

JRC CONFERENCE AND WORKSHOP REPORTS

Third international workshop of the Raw Materials Information System (RMIS)

Agenda & Summary

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Foreword

Launched in 2015 and markedly upgraded in 2017, the Raw Materials Information System (RMIS) is the Commission's reference web-based knowledge platform on non-fuel, non-agriculture raw materials. Following the success of the 2017 and 2018 editions, the 3rd International RMIS workshop (June 11-12, 2019) brought together key RMIS knowledge providers, targeting the most recent developments in the field of primary and secondary raw materials value chains. This report provides a brief overview of the workshop objectives, content, and structure. The slides that were presented by the invited speakers during the workshop are available online in the RMIS "news and event" section (direct link [here](#)).

Acknowledgements

The authors thank all the participants of the 3rd International RMIS workshop, the sessions chairs – Maria Nyberg (DG GROW), Christian Wimmer (DG ENV), Silvia Grandi (MISE), Leonardo Tognotti (University of Pisa) – and the invited speakers.

Special thanks go also to Sara Antonelli, Adrienn Gruber, Soledad Dominguez, Umberto Eynard and all of those from the JRC's raw materials project team who supported the organisation of the workshop.

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Abstract

The Raw Materials Information System (RMIS) is the Commission's reference web-based knowledge platform on non-fuel, non-agriculture raw materials (RMs) from primary (extraction/harvesting) to secondary (recycled/recovered) sources, along their entire value/supply chains.

To further expand and strengthen the network of RMIS' knowledge providers, and to promote discussion and knowledge sharing within such a network, yearly RMIS workshops are held at the JRC-Ispira. The 1st International RMIS Workshop (March 2017) aimed at gathering for the first time key stakeholders of the raw materials sectors, with a view to identify potential knowledge providers for RMIS. The 2nd RMIS Workshop (May 2018) aimed at facilitating the further development of key RMIS thematic sections, such as raw materials' and country profiles.

Following the success of the 2017 and 2018 editions, the 3rd International RMIS workshop (June 11-12, 2019, JRC Ispira site (VA), Italy) brought together 70+ participants from 20 countries, including non-EU countries such as Norway and Switzerland. In addition to DG JRC, the European Commission was represented by DG GROW, DG ENV, and DG DEVCO. Two European agencies also participated, namely the Executive Agency for Small and Medium-sized Enterprises (EASME) and the European Environment Agency (EEA), as well as the EIT Raw Materials.

The 2019 RMIS workshop targeted the most recent developments in the field of primary and secondary raw materials value chains. It provided insights on how RMIS addresses knowledge and policy needs related to e.g. social and environmental assessment of raw materials supply chains, national legislation, specific Secondary Raw Materials (SRMs) and Critical Raw Materials (CRMs), and material efficient end-of-life processes.

This report provides the final workshop agenda and short summaries of the workshop thematic sessions. The slides that were presented by the invited speakers during the workshop are available online in the RMIS "news and event" section (direct link [here](#)).

1 Introduction

1.1 Background & context

The Raw Materials Information System (RMIS) is the Commission's reference web-based knowledge platform on non-fuel, non-agriculture raw materials (RMs) from primary (extraction/harvesting) to secondary (recycled/recovered) sources, along their entire value/supply chains. Its scope includes both abiotic and biotic materials. Responding to a specific action of the Commission's Circular Economy Action Plan¹ ("To improve the availability of data on secondary raw materials the Commission will further develop the recently initiated Raw Materials Information System and support EU-wide research on raw materials flows."), the RMIS acts as a key interface for related policy support. The RMIS facilitates the availability of knowledge to primarily support EU policies and EC services.

The first version of the RMIS was released in 2015 as a permanent website under the JRC Science Hub. The markedly upgraded RMIS 2.0 was presented in detail in the 2017 "RMIS Roadmap & Progress Report". Two years later, the 2019 "RMIS Roadmap & Progress Report – Context, content and foreseen priorities" presents the RMIS in its latest form, highlights the progress made since 2017, identifies recent policy and knowledge needs related to the European raw materials sectors and provides an overview of the RMIS development goals that could help fill such needs.

