

European Science Foundation

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and MO Forum on Indicators of Internationalisation

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MO Forum Indicators of Internationalisation

Indicators for the European Research Area
Policy needs and feasibility

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PART A: Overview of the report

ERA indicators and ERA monitoring

- http://ec.europa.eu/research/era/pdf/era_indicators&monitoring.pdf
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- ***Michael Tubbs***
- ***Isidro Aguillo***
- ***Iulia Siedschlag***
- ***Reinhilde Veugelers***
- ***Horst Soboll***
- ***Rémi Barré, President***
- ***Pierre Régibeau, Rapporteur***

PART A: Overview of the report

ERA indicators and ERA monitoring

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MEMBERS OF THE EXPERT GROUP

Benedetto Lepori - Public RD data

Michael Tubbs - Corporate RD data

Isidro Aguillo - International scientific knowledge flows

Iulia Siedschlag - International spillovers

Reinhilde Veugelers - Economic relevance of ERA indicators

Horst Soboll - Cross analysis of indicators on public & industry research

Rémi Barré - *President*

Pierre Régibeau - *Rapporteur*

The mandate

- **“... development of an evidence based monitoring system on progress towards the ERA and a knowledge-based economy”**
- **Part of the “Ljubljana Process” that aims to define and build the ERA**
- **as a cornerstone of the European knowledge society (“Lisbon Objectives”)**

Methodology

The ERA indicators framework (1)

- **“Model” of ERA along two structural dimensions**
 - The “components” of the ERA
 - The “types of concern” which its monitoring supposes
- **Component 1 - *Knowledge activities: volume and quality***
- **Component 2 - *Knowledge Triangle: flows and dynamics***
- **Component 3 – *Fifth freedom: intra / extra EU openness***
- **Component 4 – *The societal dimension***
- **Component 5 – *Sustainable development and grand challenges***

Methodology

The ERA indicators framework (2)

- **Type A1 – *Member states (MS) level policy actions***
- **Type A2 – *EU level policy actions***
- **Type B – *ERA progress – state of the ERA***
- **Type C – *ERA effects (Lisbon objectives)***

Methodology

The ERA indicators framework (3)

- **For each MS, EU, EU+**
- **Sub-groups of MS having similar characteristics regarding their research base**
- **Trends, comparisons, controlled for size**
- **For each indicator: “Intention” and “Indicator”**

The Lisbon-Oriented Indicators (1)

- **PUBLIC INVESTMENTS IN KNOWLEDGE**

- Intention : Public investments in knowledge activities

- Indicator : Public funding of RD and Higher education as a share of GDP

- **EUROPEAN INTEGRATION OF RESEARCH SYSTEMS (policy level)**

- Intention : “de-fragmentation” of EU research systems

- Indicator : Share of national public funds to trans-nationally coordinated research (among which Joint programming)

The Lisbon-Oriented Indicators (2)

- **STRENGTH OF THE BUSINESS RESEARCH BASE OF EUROPE**
 - Intention : Business – including services – RD capacity
 - Indicator : Business expenditures in RD (BERD) / GDP and growth in real terms
- **TRANSITION TOWARDS A KNOWLEDGE-BASED ECONOMY - STRUCTURAL CHANGE**
 - Intention : Specialisation in knowledge-intensive sectors
 - Indicator : Evolution of the share of the value-added of sectors intensive in tertiary education work force

The Lisbon-Oriented Indicators (3)

- **PRODUCTIVITY OF THE ECONOMY**

- Intention : Capacity of the economy to provide economic and social benefits to the people

- Indicator : Growth rate of labour productivity per hour

- **CONTRIBUTION OF RESEARCH TO ADDRESS GRAND SOCIETAL CHALLENGES**

- Intention : Mobilisation of RD on grand societal challenges, towards sustainable development and competitiveness

- Indicator : Leadership (world shares) and responsiveness (specialisation index) in S&T production in fields of grand challenges

The ERA Headline Indicators (1)

- **NATIONAL POLICY (Type A1)**
 - Public investment in knowledge
- **JOINT / COORDINATED POLICIES (type A2)**
 - European integration of research systems (policy)
- **ERA-MAKING (Type B)**
 - ERA research actors coordination and cohesion
 - International cooperation in S&T and opening to the world
 - Mobility of researchers and research careers
 - Knowledge transfer between public and private sectors
 - Pan-European research infrastructures

