



ERA-MIN 2

RESEARCH & INNOVATION PROGRAMME ON RAW MATERIALS
TO FOSTER CIRCULAR ECONOMY

Acronym: ERA-MIN 2

Title: Implement a European-wide coordination of research and innovation programs on raw materials to strengthen the industry competitiveness and the shift to a circular economy

Grant Agreement number: 730238

Funding scheme: ERA-NET COFUND

Start date: 1st December 2016

Duration: 60 months

DELIVERABLE D6.4.

Strategy for cooperation beyond ERA-MIN 2

WP 6: Strengthening the raw materials research community

Task 6.4: Strategy for cooperation beyond ERA-MIN 2.

Task Leader: Vinnova

Lead beneficiary: Vinnova

Type: Report

Dissemination level: Confidential

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Due Date: Month 30



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: The main objective of this task is to have a strategy for cooperation beyond ERA-MIN 2. It has been decided to submit a proposal to the H2020 call for an ERA-NET Cofund on Raw Materials (ERA-MIN 3) in Feb 2020 in which the EU contribution is 5 million euro.

This report will present shortly the initial steps taken to get started on gathering a consortium and writing the ERA-MIN 3 proposal.

A questionnaire was sent out to relevant funding organisations to examine the potential interest in participating in ERA-MIN 3. So far, 15 funding organisations have expressed an interest in participating, and the total indicative budget is around 16-17 MEuro.

On May 9, 2019 a workshop was organised, in conjunction to the CSC and NSC meetings in Bled. The aim of the workshop was to start setting up a structure for the proposal and start thinking about topics for a possible co-fund. Representatives from 22 different funding organisations participated in the workshop.

During the following months a task force will suggest a structure for an ERA-MIN 3 proposal that will be discussed among interested organisations. In September a writing workshop will be organised, and before then organisations will be asked to give a final decision of their participation in ERA-MIN 3.



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Objectives

The main objective of this task is to have a strategy for cooperation beyond ERA-MIN 2. In the proposal two alternative possibilities were mentioned; to keep the cooperation in Horizon 2020 through a follow-up ERA-NET Cofund action in Work Programme 2020 or a sustainable long-term transnational collaboration beyond Horizon 2020 by identifying common topics of interest with added value when undertaken multilaterally and the most appropriate mechanism. As a call for an ERA-NET Cofund on Raw Materials within Horizon 2020 soon will be announced the first alternative has been chosen.

This report will present shortly the initial steps taken to get started on gathering a consortium and writing the proposal.

Preparatory work

To examine the interest in applying for a new ERA-NET Cofund on raw materials a questionnaire was sent out to the ERA-MIN 2 consortia as well as potential new members. 15 funding agencies, of which 12 are from EU countries, have so far expressed an interest in participating in ERA-MIN 3, and 4-5 organisations are also interested in leading or co-leading workpackages or tasks. As it is too early for many organisations to give a preliminary budget the co-funded call only have an indicative budget of around 8 Meuro, and additional calls 8-9 Meuro.

However, it is anticipated that more organisations will be able to give a preliminary budget before September 2019 and also more organisations will join.

The questionnaire can be seen in annex 1.

Initial workshop

A workshop with the funding organisations was organised in Bled on May 9, 2019 to start working on an ERA-MIN 3 proposal. Participants from 22 funding organisations were present at the workshop, Annex 2. The workshop was started off by a presentation from DG GROW.

A workshop methodology designed to ensure all participants had the possibility to contribute to the discussions was used. Two topics, activities/structure and thematic areas, was discussed to explore a structural re-take on ERA-MIN 2. All



funding organisations were given the possibility to express their opinion on what should be kept, updated, added or removed from current ERA-MIN 2.

The workshop was concluded by suggestions on work packages and tasks to be included in the proposal.

Information on and from the workshop can be found in annex 3.

Next steps

At the workshop a task force was chosen to make a suggestion on work packages and tasks from which the proposal will be developed. A writing workshop will take place on 25-26 September in Lisbon, and by then funding agencies should give a final decision on their participation budget for ERA-MIN 3, as well as express possible interest to lead work packages or tasks.



Annex 1 – Questionnaire

ORGANISATION /Contact details

Organisation name (in English) / acronym:	
Country:	
Research Funding Programme name (in English):	
Contact person name (s):	
Contact person Email (s):	

Please indicate your funding organisations interest in participating in ERA-MIN 3 and if you can consider leading a WP or task. This is non-binding at this point and just to scope the interest.

