

## **Outcome of the 2 June 2009 Brussels Seminar**

### **How can forward looking activities support the European Research Area (ERA)?**

#### **Scene setter**

At the initiative of Anneli Pauli, Deputy Director-General at DG Research, on 2 June 2009, the European Commission hosted a seminar in Brussels on forward-looking activities and their usefulness for the implementation of ERA-related initiatives as well as for underpinning planning of future framework programmes<sup>1</sup>.

The purpose of this seminar chaired by Jean-Michel Baer (Directorate "Science, Economy and Society") was to discuss the current status and experiences concerning forward looking activities in the context of EU research policy and to see how a systematic and continuous process of forward looking and horizon scanning activities could be organised.

The seminar addressed the needs of the ERA, and in particular joint programming and international science and technology cooperation, as well as the need to support the development of EU Framework Programmes.

To discuss these issues, this European seminar gave the floor to a balanced representation of:

- Member States' experiences: Pirjo Kyläkoski, Foresight Manager, TEKES (Finland), and Jon Parke, Deputy Head of Foresight, Government Office for Science (UK).
- Academic and research experts' inputs: Luke Georghiou, Andrew James and Rafael Popper (University of Manchester), Anders Jacobi (Danish Board of Technology), Maurits Butter (Netherlands Organisation for Applied Scientific Research) and Karl Heinz Leitner (Austrian Research Center).
- DG Research opinions: Jean-Michel Baer ("Science, Economy and Society"), Robert-Jan Smits ("European Research Area: Research programmes and capacity"), Brendan Hawdon ("Inter institutional and legal matters – Framework programme") and Callum Searle ("International Cooperation").
- Anneli Pauli presented a new needs-driven approach to the forward looking activities, emphasising the importance of a systematic, continuous process involving the users of the outcome of the activity as well as the other major stakeholders. How could such a process be planned and implemented without creating a heavy bureaucratic system?

---

<sup>1</sup> [http://ec.europa.eu/research/era/index\\_en.html](http://ec.europa.eu/research/era/index_en.html)

## Key messages and recommendations

### Forward looking activities and ERA: Major societal challenges, joint programming, framework programmes and international dimension

- Forward looking activities (FLA) support long-term policy-making as they tackle fundamental issues like demographic changes, economic transformations, geopolitical issues and socio-ecological transition.
- "Forward looking" is broader concept than what is usually labelled as "Foresight"<sup>2</sup>. This concept includes Horizon Scanning, Forecasting, Vision-building, Participative Technology Assessment, Quantitative Models, Technology Roadmaps, and Scenario Building. Also European Technology Platforms may be considered to be under the concept of FLA. These approaches and tools have to be combined to debate and in the end to imagine the possible futures of European research, and identify such major societal challenges which should be addressed by research.
- In building a genuine European Research Area (ERA), Member States and Associated Countries as well as EU institutions need to share their views about future social, economic or environmental challenges that research will have to address in the future. Many of these challenges such as the transition to a low carbon society or migrations are transnational and global and common to all.
- More specifically regarding European research policy, the forward looking activities help:
  - To define major societal challenges to be addressed by the ERA<sup>3</sup>;
  - To underpin the selection of themes in joint programming and to help to prioritize and focus research within a selected theme;
  - Support planning of framework programmes;
  - All of these have an international dimension.
- Recent ERA policy developments (cf. Ljubljana process and the ERA Vision 2020) have emphasised the opportunities of Member States' and Associated Countries to define, develop and implement common strategic research agendas through the so-called "joint programming". Joint programming aims at optimizing Europe's resources and capacities in research.

---

<sup>2</sup> Foresight include three dimensions: a wealth of information produced by experts, a participation of stakeholders (researchers, enterprises, non governmental organizations, public agencies) and a commitment of policy-makers to use the results for designing their own strategies.

<sup>3</sup> Societal challenges are mainly economic and broadly concerned with social and environmental goals. They can refer also to scientific and technological issues. Their dimension is generally global. The challenges may be rooted in economic, social or scientific goals but share a need to demonstrate their relevance at the European level, their feasibility in terms of Europe's capability to engage with them, and a clear research dimension such that they gain the commitment of the research community and pull-through the necessary improvements in its efficiency and effectiveness.

- Joint programming is to be carried out on a voluntary basis. In order to identify major socio-economic challenges that joint programming could address as well as to prepare joint programmes once such challenges have been identified, joint forward looking activities in partnership between the Member States, Associated Countries and the Commission would be needed.

### **National and EU-level forward looking exercises: Best-practices, clustering and synergies**

- In the UK the government has developed a future-oriented culture in all its departments. The Finnish (Tekes) case is exemplary in its stakeholders' participatory approach that is linked to Tekes' strategy process. Several other countries in Europe are also engaged in forward looking activities including the Swedish Foresight, the French "Futuris", "AGORA 2020" and "France 2025", the Danish "Research 2015" and the German "Foresight Process".
- These national initiatives range from technology-focussed and expert-driven activities to more socially oriented ones with broader stakeholder participation. They are also varied in their objectives, from identifying strategically important technologies for the companies implanted in their countries to more general questions about the role of public authorities and the institutional and societal conditions for socio-economic change.
- At the European level, there is a long tradition in forward looking activities<sup>4</sup>: Recently, six projects in the field of forward looking activities have been selected after the first call of the Seventh Research Framework Programme (FP7) in the field of "Socio-economic Sciences and Humanities" for a total EU contribution of € 3.5 millions and involving more than 30 European research teams on the following issues<sup>5</sup>:
  - Use of foresight to align research with longer term policy needs in European Commission (FARHORIZON)
  - Scanning for emerging science and technology issues (SESTI)
  - Innovation futures in Europe: a foresight exercise on emerging patterns of innovation. Visions, scenarios and implications for policy and practice (INFU)
  - Citizen visions on sciences, technology and innovation (CIVISTI)
  - Interconnecting knowledge for the early identification of issues, events and developments (e.g. wild cards and associated weak signals) shaping and shaking the future of science, technology and innovation in the ERA (IKNOW)
  - The future impact of security and defence policies on the ERA (SANDERA)