To further expand and strengthen the network of RMIS' knowledge providers, and to promote discussion and knowledge sharing within such a network, yearly RMIS workshops are held at the JRC-Ispira. The 1st International RMIS Workshop (March 2017) aimed at gathering for the first time key stakeholders of the raw materials sector, with a view to identify knowledge providers for RMIS. The 2nd RMIS Workshop (May 2018) aimed at facilitating the further development of key RMIS thematic sections, including raw materials' profiles, country profiles, and the Knowledge Gateway.

1.2 3rd International RMIS workshop

Figure 1. Group photo (indoor) taken at the 3rd RMIS Workshop, June 2019



Following the success of the 2017 and 2018 editions, the 3rd International RMIS workshop (June 11-12, 2019, JRC Ispira site (VA), Italy) brought together 70+ participants from 20 countries, including non-EU countries such as Norway and Switzerland. The affiliation of the attendees was evenly distributed across the national government sphere, academia (incl. R&I entities and universities), and, to a somewhat lesser extent, industry. Two European agencies also participated, namely Executive Agency for Small and Medium-sized Enterprises (EASME) and the European Environment Agency (EEA), as well as the EIT Raw Materials.

The 2019 RMIS workshop targeted recent developments in the field of primary and secondary raw materials value chains. It provided insights on how RMIS addresses knowledge and policy needs related to e.g. social and environmental assessment of raw materials supply chains, national legislation, specific Secondary Raw Materials (SRMs) and Critical Raw Materials (CRMs), and material efficient end-of-life processes.

¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52015DC0614>

The 2019 RMIS workshop included discussion with participants, with a view of strengthening the networking and knowledge sharing with key stakeholders and further advancing key thematic areas in RMIS.

The sessions of this 3rd workshop focused on:

- Social challenges and responsible sourcing aspects associated with supply chains of non-energy, non-agricultural raw materials, with a view to identifying key knowledge needs, availability, and gaps that could be filled with RMIS.
- How RMIS provides knowledge on raw materials related legislation at EU Community and Member States levels, with a view on identifying further needs, gaps and recent national legislation updates in the EU Member States.
- The current and potential roles of RMIS in increasing the availability of knowledge on secondary raw materials, zooming in on the knowledge on specific secondary (critical) raw materials.

This report provides the final workshop agenda and short summaries of the workshop thematic sessions. The slides that were presented by the invited speakers during the workshop are available online in the RMIS “news and event” section (direct link [here](https://rmis.jrc.ec.europa.eu/uploads/Collectionofallslides.pdf)²).

Figure 2. Group photo (outdoor) taken at the 3rd RMIS Workshop, June 2019, in presence of JRC-D Director Giovanni De Santi



² <https://rmis.jrc.ec.europa.eu/uploads/Collectionofallslides.pdf>

2 Workshop agenda

Table 1. Final agenda of the 3rd international RMIS workshop

11 th June, Tuesday	
11:00-14.00	Arrivals, Registration
12.30	Buffet lunch
14.00-15.30	<p style="text-align: center;">Opening Session</p> <p style="text-align: center;"><i>Raw Materials Policies and Knowledge Management in the EU: forward looking</i></p> <p>chaired by Constantin Ciupagea, Head of Unit Land Resources, DG JRC</p> <p><i>This session sets the scene how the past and future development of the raw materials policy field and related R&I activities induce the growing need for a functioning knowledge management framework. In accordance, the progress and plans at RMIS will be presented and discussed.</i></p> <p>Support to Raw Materials Policies and Knowledge management at JRC, Constantin Ciupagea, HoU, Directorate Sustainable Resources, DG JRC</p> <p>Raw Materials Policies beyond 2020, Maria Nyberg, DG GROW</p> <p>EU Partnership with raw material supply countries, Sergio Piazzardi, DG DEVCO</p> <p>Recent Results and Future Plans in the Community R&D in the raw materials and circular economy domain, Laura Petrov, EASME</p> <p>Proceedings of the EIT Raw Materials Summit 2019, with special focus on knowledge management, Ignacio Calleja, EIT RM</p> <p>Recent progress and future priorities of the JRC Raw Materials Project, David Pennington, JRC</p> <p>Raw Materials Information System (RMIS): state-of-play and the 2019 Roadmap report, Simone Manfredi, JRC</p> <p>Discussion</p>
15.30	Coffee break

