

# DECLARATION

6<sup>th</sup> World Science Forum, Rio de Janeiro, 2013



## PREAMBLE

The World Science Forum (WSF), an outcome of the 1999 World Conference on Science, is a biennial event that since 2003 has successfully been assembling scientists, decision-makers from the world of politics, industry, representatives of the civil society and the media to discuss critical global issues and the potential contribution of Science towards helping meeting these challenges. For the first time the WSF was first held outside of Hungary, as a part of a strategy to reflect the changing landscape of science, allowing the forum to benefit from the contribution and achievements of emerging scientific powerhouses to scientific enterprise, and further spreading the impact of the forum to other regions.

With the encouragement and support of the Hungarian Academy of Sciences (HAS), the Brazilian Academy of Sciences (BAS) the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Council for Science (ICSU), and all invited organizations and fellow scientists, we, the participants of the World Science Forum held from 24 to 26 November 2013 in Rio de Janeiro, recognizing the relevance of the outcomes of 1999 World Conference on Science (WCS) and taking into account the 2011 Budapest Declaration on the New Era of Global Science, as well as the debates and the outcomes of the 2013 Rio de Janeiro World Science Forum on “Science for Global Sustainable Development”, adopt the present declaration.

In line with the recommendations approved by the Rio+20 UN Summit held in Brazil in June 2012 and as stated in the document ‘The Future We Want’, signed by the heads of State and Governments in Brazil; “eradicating poverty is the greatest global challenge facing the world today and an indispensable requirement for sustainable development.” In this regard we are committed to free humanity from poverty and hunger as a matter of urgency, we renew our commitment to global sustainable development and to the ongoing discussions on the Sustainable Development Goals and the Post-2015 Development Agenda.

### Text adopted by the 6th World Science Forum on 27 November 2013

1. Global sustainable development, implying the environmental, economic and social dimensions of sustainability, as well as the need to face the challenges of growing complexity, requires intense research efforts, interdisciplinary and transdisciplinary approaches. Population growth, climate change, food, energy and water shortages, growing urban concentrations, natural and technological catastrophes, epidemics, social inequality and poverty all require that the world’s scientific establishments assume new roles necessitating the integration of all knowledge systems.
2. Scientific achievements coexist with strong inequalities in access to knowledge, natural resources, water and food supplies, economic and human capital, health care, education, research infrastructure and, in general, to the benefits of science. These inequalities require a rethinking of the scientific enterprise and cooperation. Consequently, inventing and constructing the future we want will require strong input from science policy and decision-making processes will need to be supported by the best available science. This implies building a new paradigm of development, which combines the possibility of regional social and economical development with the conservation of nature and the culture of indigenous people.

3. The global economic crisis, prevalent since 2008, has created a situation in which national science policies have been subject to fundamental revision. Many countries have cut their science budget, while others have increased the support for science and engineering in order to stimulate innovative research, which historically has given rise to technological break-throughs and new cycles of development contributing to the enhancement of Science, Technology and Innovation (STI) systems at national and regional level.
4. Accelerating “knowledge economies” have generated new migration patterns for scientists and an increase in mobility. The need for greater cooperation between universities, public research organizations, and industry has become pressing in education both at graduate and post-graduate level and in the training of scientists to open up new opportunities for young scientists.
5. Scientists are individually and collectively ethically responsible for the advancement of Science and the use of its benefits for society. Developments in many research fields (e.g. genetics, biotechnology, neuroscience, nuclear physics, etc.) have considerable moral and ethical implications that require an urgent and global dialogue between scientists and the wider public. While conceiving, proposing and developing research, in communicating research results and in cooperating and mentoring relationship with other scientists, researchers shall conduct their enterprise guided by intellectual honesty, objectivity and impartiality, veracity, justice and responsibility.
6. The growing intensity in the competition for natural resources, highly skilled talent, strategic information resources and research infrastructure induces political and economic conflicts around the globe. New development models are needed and these should be innovative, informed by scientific evidence and locally relevant. Under these conditions, science diplomacy continues to gain relevance in international relations, especially in crisis management and the establishment of peaceful cooperation among countries when traditional political and diplomatic relations cannot fulfil their roles. The rational use of the vast natural resources of the planet has to be permanently incorporated into development strategies and this will not be possible without strong input from Science.

