

Workpackage 5

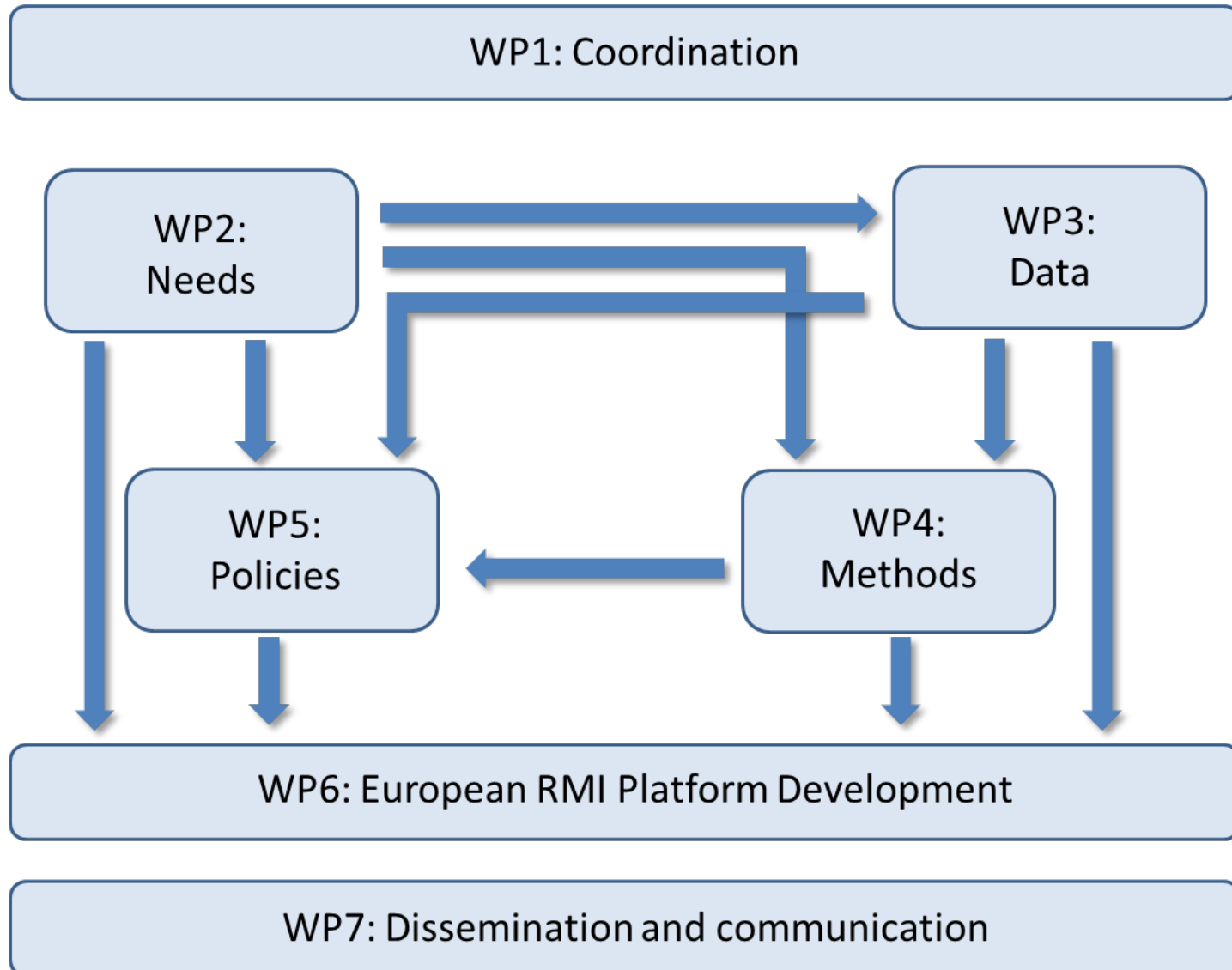
Minerals policy context

W. Eberhard Falck - MinPol

Anticipatory raw materials intelligence (RMI) is developed in a complex context of sectoral policies.

- **to take stock of existing relevant scenarios and international planning**
- **to map scenarios against the data and tools from WP3 and WP4**
- **to develop benchmarks for future foresight and planning processes.**
- **to assess future capacities needed at industry, MS, region, EU and international level**
- **to test recommended capacities with stakeholders**
- **to help EU policy makers and stakeholders to get prepared for global long-term challenges**

WP5 will go beyond MINVENTORY, INTRAW, and MINATURA2020



Subdivided into three Tasks:

- **5.1: Stocktaking, mapping and key functions of RMI**
(MinPol, NERC, UCL-ISR)
- **5.2: Strategic raw materials intelligence approaches**
(LPRC, F-ISI, MinPol, NERC, UCL-ISR)
- **5.3: Testing of RMI in Europe and its wider context**
(MinPol, LPRC, NERC, UCL-ISR)