15.50-17.30	<p style="text-align: center;">Session</p> <p style="text-align: center;"><i>Social and environmental knowledge on raw material supply chains</i></p> <p>chaired by Christian Wimmer, DG ENV and Prof. Leonardo Tognotti, Director, Dipartimento di Ingegneria Civile e Industriale, Università di Pisa</p> <p>This session focuses on sustainability aspects associated with supply chains of non-energy, non-agricultural raw materials, with a view on identifying key knowledge gaps that could be filled through the RMIS. In particular, it concentrates on the environmental and the social dimensions. Specific objectives include:</p> <ul style="list-style-type: none"> • Analysis of synergies and common areas of interest with the OECD portal for supply chain risk information; • Good governance, social and environmental information in the RMIS: potential to support responsible sourcing and rooms for further improvement with current resources; • Identifying complementarities and data exchanges with OECD, EEA and other entities. <p>The OECD Due Diligence Guidance for Responsible Minerals and OECD Portal for Supply Chain Risk Information, Louis Marechal, OECD</p> <p>Minerals governance - The IRP report, Patrice Christmann, IRP</p> <p>RMIS in support of the role of raw materials supply chains to the SDGs</p> <ul style="list-style-type: none"> • The social dimension: responsible sourcing in batteries value chain, Lucia Mancini, JRC, with input from Andrés Zaragoza, Global Battery Alliance (World Economic Forum) • The environmental dimension, Beatriz Vidal, JRC <p>Improving data on extractive waste, Christian Wimmer, DG ENV</p> <p>Initiatives and information to assess sustainability in mining, Gudrun Franken, Head of Unit Mining and Sustainability, BGR, Germany</p> <p>Sustainability preferences and choices of consumers, Tobias Persson, Swedish Agency for Growth Policy Analysis</p> <p>Discussion</p>
19.00	Workshop dinner
12th June, Wednesday	

9.00-13.00	<p style="text-align: center;">Session</p> <p style="text-align: center;"><i>Updating Knowledge on Member States' Governance of Exploration and Mining</i></p> <p style="text-align: center;">chaired by Silvia Grandi, MISE Italy and David Pennington, JRC</p> <p><i>This session aims at presenting how RMIS addresses primary raw materials related legislation at EU Community and Member States national levels, with a view of identifying further needs, gaps and discussing options for improvements. To this end, the presentations are expected to bring in the national perspective, also with a view on the global trends, and Community benchmarking and harmonization efforts, as well as better support for the implementation. Specific objectives include:</i></p> <ul style="list-style-type: none"> • <i>How global trends could be reflected in RMIS in the broad context of good governance, including the Social License to Operate scheme, and the need for conceptual change.</i> • <i>Examine the role of sectoral policies as drivers and frames for sustainable development of the domestic extractive sector.</i> • <i>Assess and discuss progressive new solutions from national scale legal acts and best regulatory practices, and their ways of integration into RMIS.</i> <p>Welcome address – Giovanni De Santi, Director, Directorate Sustainable Resources, DG JRC</p> <p>Framework conditions in RMIS – Current actions and future plans, Tamas Hamor, JRC</p> <p>Progress of national legislation: Updating country profiles in RMIS</p> <p>Finland – Riikka Aaltonen, Ministry of Economic Affairs and Employment</p> <p>Sweden – Katarina Persson Nilsson, Ministry of Enterprise and Innovation</p> <p>Ireland – Eibhlin Doyle, Dept. of Communications, Climate Action & Environment</p> <p>Belgium, Flanders – Renate Schoofs, Government of Flanders, Department of Environment & Spatial Development</p> <p>Hungary – Zoltan Horvath, Mining and Geological Survey of Hungary</p> <p>Italy – Silvia Grandi, Ministry of Economic Development</p> <p>Spain – Carmen Marchan, Ministry of Energy, Tourism and Digital Agenda</p> <p>Portugal – Paula Castanheira Dinis, Directorate-General Energy and Geology (DGEG), Ministry of Environment and Energy Transition</p> <p>Greece – Effrosyni Varvitsioti, Ministry of Environment and Energy</p> <p>Norway – Sverre Alhaug Hostmark, Federation of Norwegian Industries</p>
11.00	Coffee break
11.20	

