

# The Lund Declaration; addendum

July 14, 2009

## **Introduction**

The world is rapidly changing and simultaneously facing a number of Grand Challenges, which require new solutions. This was the starting point when preparing the Conference that resulted in the Lund Declaration presented to the Swedish minister of research and higher education at the closing of the conference. This addendum to the Declaration tries to give further credit for the affluence of input from the Conference that could give guidance in the further discussions on how to better meet the Grand Challenges.

Grand Challenges, e.g. climate change, energy and water supply, public health, ageing societies and changes in world economy, were used as illustration for what they may bring. Some will emerge incrementally while others may come as crises or even shocks. Different Grand Challenges will be characterized by different sets of specific challenges, which may differ in important aspects across different regions of the world.

Radical renewal through research and innovation is needed to generate the necessary new solutions. Opportunities for path-breaking frontier research and paradigm shifts in innovation will rapidly grow. These opportunities will be the major sources of global university and business competitiveness and help our society to cope with the future. Taking into account and addressing the specific characteristics of different Grand Challenges will be critical for success.

Europe needs to mobilize substantially increased investments in research and innovation targeting Grand Challenges, as this is required to meet the rapidly increasing global competition and other threats to our well-being and in order to take part in the widening and deepening global cooperation. We must build trust with society so the required resources are made available to the research and innovation sectors. A major source for increasing research and innovation investments in Europe should be a reallocation of funds from other areas of the EU budget, notably the common agricultural policy.

Europe also needs to find effective ways to prioritize research and innovation targeting the Grand Challenges that are widely inclusive and cross boundary in their character. It needs efficient ways to manage research and innovation activities and relationships, which implies considerably improved governance structures and processes between regions, Member States and the EU, as well as at each of the different policy levels. This will be of major importance to the sustainable growth in Europe and in the rest of the world.

## **Specific policy proposals**

Following the general approach of the Lund Declaration, specific policy proposals from the conference are summarized below:

***Prioritizing of Research and Innovation to meet Grand Challenges and build public trust*** - a new and holistic governance structure to approach research and innovation should be developed:

- New stakeholder platforms for further identifying Grand Challenges are needed
- Focus on Grand challenges to transcend policy silos and generate governance synergies
- Target excellent transdisciplinary research to meet Grand challenges
- Bridge research to targeted effective innovation solutions to meet Grand Challenges
- The humanities should be an integral part in the research and innovation landscape to allow the full European knowledge and research potential to contribute to the global well-being
- Alert functions and inclusive foresight processes should be developed for flexible and prompt actions to meet unforeseen challenges
- Simplification of procedures at the Commission level hand in hand with increased accountability to build trust between the commission and the research community, the enterprises and the society

***Transformation of the European knowledge production system through major university reforms*** - a university reform is urgently needed in EU to promote top class research at selected universities and to simultaneously develop incentives for interdisciplinary research and to cooperate with the whole of the society:

- Focus on a European champions league of university research
- Develop incentives for excellence in all three knowledge triangle dimensions
- Incentives and structures for geographic and stakeholder mobility must be developed
- Develop large scale research schools for young scientists
- Focus on developing structures for excellence in inter- and transdisciplinary research
- Bridge innovation gaps by improving academia and industry relations and mobility

***Radical new solutions require more risk-taking in research and innovation*** – to secure excellence in research and lay the ground for incentives for worldwide competitiveness and responsiveness in meeting the Grand Challenges with radically new innovative solutions need long-term (financial) investments in all knowledge triangle dimensions:

- Increased support to excellence in research by a strengthened ERC
- Develop increased support for high-risk research and innovation in research programmes
- Develop new mechanisms to allocate resources to emerging fields and experimentation
- Simplify administrative conditions for research to allow for increased impact
- Develop links between high-risk radical research and high-risk radical innovation

***Demand for innovation-based new solutions need to be stimulated through lead market policies*** – different incentives and tools must be developed or improved in order to become driving forces for world-wide competitiveness of an innovative Europe:

- Develop public innovation procurement related to Grand challenges at all policy levels
- Focus on strategic price affecting and standardization policies for Grand Challenge innovation
- New and existing SMEs should particularly be focused on in different lead market measures
- Focus on competitive conditions and program schemes incentivizing lead market formations

***Global strategies in all research and innovation policies are necessary*** – Europe needs to strategically develop international relations and co-operations by strengthen links and alliances to the ERA and to the European innovation system:

- Develop Europe's international relations and co-operations in research and innovation
- Focus on opening the ERA to the world
- Focus on ensuring mutually beneficial mobility and complementarity of programmes
- Develop new approaches and new competencies for new partners in developing countries and emerging markets
- Develop new platforms for global priorities and new instruments for improved impacts

***World class research infrastructures are needed for excellence and attractiveness*** - excellent research infrastructures are needed to meet Grand Challenges with innovations, through cooperation between MS and the public and private stakeholders, to facilitate transdisciplinary research and innovation:

- Pursue ambitious investments along the lines of the ESFRI road map
- Develop databases for social sciences and the humanities as part of ESFRI
- Develop attractive conditions for young researchers access to and use of research infrastructures