Science, technology, and innovation for achieving United Nations Millennium Development Goals

A joint statement from international scientific, engineering, and medical organizations to the Heads of State and Government meeting at the United Nations General Assembly, September 2005

"Stronger worldwide capacities in science and technology are necessary to allow humanity to achieve the UN Millennium Development Goals. A concerted global effort among the world's scientists, engineers, and medical experts is needed to identify successful strategies and to help implement effective programs. Sustained progress in reducing poverty and related problems will require strengthened institutions for science, technology, and innovation throughout the world, including in each developing nation."

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In September 2000, 147 heads of State and Government, and 189 nations in total, committed themselves by year 2015 to reduce significantly global poverty and the related problems of illiteracy, hunger, discrimination against women, unsafe drinking water, and degraded environments and ecosystems, through the United Nations Millennium Declaration [A/RES/55/2].

Stronger worldwide capacities in science and technology are necessary to allow humanity to achieve the UN Millennium Development Goals. A concerted global effort among the world's scientists, engineers, and medical experts is needed to identify successful strategies and to help implement effective programs. Sustained progress in reducing poverty and related problems will require strengthened institutions for science, technology, and innovation throughout the world, including in each developing nation.

We, representing international scientific, engineering, and medical organizations, therefore call on the national leaders meeting at the United Nations General Assembly in September 2005 to take the following actions without delay. For our part, we also commit ourselves to working with appropriate partners to help implement these urgent actions.

Recognize that science, technology, and innovation are essential components of effective strategies and programs for reducing poverty and its many associated problems. Effective solutions to address these challenges can be identified and implemented only through the active participation of the international community of scientists, engineers, and medical experts.

It is critical to ensure that appropriate international networks are in place to enable all nations to share their experiences and best practices. The transfer of scientific, technological, and innovative capacity should be encouraged not only between the industrialized and developing countries, but also among the nations of the developing world. Assuring good connectivity to the Internet by all scientists and academic institutions is a vital component of this knowledge sharing for capacity building.

Recognize that, to enable developing countries to pursue the evidence-based policies required to achieve the Millennium Development Goals, they will need sound mechanisms and essential infrastructure for applying scientific and technological knowledge to national problem solving.

National leadership is required to establish the needed mechanisms, as well as to foster a social and economic climate in which the application of current best information and the production of new knowledge can be successfully applied to each nation's needs. Governments must be able to rely on the commitment of their scientific and technological communities in support of the Millennium Development Goals as their contribution to the role of civil society in improving public welfare. Each nation must have a source of independent, credible, and timely advice to government policymakers and the public on critical issues involving science and technology.

Recognize that sustainable national structures and strategies are needed to provide and maintain a source of well-trained, knowledgeable people. This requires an emphasis on training future generations of scientists, engineers, and medical experts, including both women and men; and on continuous evaluation and improvement at all levels of education, from primary to tertiary. Only with well-educated people can any nation hope to create, adapt, and exploit scientific and technological solutions appropriate to achieving its own specific goals.

Help revitalize universities in countries where the university sector is weak and support the creation of centres of excellence in science, engineering, and medicine. These institutions should become focal points for national and regional networks of innovation, as especially advocated for Africa in an eleven-academy statement to the G8 leadership in June 2005.

Foster the creation of local enterprises that use scientific knowledge and technology for better meeting the needs of the poor and provide local infrastructure and services for economic and social growth. A productive private sector should be a fundamental component of both national and international networks of innovation.

Invest international funds to support scientific, technological, and innovative capacity in developing countries for addressing the Millennium Development Goals. Local scientific, engineering, and medical expertise – harnessed through strong merit-based institutions – will be essential if countries are to continue to address their problems after specific international cooperation programs have ended.

It is important that the United Nations enhances its institutional capability to address urgent global issues involving science and technology. We note with approval the recent report of the UN Secretary-General, entitled *In Larger Freedom – Towards Security, Development and Human Rights for All,* which presents a strategy for strengthening the United Nations in its attempts to help build worldwide scientific and technological capacities for achieving the Millennium Development Goals.

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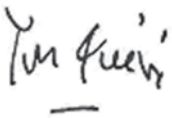
Past President, U.S. National Academy of Sciences

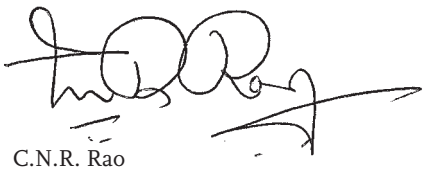
Lu Yongxiang
Co-Chair, InterAcademy Council
President, Chinese Academy of Sciences

Jane Lubchenco
President, International Council for Science (ICSU)

Chen Zhu
Co-Chair, InterAcademy Panel on International Issues



Yves Quéré
Co-Chair, InterAcademy Panel on International Issues



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David Challoner
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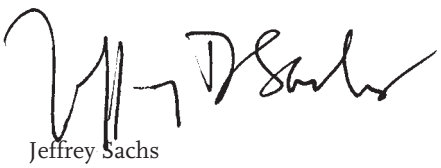
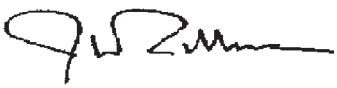


Jeffrey Sachs
Director, UN Millennium Project



J.W. Zillman
President,
International Council of Academies of Engineering and Technological Sciences

Lee Yee Cheong
President,
World Federation of Engineering Organizations

Some key documents addressing the role of science, technology, and innovation in meeting the Millennium Development Goals:

InterAcademy Council. *2004. Inventing a Better Future: A Strategy for Building Worldwide Capacities in Science and Technology.* www.interacademycouncil.net

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