	<p>Towards a circular future: analysis of national and sectoral strategies with a focus on raw materials – based on “2019, Even more from less” EEA report, Daniel Montalvo, European Environment Agency</p> <p>The MIN-GUIDE’s online Minerals Policy Guide, Andreas Endl, Vienna University of Economics and Business (Institute for Managing Sustainability)</p> <p>MinLand – a H2020 project focused upon linking of mineral policies and land use policies, Ronald Arvidsson, SGU</p> <p>Discussion</p>
13.00	Lunch break
14.30-17.00	<p style="text-align: center;"><i>Session</i></p> <p style="text-align: center;"><i>Strengthening the knowledge-base on specific Secondary Raw Materials</i></p> <p style="text-align: center;"><i>chaired by Maria Nyberg, GROW and Fabrice Mathieux, JRC</i></p> <p>This session aims at presenting how RMIS plays its role in increasing the availability of data and knowledge on secondary raw materials, as well as on material flows. It also aims at zooming in on the knowledge on specific secondary (critical) raw materials potentially arising from some waste flows. Specific objectives include:</p> <ul style="list-style-type: none"> • Updates of the RMIS developments related to data and knowledge on secondary raw materials; • State of knowledge from various sectors / waste flows (e.g. electr(on)ic equipment, batteries, vehicles, mining waste); • Discussing ways forward. <p>RMIS in support to improvements of the knowledge-base on secondary raw materials’ supply chains, Jaco Huisman, JRC</p> <p>Strategies for improving knowledge on the collection of WEEE, batteries and ELV, José Riso, DG ENV</p> <p>End of life vehicles management at FCA, Francesco Bonino, FCA</p> <p>Knowledge on vehicles stocks and flows, Amund Loevik, EMPA, Maria Ljunggren Söderman, Chalmers University</p>

15.50	Coffee break
16.10	<p>The impact of second-use of vehicle batteries on raw materials availability, the example of Lithium and Cobalt, Silvia Bobba, JRC</p> <p>Providing information on the potential role of landfills and mining waste as supplier of critical and other raw materials, Maria Nyberg, DG GROW</p> <p>Discussion</p>
17.00	Closure of the RMIS workshop

3 Opening session: Raw materials policies and knowledge management in the EU

This session was chaired by Constantin Ciupagea, Head of Unit JRC-D3, Land Resources

This opening session set the scene on how the past and future development of the raw materials policy field and related R&I activities induce the growing need for a functioning knowledge management framework. In accordance, the progress and plans of the RMIS were presented and discussed.