- **Scope and content of RMI will be a function of stakeholder needs <-> WP2**
- **Implications of existing long-term scenarios with relevance to RMI**
 - low carbon scenarios (e.g. IPCC),
 - resource efficiency scenarios (e.g. POLFREE project),
 - non-EU plans (e.g. Chinese 5-year plan, African Mining Vision).
- **Establish minimum set of tools/methods to develop a coherent and comprehensive mineral policy-making framework <-> WP4**
- **RMI-MATRIX to be developed - best, medium and worst cases for RMI development**
- **Identify compromising factors**
 - lack of concrete mineral policy scenarios,
 - absence of reliable production, import, and export statistics
 - absence of reliable (historical/future) mineral consumption analyses

- **Tools for RMI assessment**
- **Differentiation between operative tools, e.g.**
 - descriptive statistics,
 - life cycle assessment (LCA),
 - materials flows analysis (MFA, c.f. WP4)
- **and strategic, long-term planning tools, e.g.**
 - back-casting,
 - scenario development and analysis
- **Investigate key functions of RMI in minerals policies and which methods and tools can be used by which stakeholders**

- **Key aspects of mineral policies include:**
 - **clear definition of scope (primary, secondary, etc. minerals);**
 - **commitment to provide an appropriate materials regulatory and knowledge framework;**
 - **harmonisation between sectoral policies bearing on sustainable resource management;**
 - **appropriate supply and demand scenarios, including the feedback from corresponding (mineral) policies <-> WP4;**
 - **SWOT analyses of policy and regulatory options and their critical paths;**
 - **monitoring the effectiveness and impact of regulations and policies;**
 - **monitoring the status of mineral deposits of public importance;**

- Develop recommendations for raw materials foresight approaches
- Complementary to the operative forecasting tools <-> WP4
- The purposes and the methods to be reviewed will be largely qualitative
- The outcomes of this Task will enable stakeholders to conduct foresight exercises in order to:
 - increase Europe's capacities for a timely response to anticipated scenarios that concern future raw material challenges (e.g. 2030/2050);
 - identify major trends, uncertainties, key decision points, driving forces, needs for future research, etc. against different timeframes;
 - formulate ideas for possible future actions (actively bringing forward a 'preferred future') and increasing efficiency and effectiveness of the EU activities related raw materials policy planning.
- Outputs will provide tools to support RMI for longer-term policy making <-> WP6

The following subtasks are envisaged (<-> WP2 and WP4):

- **5.2.1 - Logframe definition, finalising the objectives and targets of Task;**
- **5.2.2 - Understanding the different purposes of a RMI foresight**
 - according to stakeholder objectives and different futures (possible, probable, preferable, aspirational);
 - what are the most suitable dedicated foresight methods for a given purpose;
 - how have these tools been used in the past and how were they combined with other methods (<-> WP4)
 - what are the actual steps of implementation of a foresight exercise
- **5.2.3 - Benchmarks and best practices**
 - International case studies and literature to be reviewed
 - What was the scope of these studies, what was the methodology, what are the results

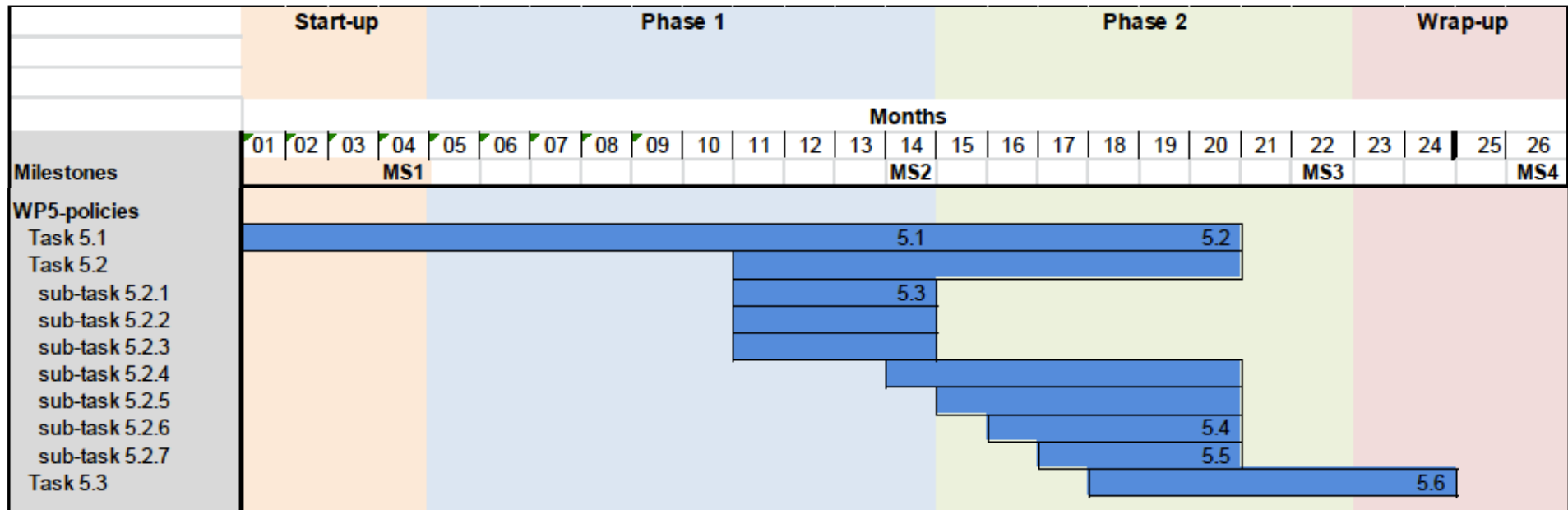
- **5.2.4 - Methodology Catalogue**
 - **Based on possible purposes of the raw materials foresight**
 - **Overview of the different foresight methods:**
 - ***anticipatory thinking protocols*** (Delphi method, Causal Layered Analysis, Horizon Scanning, Scenario planning, etc.)
 - ***Back-casting methods*** (cross-impact analysis, back-view mirror, etc.)
 - ***Visioning, futures workshops, serious games, etc.***
 - **Synchronising the catalogue with the outputs of WP4**
- **5.2.5 – Detailed methodology assessment**
 - **to provide clear guidance to the methods and to their practical implementation.**

