominican Republic: Dominican Geology Society (SODOGEO)** is a non-profit organization, established in 1975 which is made up of 100 Geologists, Mining Engineers, Metallurgists and professionals from other branches of geosciences. See <http://sodogeo.org/>

- **Uruguay: National Directorate for Mining and Geology (DINAMIGE)** whose objectives are to promote, regulate, control and supervise the exploitation, for economic purposes, of the country mineral resources; to regulate and control exploration and exploration activities carried out outside the State; keep the geoscientific and mining information of the country updated in reports of the companies, organizations and institutions that implement the surveys directly; to grant and manage exploitation concessions. See <http://www.dinamige.gub.uy/web/mineria-and-geologia>

- **Venezuela: National Institute of Mining Geology (INGEOMIN)**

Institution with the capacity of designing and implementing programmes in geochemical, geophysical and geological fields which evaluates mineral reserves, as well as for prospecting groundwater. <Http://www.ingemin.gob.ve/>



## **ANNEX 3 - CONSULTATION ON RAW MATERIAL RELATED PLATFORMS/INITIATIVES TO EU LIAISON OFFICES**

### **• CANADA**

Canada is a country with a strong mining background, for more than 150 years it has built its economic prosperity partially based on this industry, and currently it has around 200 active mines. However, while large-scale deposits continue to be exploited on the continent, about 50% of mining projects owned by companies registered on the Toronto Stock Exchange (TMX) are located outside Canada. What's more, many of the companies registered with TMX do not even hold mining concessions in Canadian territory. 60% of the world's mining and exploration companies are listed on this stock exchange, which accounts for 80% of the sector's transactions and 36% of global mining capital. This concentration positions Canada as the world leader in the sector where mining companies find an ideal platform to deploy their activities around the world, particularly in Latin America, Asia and Africa.

In the last two decades, the international presence of Canadian miners has continued to grow, especially through the juniors (companies that are exclusively dedicated to exploration) but also through their elder sisters, the majors.

### **• NATURAL RESOURCES OF CANADA- EARTH SCIENCES SECTOR.**

As Canada's foremost geomatics and geoscience organization, NRCan provides public geoscientific and geospatial expertise, knowledge and technology to support environmental, social and economic objectives of the federal government. This knowledge is used to strengthen Canada's understanding, stewardship and sovereignty of its landmass and natural resources and helps to build a competitive advantage for its related economic sectors. Not only does it rely on its in-depth science and technology expertise, Earth Sciences programs and services in NRCan also leverage federal / provincial / territorial and academic partnerships to effectively support its mandate and legislated responsibilities.

NRCan's fundamental earth science, geography and geospatial information and expertise helps to: Develop innovative and sophisticated tools, technologies, standards and frameworks based on geo-information to enhance productivity or cost-efficiency in the Natural Resource sectors and other organizations;



Underpin land development and assertion of sovereign rights through its role to help define legal geographic boundaries; Reduce investment risk in natural resource development, by identifying potential sources of energy and minerals; and Assist in reducing environmental impacts related to natural resource development through the use of science and technology products for effective regulatory practices and informing stakeholders with evidence-based information.

NRCan's Earth Sciences scientific and technical expertise spans the areas of geology, environmental geoscience on land surface, vegetation, groundwater, permafrost, snow and ice as well as their interactions with resource development and infrastructure. It also spans scientific and technical expertise on remote sensing (RS) satellite imagery, geodetic surveys, topographic, height and other theme-based data references, authoritative geospatial standards, legal surveys and boundary information, as well as regulatory and support functions to cadastral surveys on Canada's landmass and waters.

See <http://www.nrcan.gc.ca/home>

- **THE MINING ASSOCIATION OF CANADA (MAC).**

Since 1935, the Mining Association of Canada (MAC) has been the national voice of the Canadian mining industry. Working alongside its members, MAC promotes the industry nationally and internationally, works with governments on policies affecting the sector and educates the public on the value mining brings to the economy and the daily life of Canadians. The list of full and associated members can be consulted at <http://mining.ca/members-partners/our-members>.

- **JAPAN**

Mineral resources of Japan are varied but limited in quantity. Limestone is the most exploited rock. Other minerals such as coal, copper, lead, zinc and other rocks such as quartzite are also extracted, but in quantities insufficient in order to meet the domestic internal demand.

Japanese industries suffered serious damages in World War II. Afterwards, the country undertook a reconstruction that resulted in the complete modernization of industrial facilities, with emphasis on the chemical and petrochemical industries and the heavy machinery industry.





By the mid-1950s, industrial production had surpassed pre-war levels; Industrial growth reached 9.4% annually during the period 1965-1980 and 6.7% annually during the 1980-88 period.

By the mid-1990s, Japan was the world's leading shipbuilding country and was among the world's top producers of electrical and electronic products, steel and motor vehicles. Crude steel production in the same period was about 109.7 million tons; and the production of iron in ingots, amounted to 80 million tons. Japanese industry also produced 9.8 million passenger cars, 7.6 million trucks and cranes, 47.7 million watches, 28.2 million videos, 14.3 million colour televisions, 18 million cameras of 35mm, 6.1 million microwave ovens, 5.2 million refrigerators, 4.3 million fax machines, 2.6 million computers, 2.3 million copiers and many other electrical and electronic home and working appliances. In parallel, due to the strength of the yen, Japanese companies have increasingly invested in industrial plants outside of Japan.