- Constantin Ciupagea welcomed the participants, introduced the workshop structure and content, with a view to highlight how JRC provides support within the EC to raw materials policies.
- Maria Nyberg, DG GROW, provided an overview of the current policy framework in the context of raw materials and of the RMIS, in particular: the EU Raw Materials Initiative, the Strategic Implementation Plan (SIP) of the European Innovation Partnership on Raw Materials (EIP-RM), the Horizon 2020, the Renewed Industrial Policy, the European Battery Alliance and the Strategic Action Plan for Batteries. Maria also gave a pragmatic overview of the needs and challenges that the raw materials policy framework beyond 2020 will have to face.
- Sergio Piazzardi, DG DEVCO, gave insights on the EU partnerships with raw materials supply countries, highlighted some key principles of sustainable minerals value chains (in connection to SDGs), the reference policy documents, and the existing areas of attention (e.g. contract definition and management, environmental health/safety, indigenous population, energy/infrastructure needs).
- Laura Petrov, EASME, presented recent results and future plans in the community R&D in the raw materials and circular economy domains. In particular, she gave an overview of the key role of EASME in facilitating the development of high-level knowledge on raw materials through the Horizon 2020 scheme. She also announced the forthcoming EASME Infodays, 16-17 September 2019.
- Ignacio Calleja, EIT Raw Materials, gave an overview of the recent EIT Raw Materials Summit 2019, with special focus on raw materials knowledge management. Among the key messages arising from the Summit, it was emphasised that (a) e-vehicles market will put high pressure on the demand of certain raw materials, (b) informing stakeholders with high-quality data is crucial, (c) shifting to circularity is increasingly essential for the economy and (d) Europe shall invest more and more in the critical part(s) of raw materials value chains.
- David Pennington, JRC, provided an overview of the JRC's Raw Materials Project, which also includes the RMIS development.
- Simone Manfredi, JRC, presented the recent progress and future priorities of the RMIS, and announced the publication of the 2019 RMIS Roadmap and progress report.

4 Session: Social and environmental knowledge on raw materials supply chains

This session was chaired by Christian Wimmer, DG Environment and Professor Leonardo Tognotti, Director of the Department of Civil and Industrial Engineering of Pisa University, Italy.

The session focused on social and environmental sustainability aspects associated with supply chains of non-energy, non-agricultural raw materials, with a view to identifying key knowledge gaps that could be filled through the RMIS. The session included insights from experts on responsible sourcing of raw materials.

In his presentation, prof. Leonardo Tognotti, addressed the role of research institutes for strengthening the knowledge base on raw materials sustainability. He also presented the objectives of the ongoing scientific collaboration on raw materials between JRC and Pisa University.

Louis Marechal from OECD presented the OECD due diligence guidance on responsible supply chains of minerals, and described the forthcoming supply chain risk information portal.

Patrice Christmann, from the UN International Resource Panel, provided an overview of the main challenges to resources governance, based on a report that will be soon released on this topic. He provided an overview of materials demand trends, links to the Sustainable Development Goals and the Sustainable Development Licence to Operate (SDLO).

Lucia Mancini (JRC) presented JRC research developments in the fields of sustainable development goals and responsible sourcing. This includes the publication of a special issue in the scientific journal “Resources” on responsible sourcing and the ongoing activity of the JRC's internal project (Surebatt) on responsible sourcing of batteries materials.

The second part of the session started with a presentation from Beatriz Vidal (JRC), who provided an overview of the latest development of the environmental sustainability section of the RMIS, the country profiles, the raw materials profiles and also the section on monitoring schemes that includes the Raw Materials Scoreboard.

Christian Wimmer from DG Environment outlined the practical experience with the implementation of the Extractive Waste Directive (EWD). Further effort is needed to ensure that all Member States apply the basic concepts of the Directive in a similar way. DG Environment has initiated a dialogue with Member States on their application of these basic concepts. An ongoing study supports this effort by developing a broader picture of the extractive sector including country facts sheets and a material flow analysis of metal mines.

Initiatives and information to assess sustainability in mining were presented by Gudrun Franken, Head of Unit of BGR (Germany). She highlighted the report on sustainability schemes they have produced and that some companies have reporting obligations (linked to e.g. stock exchange markets). She also described an example of the considerations for the assessment of water risks, with an example for copper mining using site-specific information.

