WSIS Science and Development Tool Kit

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Introduction

At the 18 November 2004 InterAcademy Panel (IAP) Planning Meeting for the *Access to Scientific Information/Digital Divide Initiative,* participants heard from representatives of international scientific organizations about the importance of the engagement of the scientific community in the World Summit on the Information Society (WSIS) to their governments. One of the recommendations from this planning meeting was that the IAP should assist its member Academies to convey to their governments the central role of science in WSIS principles and actions. To provide that assistance to its member Academies, the IAP is now forwarding this *WSIS Science and Development Tool Kit*, which contains a description of and Web links to science-related information from the first phase of WSIS, as well as useful information leading to the second WSIS meeting in Tunis in November 2005.

Recommended Actions for Academies of Science in the WSIS Process

The IAP member Academies of Science are encouraged to actively contribute to the second phase of WSIS. There are several easy ways to do so, which are elaborated further in the document that follows:

 ➢ Contribute information about relevant activities to the CODATA online scientific inventory at http://www.wsis-online.net/science/home_EN/About.
 ➢ Establish a Web site that describes the Academy's WSIS-related activities.
 ➢ Brief policymakers on the central role of science in the information society. The information included in this WSIS tool kit provides useful resources.
 ➢ Identify scientists to serve on the WSIS ministerial and civil society delegations, including the preparatory meetings. For additional information on the preparatory process leading up to Tunis, see http://www.itu.int/wsis/preparatory2/index.html.
 ➢ Attend and actively participate in the science-related events in Tunis.

WSIS Background

The World Summit on the Information Society is a high-level gathering of heads of state, ministers, and representatives of non-governmental organizations (NGOs), industry groups, and civil society organizations to address the challenges of the "Information Society." The objective of the Summit is to cultivate a clear statement of political will and from this a concrete plan of action for achieving the agreed goals of the Summit. The Summit, endorsed by the United Nations, recognizes the need to "marshal the global consensus and commitment required to promote the urgently needed access of all countries to information, knowledge and communication technologies for development so as to reap the full benefits of the information and communication technologies revolution."

WSIS is a two-phase Summit. The first phase culminated with a meeting in Geneva on 10-12 December 2003, and was hosted by the government of Switzerland. The second phase is to end with a meeting in Tunis, Tunisia on 16-18 November 2005. The Geneva Summit addressed the themes of the information society and adopted a Declaration of Principles and a Plan of

Action. The Tunis Summit will focus more on development themes and will be an opportunity to assess the progress on and status of the Plan of Action that was agreed upon in Geneva. The Summit is being administered by the International Telecommunications Union (ITU), which has created an executive secretariat to manage the overall process and the day-to-day activities.

Science and the Information Society: Phase I

During the preparation for the first phase of the Summit, the International Council for Science (ICSU), along with its interdisciplinary Committee on Data for Science and Technology (CODATA) and UNESCO, collaborated to promote the role of science in the Information Society in the WSIS process. To this end, these organizations organized, along with the U.S. National Academies and the International Council for Scientific and Technical Information (ICSTI), an International Symposium on Open Access and the Public Domain in Digital Data and Information for Science. The symposium was held on 10-11 March 2003, and brought together over 150 leading experts and managers from the government and academic sectors in the developed and developing world, involved in the creation, dissemination, and use of data and information in public research. The Proceedings of the Symposium were published in June 2004 by the National Academies Press. That Symposium, along with the Workshop on Science in the Information Society, which was organized by ICSU, CODATA, and UNESCO and held on 12 March 2003 at UNESCO headquarters in Paris, also helped to identify and analyze important issues for follow up by the ICSU family of organizations.

The results of this subsequent workshop were summarized by ICSU--*Science in the Information Society—An Agenda for Action*-- and used to provide scientific community input for the development of a Declaration of Principles and Plan of Action in preparation for the Geneva meeting. The ICSU March 2003 workshop identified four key themes: (1) universal access to scientific knowledge, (2) decision making and governance, (3) policy issues for scientific information, and (4) improving education and training. ICSU prepared brochures that discuss the relevant issues and identify actions for the international scientific community in these four areas. These brochures are available from ICSU.