The ERA Headline Indicators (2)

- **ERA-EFFECTS (Type C)**

- **Activity level in knowledge producing activities**
- **Strength of the business research base of Europe**
- **Excellence of the S&T base**
- **Human resources base of the ERA**
- **Transition towards a knowledge-based economy (S-Change)**
- **Knowledge based innovation**
- **Firms dynamics (Structural change**
- **International attractiveness of Europe for business innovation and investment**
- **Productivity of the economy**
- **Mobilising RD to address grand challenges**
- **Confidence of society in science and S&T community**

The Comprehensive Set of Indicators

- **Covering in a systematic way the entries of the overall framework**
- **Understanding of the development of the various issues related to the ERA**
- **In terms of (a) policy action, (b) ERA building and (c) ERA effects**
- **Aims at contributing to the STC Report**
- **Proposal of about 60 indicators that are readily available or easily obtainable**
- **Open ended**

The Monitoring of the ERA (1)

- **The challenges of the Monitoring of the ERA**

- The ERA is about the contribution of member states to realising it
- The ERA is about integrating research into a “Knowledge society” related to policies far beyond research policy
- ERA Monitoring and governance prominent in Ljubljana process
- How can indicators contribute ?

The Monitoring of the ERA (2)

- **The significance of indicators to monitor public policies**
 - Indicators are intrinsically dependent on a representation (or model or theory) of the topic at stake
→ therefore debatable
 - Necessity to explicit the underlying representation (or model or theory)
 - In this view, indicators are neither truth nor fallacy, but a common language
 - Potential for deepening the issues

The Monitoring of the ERA (3)

- **The significance of indicators to monitor public policies**
 - **Methodological and procedural rules have to be respected**
 - ◆ Specification of data, treatments, classifications
 - ◆ Opportunities given for criticism of the indicators: underlying assumptions and proxies, questioning the classifications
 - ◆ Opportunities given for alternative approaches

The Monitoring of the ERA (4)

- **Towards using indicators for the monitoring of the ERA**

- Indicators are one of the means for the interactions among the actors
- Two possible contexts:
 - ◆ Multi-actors assessment of the ERA Headline indicators
 - ◆ High level and ministerial level meetings focussing on Lisbon Oriented indicators for broad orientations
- Need of a capacity with high degree of legitimacy both professional and political

Conclusion of the report

- **Towards a responsible and efficient use of indicators for the monitoring of ERA**
 - Analysing indicators in a systemic perspective
 - Being cautious with the issue of indicators becoming targets
 - Setting benchmarks and targets for groups of countries
 - Linking between ERA and the national monitoring processes
 - Indicators lists and reports as “living documents”
 - Some issues not fit for direct quantitative measurement
 - The question of composite indicators: demands research

PART B: The process of adoption of the indicators - issues and debates

- **Since October 2009, interactions between the Member States, CREST and the Commission to agree on a set of indicators for the monitoring of ERA**
- **Today, a provisional list is under discussion, consisting of 22 indicators**

- The relationship between indicators and targets

- **a subset of indicators would be designated as explicit policy and political targets (the ‘Lisbon-oriented indicators’)**
- **concern that some of the indicators – beyond those designated as targets - would surreptitiously become targets**
- **in the political process, the normative status of indicators is central**

- The issue of composite and qualitative indicators

- **The expert group had not proposed composite indicators (weighting problem)**
- **today, two composite indicators are under consideration: one on public – private cooperation and one on the ‘fifth freedom’**
- **concern among policy makers about the lack of transparency of such indicators, but others view them as a relevant way to synthesise complex issues**

- The issue of the country-level targets

- **Indicators become policy targets: adaptation to the situation of each member state**
- **policy and political debate at national level**
- **possible and needed to have explicit discussion about the contribution of each country to the attainment of the EU objectives**
- **heading towards a common goal each having its own best or preferred way to do it.**

- The issue of the indicators under development

- Such a role for indicators - the making of the ERA - is totally original
- Need of new indicators: only about 30 % of those currently under consideration can be considered as existing
- intensive development work, involving the relevant organisations.

Conclusion

- The ERA building process will use S&T indicators as a major political coordination mechanism
- Indicators are becoming the EU policy language: the esperanto of policy-makers
- This is indeed a challenge
- The indicators community is ready to face it
- This conference is a good expression of that.