Tobias Persson, from the Swedish Agency for Growth Policy Analyses, presented an environmental analysis from the consumer perspective. He presented the results of an assessment of sustainability preferences and consumer choices, which highlighted the limited relevance of environmental considerations in final consumer choices.

5 Session: Updating knowledge on Member States' governance of exploration and mining

This session was chaired by Silvia Grandi, Italian Ministry for Economic Development (MISE) and David Pennington, JRC.

This session aims at presenting how RMIS addresses primary raw materials related legislation at EU Community and Member States national levels, with a view of identifying further needs, gaps and discussing options for improvements. To this end, the presentations are expected to bring in the national perspective, also with a view on the global trends, and Community benchmarking and harmonization efforts, as well as better support for implementation. Specific objectives included:

- How global trends could be reflected in RMIS in the broad context of good governance, including the Social License to Operate scheme, and the need for conceptual change.
- Examine the role of sectorial policies as drivers and frames for sustainable development of the domestic extractive sector.
- Assess and discuss progressive new solutions from national scale legal acts and best regulatory practices, and the ways of integration into RMIS.

Accounting for these objectives, the national contact persons of the EU Member States at the Raw Materials Supply Group (RMSG NCPs) received an invitation from the organizers, inter alia, with the following questions to be addressed in their contribution, echoing in part the above objectives and also adding a few specific ones:

- What are the recent national implementation experiences worth sharing in the context of exploration and mining, facing the regulatory/legislative framework at European, national, regional or local levels?
- What are the current trends and plans in your country on policy making and strategic thinking with regard to raw materials (e.g. change in primary and secondary minerals policy, new strategic reports, changes in other sectoral policies that affect this sector, streamlining efforts, etc.)? Could one expect game changers in the foreseen strategies?
- What is the approach taken by exploration and mining companies operating in your country to the PERC (Pan-European Reporting Standards) or IFRS (International Financial Reporting Standards) and what are the problems you noticed related to this topic?
- How could RMIS better serve the interests of MS (or regional) scale governments and help them sharing their knowledge on the framework conditions?"

In addition, the Session also contributed to the efforts of the EC (DG GROW) in support of the Second (Domestic) Pillar of the RMI by promoting the annual updates on the EU Member States regulatory profiles based on the MINLEX report (2017)³. In the request for the annual update by DG GROW the following new questions were added to the original country profile schemes:

- Do you have national or regional guidance documents or a piece of legislation specific to Environmental Impact Assessment on mineral extraction? If yes, please provide...
- Could you please specify that at which permitting stage is a detailed EIA is required in your country?
- Does your country apply the option of Article 4(b) of the EIA Directive („... for projects listed in Annex II, Member States shall determine whether the project shall be made subject to an assessment in accordance with Articles 5 to 10 through thresholds or criteria set ...") for mining projects? If yes, under what criteria?
- Was there any case in your country when Article 10 of the EIA Directive was applied („limitations ... with regard to commercial and industrial confidentiality, incl. intellectual property, and safeguarding of public interest")? Which were these?
- Do competent authorities in your country apply the IPPC permit and the Extractive Waste BREF for mining under the scope of Industrial Emissions Directive?
- Do you have national BREF(s) (Best Available Technique Reference Document(s)) specific to the whole (or stages or subsectors) minerals extractive sector?"

³ European Commission, 2017: Legal framework for mineral extraction permitting procedures for exploration and exploitation in the EU. „The MINLEX study" <https://publications.europa.eu/en/publication-detail/-/publication/18c19395-6dbf-11e7-b2f2-01aa75ed71a1/language-en/format-PDF>; <http://www.minlex.eu/index.html>

Obviously, it was impossible to cover all the above aspects in the 10-15 minutes presentation that was available for each NCP, therefore, the emphasis was made on the country's novel regulatory solutions from which other participants could benefit.