There were several thematic events convened during the course of WSIS I in Geneva that focused on the role of science in the information society. ICSU collaborated on two major events with UNESCO, TWAS, and CERN: (1) an international Conference on the Role of Science in the Information Society on 8-9 December 2003, and (2) a ministerial roundtable focused on Sciences in Knowledge Societies on 11 December 2003. In addition, the World Federation of Engineering Organizations convened a forum on Engineering the Knowledge Society on 11 December 2003. The International Research Foundation for Development also convened a Conference on the Digital Divide, Global Development and Information Society on 8-9 December 2003. Finally, a number of scientific organizations participated in the ICT for Development (ICT4D) Exhibition that was convened as part of WSIS.

The Road to Tunis

The central role of science in the development of the Information Society was fully and formally recognized in the Declaration of Principles and the Plan of Action resulting from the Geneva phase of WSIS. Specifically, the Declaration of Principles stated in paragraph A.7 that: "…science has a central role in the development of the Information Society. Many of the building blocks of the Information Society are the result of scientific and technical advances made possible by the sharing of research results." Moreover, the WSIS Plan of Action contains many goals involving digital information that are directly relevant to many areas of research, including

e-health, *e*-environment, and *e*-learning, and *e*-agriculture, as well as the following actions specific to *e*-science (in paragraph 21):

a) Promote affordable and reliable high-speed Internet connection for all universities and research institutions to support their critical role in information and knowledge production, education and training, and to support the establishment of partnerships, cooperation and networking between these institutions.

b) Promote electronic publishing, differential pricing and open access initiatives to make scientific information affordable and accessible in all countries on an equitable basis.

c) Promote the use of peer-to-peer technology to share scientific knowledge and pre-prints and reprints written by scientific authors who have waived their right to payment.

d) Promote the long-term systematic and efficient collection, dissemination and preservation of essential scientific digital data, for example, population and meteorological data in all countries.

e) Promote principles and metadata standards to facilitate cooperation and effective use of collected scientific information and data as appropriate to conduct scientific research.

While these principles and actions will be reaffirmed at the Tunis phase, which will be held 16-18 November 2005 in Tunisia, there are two main issues that are the focus on the second phase of the Summit—Internet governance and financing of future activities in support of the WSIS Information Society goals in developing countries, mainly through the suggested creation of a "digital solidarity fund."

There are several activities that the international scientific community is actively planning in preparation for the Tunis phase of WSIS. A number of thematic and regional WSIS meetings and events have been convened. These have focused on diverse topics, including Internet governance, the economic and social implications of ICTs, and cybersecurity. Additional information on official WSIS thematic and regional meetings can be found at http://www.itu.int/wsis/preparatory2/thematic.html. A number of other scientific organizations have been actively involved in the preparations for Tunis as well.

CODATA
- A special session on WSIS was convened at the 19th International CODATA Conference in November 2004. The objectives of this session were to motivate discussion on the important role of scientists within the Information Society; highlight initiatives currently underway within the scientific community that complement the science-related Agenda for Action items from the first phase of WSIS; and begin discussions on how the scientific community can constructively contribute to the second phase of WSIS in Tunis in 2005.
- In June 2005, CODATA launched an online inventory of scientific activities related to WSIS, to which all ICSU and IAP member Academies are encouraged to contribute.
- Finally, CODATA is organizing an international, interdisciplinary workshop on Building the Information Commons for e-Science in collaboration with ICSU, UNESCO, ICSTI, the International Network for the Availability of Scientific Publications (INASP), TWAS, and IAP, which will be held on 1-2 September at UNESCO Headquarters in Paris.

ICSU

- In preparation for the Tunis phase, ICSU will be considering the Declaration of Principles and the Plan of Action from the Geneva Summit and integrating these into its recently published Data and Information Strategy.
- ICSU also participated in the November 2004 CODATA special session on WSIS and is one of the co-organizers of the September 2005 Workshop on Building the Information Commons for e-Science.

U.S National Academies
- The U.S. National Academies has created an online WSIS collection that includes reports and other activities that pertain to WSIS. For more information, see http://wsis.nap.edu.
- The U.S. National Committee for CODATA is also compiling a national inventory of publicly funded activities that relate to WSIS. See the USNC/CODATA Web site at http://www7.nationalacademies.org/usnc-codata/WSIS_Summary.html for additional information.

Scientific Events in Tunis
There are many meetings of potential relevance to science and the Information Society that can be found on the WSIS web page. However, there are several satellite events more directly related to this topic that are being organized for Tunis:

- Past, Present, and Future of Research in the Information Society, 13-15 November;
- The World Forum on Information Society: Digital Divide, Global Development and the Information Society, International Research Foundation for Development, 14-16 November; and
- ICT 4 All Exhibition, 15-19 November.