- **5.2.6 – Pilot workshop**
 - to provide guidance and support to policy making.
 - to evaluate methodology with the help of foresight experts <-> WP6
 - will also involve experts from within the raw materials community
 - will be a very small workshop focusing on scenario analysis
- **5.2.7 – Recommendations**
 - focus on user needs, both actual (c.f. WP2) and anticipated
 - **guide on conducting raw materials foresight for RMI**
 - different possible objectives for RMI foresight
 - methods corresponding to the objectives listed before
 - detailed guide to conducting and evaluating the exercise
 - SWOT analyses of the foresight.

- **Analysis of RMI status quo in Europe and how it influences the mineral policy development**
- **The RMI MATRIX for EU-countries will be screened for the capacities, methods and tools employed <-> WP4**
- **Methods for correlating and transposing information from country reports will be developed for each EU member state.**
- **Contextual analysis of European minerals policies and supporting RMI**
 - governance paradigms of multi-national players, such as WTO, WB, WMMF, and internationally operating mining companies
- **National governance paradigms influence how RMI can be established**
 - who is responsible for foresight, regulation, supervision, research, etc.
 - how do the different authorities interact
 - synergistic or antagonistic effect of interactions.

- **Mappin of influences to understand how RMI and mineral policies can be implemented effectively in member states**
- **Analysis of the feedback of this contextualisation**
- **Analysis of impacts of Social licensing and related governance paradigms (e.g. national planning regulations, UN conventions, EU directives)**
- **Analysis of stakeholder impact on mineral policy development <-> WP2.**

Call/topic statement	Project response
<p>In the medium to longer term enhanced impact of research and innovation activities through better identification of R&I priorities, improved co-ordination of EU and Member States' research and innovation programmes and funded activities, and synergies with international research and innovation programmes.</p>	<p>WP2, WP3, WP4 and WP5 will identify and assess R&I needs, and suggest possible development tracks at EU- and international level. The comprehensive policy analyses of WP5 and the needs analyses of WP2 will provide the framework for the recommendation of R&I priorities.</p>
<p>Safeguarding of mineral wealth for future generations by defining mineral deposits of public importance.</p>	<p>... Furthermore, MICA is strongly linked to the project MINATURA2020 (coordinated by WP5 leader MinPol), that also addresses the question of deposits of public importance.</p>
<p>Increased competitiveness of the EU industry and minerals supply from EU sources.</p>	<p>MICA will deliver strengthening of the knowledge about which data are available (WP3), of the methods and tools to exploit these data, and the results they can produce (WP4) and of the regulatory framework (WP5). ...</p>
<p>Increased transparency of EU raw materials policies and legislation.</p>	<p>The policy analyses provided by WP5 will clarify the interdependencies of various policy arenas impacting raw materials, and will help to identify the drivers behind policy making in the EU.</p>



No.	Description	Responsible	Due date
D5.1	Report on the RMI tools and methods	Minpol	01/17
D5.2	Report on the development and application of the RMI-MATRIX	Minpol	07/18
D5.3	Report on Foresight Logframe	LPRC	01/17
D5.4	Report on Pilot Foresight	LPRC	07/18
D5.5	Raw materials Foresight Guide	LPRC	07/18
D5.6	Report on RMI implementation status quo and needs in EU-28	Minpol	11/18