In conclusion, beyond the keynote presentations by JRC, EEA, MIN-GUIDE, and MIN LAND on overarching policy issues, 10 country representatives presented at the Session. The outcome of these talks is rather diverse. Some EU Member States showed no active legislation making on the extractive sector. Other countries, such as Belgium, Portugal, Greece, and others approved new and progressive policy documents and legislation. However, a few countries known as active mining countries, adopted absolute bans, for example Sweden on uranium mining.

A separate JRC report will present the detailed outputs of this Session.

6 Session: Strengthening the knowledge-base on specific Secondary Raw Materials

This session was chaired by Maria Nyberg, DG GROW, and Fabrice Mathieux, JRC.

The session aimed at presenting how RMIS plays its role in increasing the availability of data and knowledge on secondary raw materials, as well as on material flows. It also aimed at zooming in on the knowledge on specific secondary (critical) raw materials potentially arising from some waste flows.

The session gathered together several speakers from various organisations (industry; academia; four representatives of the Commission, from three DGs). Following a short framing introduction, six presentations were given (see presentations enclosed), followed by a short questions/answer session. A more general discussion with all participants to the workshop followed the presentations.

The session had a very good coverage of relevant sectors for the production of secondary raw materials; waste batteries, end-of-life vehicles, WEEE, mining waste and landfill were addressed. It was the first time that data on secondary raw materials arising from vehicles and mining waste and landfill were discussed in the context of a RMIS workshop. For vehicles for example, it was informative to have the views of the Commission (on legislation), of academia (on knowledge) and of the industry (on compliance); vehicles appear to contain important quantities of potential secondary (critical) raw materials, in the same order of magnitude as WEEE and it is important to increase the knowledge base on raw materials in vehicles.

Discussion points concerned quantities of certain raw materials (e.g. antimony) contained in vehicles put on the market and in stocks, as well as ways to determine these quantities (through e.g. industry data in IMDS, or through sampling). More discussions concerned ways (e.g. through measurement, modelling, etc.) to determine key parameters for quantities of raw materials in applications (e.g. batteries). Batteries and End-of-life vehicles Directives will be reviewed in the next months/years and there are opportunities to influence their provisions, in particular concerning reporting and binding targets. It was highlighted also that for less mature sectors (e.g. mining waste and landfill), the development of the knowledge base will remain important and this knowledge base needs to be developed also with current industrial initiatives in the domain.

Discussion concerned also the maintainability and sustainability of data on secondary raw materials in time: although work on data on secondary raw materials were developed in the past as one-off initiatives (e.g. projects), key data providers are still present and working to ensure that data can be updated; JRC is also working with some data providers. It was also highlighted that more work is necessary on targeting (data on) missing flows of secondary raw materials (either non reported flows or flows being exported), and that policy action was probably necessary to increase collection rates.

It was said that, although the new Parliament and the new Commission did not take office yet and, hence, it is difficult to know what will be the focus in the next years, the analysis of the recent conclusions of the Competitiveness Council of May 2019 show that efforts towards carbon neutrality and circular economy, including secondary (critical) raw materials and specific value chains, will likely play an important role in the next industrial policy strategy.

List of abbreviations and definitions

CE	Circular Economy
CEAP	Circular Economy Action Plan
CRM	Critical Raw Material
EC	European Commission
EGS	European Geological Survey
EIP-RM	European Innovation Partnership on Raw Materials
EU	European Union
EURMKB	European Raw Materials Knowledge Base
H2020	Horizon 2020
MFA	Material Flow Analysis
MSA	Material System Analysis
RMI	Raw Materials Initiative
RMIS	Raw Materials Information System
RMKG	Raw Materials Knowledge Gateway
SIP	Strategic implementation Plan (of the EIP-SIP)
SRM	Secondary Raw Material
UNFC	United Nations Framework Classification system

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