# RECOMMENDATIONS

In light of these statements, we make the following recommendations:

1. International scientific cooperation and coordinated national actions for global sustainable development

In the complex global system of environmental, economic and social interdependencies, sustainable development can only be addressed when global and national efforts are coordinated. International coordination and common principles are required to harmonize national science policy actions and research projects focusing on global sustainability issues. Coordinating actions must however respect regional disparities and inequalities in current national capacities. Global challenges offer a unique opportunity for collaborative research on an equitable basis

Excessive inequalities in natural resources, highly skilled talents, strategic knowledge resources and research infrastructure are inhibitors of meaningful cooperation and are the foundation of political, social and economic tension. For this reason, policy actions to promote sustainability must also aim at decreasing inequalities around the globe, with special attention directed to education, research infrastructure and access to strategic knowledge resources.

2. Education to reduce inequalities and promote global and sustainable science and innovation

Providing high quality education in Science, Technology and Engineering must be understood as a priority: in basic education, as a fundamental element of modern culture and later as a vital component of a country's capacity to compete in the global economy. Governments need to understand that strong investment in education, and deep changes in science education, are closely linked with social inclusion, prosperity, effective citizenship, and the building of a sustainable future for the planet. Global Sustainability requires the involvement of all members of society particularly, the inclusion of more women in science

In higher education inter- and transdisciplinary approaches should be encouraged; in order to address the complex needs of contemporary societies and industries. In the current age when the mobility of both students and researchers is steadily increasing, international cooperation is essential to meet the needs of highly skilled human capital for future generations.

3. Responsible and ethical conduct of research and innovation

In the era of global science, the scientific establishment needs to implement continuous self-reflection and action to appropriately evaluate its responsibilities, duties and rules of conduct in research and innovation.

The world's scientific community should share a universal code of conduct addressing the rights, freedoms and responsibilities of scientific researchers, and universal rules of scientific research. These rules and policies should be respected by the states and adopted by their national legislations. Scientists should strengthen their individual and institutional responsibilities towards present and future societies in order to avoid possible harm due to ignorance or misjudgement of the consequences of new discoveries and applications of scientific knowledge.

It is the responsibility of both those who promote science and scientists to maintain the primacy of moral and social concerns over short-term economic and political interests in the selection and implementation of Research Development and Innovation (RD&I) projects by governments or private industries. Social inclusion, as a key part of sustainable development is an ethical and strategic imperative of scientific research, technology, and innovation.

4. Improved dialogue with governments, society, industry and media on sustainability issues

In order to meet global sustainability goals, it is of utmost importance to engage societies and empower them to participate as knowledge holders in the discussion and evaluation of

environmental, moral and ethical questions on globally unsustainable consumption levels. It is the responsibility of policy-makers to promote new patterns and attitudes for the sustainable and responsible use of the resources of the Earth.

In cooperation with the science community and political decision makers, industry is required to develop new production methods that enable it to both meet economic goals and avoid over-exploitation of resources at the same time.

The involvement of media is paramount to communicate scientific knowledge and the consequences of policy decisions to people.

Therefore it is of key importance that the science-policy-society interface is strengthened as a space for dialogue and engagement, and for the social transformation required for sustainable development. In this regard, the integration of natural sciences, engineering and social sciences is essential in designing effective policy actions that address global sustainability issues.

#### 5. Sustainable mechanisms for the funding of science

Scientific discoveries provide the foundations for innovation and social and economic development. Investment in science delivers the capacity for future development at a national level and an opportunity to face global challenges internationally. It induces new and unforeseen pathways of technological and social development; mitigating economic crises and promoting sustainable routes at the national and international levels. It is therefore the primary responsibility of governments, particularly parliamentarians in both the developed and the developing world, to establish sustainable mechanisms for the funding of scientific research and to guarantee that it fulfils its role to serve for the benefit of societies.

Therefore we call for concerted action and will mobilize the international academies and scientific community to play our role, supporting, for example, the Future Earth, Research for Global sustainability programme. Currently national governments and the UN are continuing discussions on the design of the Post-2015 Development Agenda and reviewing the Hyogo Framework for Action on Disaster Risk Reduction. The implementation of this Agenda and of the proposed Sustainable Development Goals may represent an even bigger challenge. Therefore, scientists, decision makers and society need to be engaged in this process at the national, regional and global levels, as this will be crucial to pave the way to achieving global sustainable development. The World Science Forum, held in Rio de Janeiro, therefore commits to advance the use of science for sustainable development.

## APPRECIATION

We express our gratitude to Her Excellency, Dilma Rousseff President of the Federative Republic of Brazil for their warm hospitality for the hosting of the 2013 WSF and the Hungarian Academy of Sciences for ensuring the continuity of the WSF.