---

<sup>4</sup> Forward looking activities have a long tradition in the European Commission:

- The Cellule de Prospective and the FAST / MONOTOR programmes (in the eighties);
- The building up of the JRC Institute for Prospective Studies (IPTS) and the development of competencies or studies in several Directorates-General that allow them to better seize the challenges of the future (in the nineties);
- The setting up of a monitoring system on foresight; the so-called European Foresight Monitoring Network and the "nano-bio-info-cogno convergence" process at the beginning of this century;
- The sectorial studies on energy and climate change outlooks these last ten years;
- The current EU 7<sup>th</sup> Research Framework Programme (FP7) that integrates Forward looking activities within the thematic field "Socio-economic Sciences and Humanities" (SSH).

<sup>5</sup> [http://ec.europa.eu/research/social-sciences/pdf/synopses-fp7-ssh-projects-2007-2009\\_en.pdf](http://ec.europa.eu/research/social-sciences/pdf/synopses-fp7-ssh-projects-2007-2009_en.pdf)

- These FP7 projects will be as much as possible "clustered" in order to ensure synergies and complementarities among EU forward looking research activities. In addition, efforts will be made to give the best visibility to these projects integrating Member States, Associated Countries and EU institutions in the progress of the research work in order to develop exchanges between the research community and the policy processes related to the ERA.
- Other European research initiatives in the field of forward looking activities could be mentioned like the European Technology Platforms, the newly initiated Social Platforms and the SCAR foresight for agriculture.

## **Points of agreement**

- Consensus is growing that a more coherent development of research and innovation policies in Europe implies an urgent need to co-operate more systematically and efficiently to share the knowledge base on which European, national and sub-national policy decisions are made. Forward looking activities are a useful tool for such exchange in up-stream EU ("creative") policy-making process.
- Forward looking activities can be used for supporting the definition of the future framework programme, its annual work programmes (look at the presentation of Brendan Hawdon), joint programming (look at the presentation of Robert-Jan Smits) and international cooperation (look at the presentation of Callum Searle).
- Forward looking activities help in reinforcing the governance culture integrating the long-term perspective and in giving a larger place to cross-cutting issues.
- A lot of work has been done at the European level in the "research" component of forward looking activities but a lot has still to be done in the "policy" component of forward looking activities, i.e. "foresight research" (done by researchers, experts) should be better integrated to this process where policy-makers and stakeholders (including citizens) should participate.
- To be successful, forward looking activities need a commitment and an involvement of the initiator. For e.g. for the definition of the future framework programmes, all the actors should be present: Member States, research communities, industry and civil society organizations, Parliament and Commission. Forward looking activities should be embedded in the research strategy process, i.e. as part of the policy culture.
- Many problems and challenges of ERA should be addressed jointly, providing specific solutions, where necessary, for different socio-economic contexts. Following the EU "Competitiveness Council" (December 2008), the idea that a number of EU countries should combine their efforts through "joint programming" is becoming a reality.
- Forward looking exercises help to improve the quality and impact of European, national and regional research policies by comparing findings and methods and, consequently by contributing to improved policy design and implementation at European, national and regional level.

- Better coherence – that does not mean harmonisation or standardisation – among forward looking exercises at various levels, better access to each other's knowledge, sharing and networking will improve the support to future decision-making. European forward looking activities cannot be the aggregation of national forward looking activities but should be set up as a truly European project, preferably putting together interoperable visions that can be exploited by decision-makers.
- Forward looking methods have to be combined and integrated as much as possible in the "policy cycle" taking stock of appropriate structures for defining research agendas such as the Technology platforms and the Social platforms.
- Policy-makers, stakeholders (ministries, universities, industries, research centres and civil society organizations) should participate and work together. Both bottom-up (researchers, experts) and top-down (policy-makers) involvement are needed. Both new web-based tools and face to face contacts have to be applied.

### **Presentations available on the web:**

- Jean-Michel Baer - Forward looking activities, what has been done so far?
- Luke Georghiou - FARHORIZON project
- Anders Jacobi - CIVISTI project
- Maurits Butter - SESTI project
- Rafael Popper – IKNOW project
- Karl Heinz Leitner – INFU project
- Andrew James – SANDERA project
- Anneli Pauli – Needs of the ERA - New perspectives for Forward Looking Activities
- Robert-Jan Smits – Needs for supporting Joint Programming
- Brendan Hawdon – Needs for the development of the Framework Programme
- Callum Searle – Needs for the development of international S&T cooperation
- Pirjo Kyläkoski – The Finnish experience
- Jon Parke – The UK experience
- Luke Georghiou – Discussion introduced by short comments
- Tim Hall – The experience of a thematic Directorate of DG Research
- Helena Hacheson – The ERA expert group on "optimising RTD programmes and priorities"
- Tiit Jürimäe – The European Technology Platforms (ETP) as a vision-building process
- Karen Metzloff - European Technology Platform – Plants for the future
- Paraskevas Caracostas – Social platforms: identifying research agendas for SSH
- Anneli Pauli – Conclusions