- **GEOLOGICAL SURVEY OF JAPAN**

Geological information is essential for a country like Japan, which is located in a tectonically active area, to ensure a safe and secure society. The Geological Survey of Japan gathers, compiles, and provides geological information and promotes its wider use. There's also the development of technologies to overcome various difficulties related to global environment protection, exploration of minerals and energy resources, and natural disaster mitigation; it's also responsible for the coordination of the international cooperations as a national representative. See <http://www.aist.go.jp>

- **National Research Institute for Earth Science and Disaster Resilience (NIED)**

The NIED aims to protect people's lives and properties from natural disasters and to prepare society to become more resilient to natural disasters, through research on disasters caused by earthquakes, volcanoes, floods, landslides, meteorological changes, and snow and ice damages. See <http://www.bosai.go.jp>

- **New Energy and Industrial Technology Development Organization (NEDO)**

Since 1980, NEDO has 2 missions: 1) Addressing energy and global environmental problems, and 2) Enhancing industrial technology.

NEDO's Technology Development Fields covers a wide range of the energy and environmental fields and the industrial field. National projects are supported with 1.2 billion € (from the 2017 budget). Basic legislation on promotion of recycling has been established since 1991. To face shortage in raw metals supply and subsequent price rise, Japan is making a shift towards another phase of technology development, thereby boosting a transformation of urban mines (e-waste) into raw materials feedstock and strengthening the link between production and recycling industries. Recycling industries can be more efficient and sophisticated with the help of a information sharing platform. NEDO has just started a new national project "Technology Development of Metals Recycling for High-Efficiency Resource Circulation System" for the period 2017-2022, with a budget for 2017 of 3.2 million EURO.

- **USA**

The USA has a rich history of mining and raw materials. For example, every American uses an average of 40,000 pounds of new minerals each year. About 320,000 people work directly in mining throughout the United States and employment in industries that support mining, including manufacturing, accounts for another 3 million jobs.

Its weight in the economy is substantial given that processed materials of mineral origins account for 5 percent of U.S. gross domestic product and minerals account for U.S. exports of as much as \$6 billion per year.

United States is the world's second-largest producer of copper and gold and has the world's largest reserve of coal.

This level of reserves and the Investment in technology, training and equipment has made the U.S. mining industry the safest in the world.

- **U.S. GEOLOGICAL SURVEY**

The U.S. Geological Survey is the nation's largest water, earth, and biological science and civilian mapping agency. It collects, monitors, analyses, and provides scientific understanding of the natural resource conditions, issues, and problems. See [www.usgs.gov](http://www.usgs.gov)



- **MINERALS**

The USGS studies geologic processes that concentrate mineral resources in the Earth's crust, and assesses areas of undiscovered mineral resources. It also collects national and international information on mineral commodities. See <https://www.usgs.gov>

- **National Minerals Information Center**

The National Minerals Information Center, the primary agency for collecting and analysing nonfuel minerals information, released the 2017 Mineral Commodity Summaries, a collection of reports on over 85 commodities essential to the U.S. economy and national security. See <https://www.usgs.gov/locations/national-minerals-and-information-center>.

- **Geology, Minerals, Energy and Geophysics Science Center**

Scientists with the GMEG Science Center work on issues related to geologic processes and mineral and energy resource potential, primarily in the western United States. The science staff includes geologists, geophysicists, geochemists, biologists, GIS and remote sensing specialists who are located in offices in several states. See <https://www.usgs.gov/centers/gmeg>

#### ANNEX 4 - EU-LATIN AMERICA MINERAL DEVELOPMENT NETWORK PLATFORM (MDNP)

The overall objective and purposes of the ERA-MIN 2 Project are the establishment of a network platform for continuous and structured cooperation on a mutual benefit basis between EU and Latin American authorities, industry, business (including SMEs), academia, geological surveys and other relevant entities for the non-energy extractive industries, in the fields of technology, consulting services, infrastructure, investment, trade, training and skills, health and safety, good governance and other relevant areas of the mining value chain (from exploration to mining, rehabilitation and post-closure). The purpose of the project's work is:

- Realisation of a study comprising a comprehensive analysis of the extractive sectors and related technologies and services in each of the target countries, a thorough stakeholders' mapping exercise, a detailed mapping of the different interests in cooperating and of the different funding instruments available to support cooperation.
- The development of a trilingual (English, Portuguese and Spanish) operational digital network platform;
- The organisation of an EU-LA mining exploration convention & trade show for all interested stakeholders to be organized in Madrid, Spain, during April 2018.

Proceeding from these definitions, the tasks of the project can be summarised in the following two components as follows:

**1. Component 1:** Comprehensive analysis of the extractive sector, related technologies and services between EU and Latin America. This includes a thorough stakeholders' mapping exercise and a detailed mapping of the different interest in cooperation and of the different funding instruments available to support cooperation;

**2. Component 2:** Enhancing EU-LA Cooperation; with the development of a trilingual (English, Spanish, Portuguese) operational digital mineral development network platform (MDNP) hosted in the cloud. Ownership, maintenance and options for self-sustainability of the MDNP in the mid to long term shall be assessed; the organisation of a EU-LA 3 days mining exploration convention & trade show for all stakeholders, in Madrid; where it is easy for Latin American miners, to meet with their European counterparts and to discuss around the platform and participated with different workshops covering at least the following topics: good





ERAMIN 2

RESEARCH & INNOVATION PROGRAMME ON RAW MATERIALS  
TO FOSTER CIRCULAR ECONOMY

governance, land-use planning, investment, CSR, technology supply, environmental and social license to operate trade.



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