Question	YES/NO	Comment
Interest in participating in the “ERA-NET Cofund on Raw Materials” as a partner and thus also participating in the first (cofunded) call?		
Preliminary, non-binding, indicative national or regional funds committed by your organisation for the Cofund call (in Euro)?		
Interest in leading or co-leading one or more Work Packages?		
Interest in leading or co-leading one or more tasks?		
Interest in participating in the ERA-MIN 3 without any leadership but contributing to different tasks?		
Interest in participating in the additional call(s) without EU top-up?		
Preliminary, non-binding, indicative national or regional funds committed by your organisation for additional Call(s) (in Euro)?		



Please indicate the research topics that are eligible for funding by your organisation and of high, medium or low priority or cannot be funded. The topics and sub-topics from ERA-MIN 2 has been used but this can be changed if agreed upon at later discussions

Call Topic	High-medium-low priority /Cannot be funded	Comment
Supply of raw materials from exploration and mining		
Sub-topics:		
Exploration		
Mining operations		
Mine closure and reclamation		
Other sub-topic? Please specify		
Design		
Sub-topics:		
Product design for increased raw material efficiency		
Product design for reuse or extended durability of products		
Product design to promote recycling (e.g. facilitation of dismantling)		
Product design for critical materials substitution		
Other sub-topic? Please specify		
Processing, Production and Remanufacturing		
Sub-topics:		
Increase resource efficiency in resource intensive production processes		
Increase resource efficiency through recycling of residues or remanufacturing of used products and components		
Increase resource efficiency using information and communication technologies (ICT)		
Other sub-topic? Please specify		
Recycling and Re-use of End-of-Life products		
Sub-topics:		
End-of-life products collection and (reverse) logistics		
End-of-life products pre-processing: pre-treatment, dismantling, sorting, characterization.		
Recovery of raw materials from End-of-life products		
Increase recycling of End-of-Life products through information and communication technologies (ICT)		
Other sub-topic? Please specify		
Cross-Cutting Topics		
Sub-topics:		
New business models		
Improvement of methods or data for environmental impact assessment (e. g. LCA - life-cycle analysis)		
Social acceptance and trust/public perception of raw materials		
Other sub-topic? Please specify		



Annex 2 – List of participants at the workshop

Belgium/Flanders	Hermesfonds	Ms. Elsie De Clercq
Belgium-Brussels	Innoviris	Ms. Beata Bibrowska
Belgium-Wallonia	SPW-Wallonia	Mr. Pierre Demoitié
Brazil	Finep	Mr. Tadzo Queiroz
Chile	CONICYT	Ms. Andrea Cibotti Ortiz
Czech Republic	TACR	Ms. Barbora Netolická
EU	DG GROW	Mr. Daniel Cios
Finland	Business Finland	Mr. Kari Keskinen
France	ANR	Mr. Massimiliano Picciani
France	ADEME	Ms. Rachel Baudry
Germany	BMBF	Mr. Helmut Löwe
Germany	JUELICH	Mr. Holger Grünewald
Greece	GSRT	Mr. Michael Kotsias
Ireland	GSI	Ms. Aoife Braidén
Italy	MIUR	Mr. Aldo Covello
Italy-Calabria	Calabria Regione	Mr. Menotti Lucchetta
Poland	NCBR	Ms. Karolina Janczykowska
Portugal	FCT	Ms. Dina Carrilho
Portugal	FCT	Ms. Ana Luísa Lavado
Slovakia	SAS	Mr. Jan Barancik
Slovenia	MIZS	Ms. Doroteja Zlobec
Slovenia	MIZS	Ms. Petra Žagar
Slovenia	MIZS	Ms. Meta Dobnikar
Spain	AEI	Ms. Leonor Gómez
Spain	AEI	Mr. Amador Caballero
Sweden	Vinnova	Ms. Susanne Gylesjö
Turkey	TUBITAK	Mr. M. Ufuk Atay



Annex 3 – Workshop - structure and notes

Structure of WS

4 groups with 4-5ppl/group + one 'host'

1. Think and write post-it's individually (6 min, 1 thing/post-it)
2. Discussions and clustering of the post-it's, add on together--
lead by 'host' (20 min)
3. Switch groups- the host stays and summarises the post-it's
for the new group (max 7 min) Repeat step 1 and 2
4. The hosts present the result to all (max 7 min/group)

- What do we want to keep from ERA-MIN 1 and 2? **blue post-it**
 - What do we need to update, change or add? (reflect changes in the Raw Materials sector) **orange post-it**
 - Anything we want to remove? **pink post-it**
1. **Activities, processes (how, what, when?) Hosts: Massimiliano and Karolina**
 2. **Topics (thematic areas) Hosts: Leonor and Ufuk**

- Compile results from previous exercise to make preliminary WP's**
- discussions in smaller groups to propose WP-structure, 20 min**

Notes

KEEP	UPDATE/CHANGE/ADD	REMOVE
<p>Calls: 2 additional calls 1-step procedure (not possible cofund call?)</p> <p>External SEB + meeting</p>	<p>Joint calls with other ERA-nets/networks WS w experts to discuss topics Different criteria for different topics Min funding/agency Max funding/country/project More diversified SEB (country and industry)</p>	
<p>Structure: Keep same WP-structure</p>	<p>WP 5 and 6 too similar now WP4 monitoring projects focus more on result (not admin)</p>	<p>WP 6 Advisory board Tasks with no clear purpose</p>
<p>Additional activities: Follow-up ERA-MIN 2 projects</p>	<p>More activities w other networks Knowledge hubs Scientific seminars More branding (outreach activities?) Mapping of regional/national projects (RMIS) Info/knowledge transfer-funding org (national programmes, experience etc) Update road map</p>	<p>Mapping (benchmarking) of programmes</p>
<p>Other:</p>	<p>More web meetings to save costs (to increase evaluator fee) More partners (RFO?)</p>	

WP1-5 are fixed

WP1 – Coordination and management

WP2 - Preparation and launch of the co-funded call

WP3 - Evaluation and proposal selection for the co-funded call

WP4 - Follow-up and monitoring of co-funded projects and co-funded call implementation

WP5 - Communication, dissemination and exploitation of the results

WP6 – Joint calls

- with other international partnerships?
- with other ERA-Nets?

WP7 – Outreach?? (maybe some of this should be in WP5?) (added value funded projects

- knowledge hubs, **project seminars and match making events wp5**
- Database of national/bi-lateral projects linked to RMIS (Get RMIS to host it on RMIS link and add EU funded projects themselves)
- Exchange for researchers/exchange of knowledge...workshop, short stays etc., Building competencies – organise specific themed workshops

WP8 – (European) Partnerships in Raw Materials?? 'added value funding org

- brokerage events, communication,
- Identify barriers/opportunities to EU/non-EU co-funding or agency collaboration
- Knowledge exchange for the funding agencies
- update research agenda (subcontract relevant network for this)

We need to look at what expertise we have – running funding programmes, strategy funding planning leveraging funding from industry etc. - and identify what we can add here. Two main objectives of ERA Min 3 (i) supporting transnational RM projects and (ii) linking international funding agencies and strengthening networks here.

For the links to other projects, I think we are better off to change the WP6 activities and limit it to (a) RM EIT/EIP and strategic minerals initiatives and (b) other ERA NETS or co-funding programmes – these are our expert areas, designing strategic funding programmes and then implementing them.

KEEP	UPDATE/CHANGE/ADD	REMOVE
Sustainable management of resource cycle, whole value chain, circular economy approach, whole life cycle, broad topic distribution	Consortia should include end-users Different topics-different calls Industry driven (applied topics)	Batteries (not primary supply)
Design (new products, processes and services)	Industrial symbiosis	Non-metallic minerals (only keep metals??)
Primary resources, sustainable supply of strategic RM, mining processes,	Benchmark of processes (environmentally friendly)	Cross-cutting topics (include in all topics instead)
Secondary resources, recycling	Governance and policy (circular economy)	Eco-design (is a different community)
Substitution	Education, training	
New business models	Better correlation to SDG's	
Public acceptance	Re-use of mine waste	

KEEP	UPDATE/CHANGE/ADD	REMOVE
	More on construction materials – quality, effects of pyrite, mica etc., demand, geopolymers (construction materials from waste or secondary resources, low Carbon, carbon sequestration)	
	Smart mining	
	Increase RM for low carbon energy sector	
	Improve critical raw materials recovery	