

# CODATA

## Newsletter 88

Committee on Data for Science and Technology

### ***The World Summit on the Information Society (WSIS): The Road to Tunis***

*In August 2003 (CODATA Newsletter 85), the ICSU Deputy Executive Director, Carthage Smith, described his vision "that the WSIS will be the beginning of the end for the knowledge divide in science." At that stage, he also expressed his concern that "the essential role of science and scientists in the Information Society has been understated in the Declaration of Principles and Plan of Action as currently drafted."*

*These documents have now been finalised and formally endorsed by 172 member states at the Summit meeting in Geneva in December last year. So, what do the documents say and how do they relate to his ambitious vision? We asked Carthage to up-date us on what has happened since August and pick out some of the key issues for science leading up to the next phase of the Summit in Tunis in 2005.*

#### March 2004

#### Highlights

- 1,2,3 The World Summit on the Information Society (WSIS): The Road to Tunis
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<http://www.codata.org>

The Committee on Data for Science and Technology (CODATA) was established in 1966 by the International Council for Science (ICSU). Working on an inter-disciplinary basis, CODATA seeks to improve the quality, reliability, management and accessibility of data of importance in all fields of science and technology.

#### Phase I (Geneva, 2003) : A significant step forward for science in the information society

The first phase of the World Summit on the Information Society (WSIS) was held in Geneva, on December 10-12, 2003. 172 governments adopted a Declaration of Principles and a Plan of Action entitled 'Building the Information Society: a global challenge in the new Millennium'. The Summit itself was attended by many Heads of States, particularly from developing countries, and attracted considerable media attention internationally.

ICSU and CODATA worked very closely together and with other international science organisations in the preparatory process and negotiations leading to Geneva and these efforts were rewarded when science was clearly recognized as a key component of the Information Society in the formal Summit Declaration. The majority of the recommendations from the agenda for action "Science in the Information Society", that was developed in partnership with UNESCO in March 2003, were also incorporated into the formal Summit Plan of Action. By any standards, in the light of where the negotiations were at mid-way through last-year, this should be considered a success.



*The ICSU/CODATA WSIS team are (clockwise, starting in the front row, right to left): Mustapha Mokrane, Kathleen Cass, Herve Barioulet, Carthage Smith, and Malene Munkebo.*

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## The World Summit on the Information Society (WSIS): The Road to Tunis

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With regard to the visibility of science at the Geneva Summit itself, ICSU, with CODATA, was a formal partner for 2 events:

1. A major scientific conference on the Role of Science in the Information Society was hosted by CERN, immediately prior to the Summit. Several hundred eminent scientists attended the Conference which focused on five major themes: enabling technologies, health, environment, economic development, education. The major outcome was a statement, subsequently forwarded by the General Director of CERN to the General Conference of the Summit. As a co-organiser, ICSU, working with CODATA, had a major influence in the agenda of this event and in particular in ensuring representation from developing countries.
2. A half-day 'high-level' round table, 'Science, Information Society and the Millennium Goals' was organized by UNESCO during the second day of the Summit. The ICSU President, Jane Lubchenco and CODATA President, Shuichi Iwata, participated in this event together with several ministers from developing countries and President Iliescu of Romania. The UNESCO Director-General reported on it to the General Conference of the Summit.

The ICSU President also had the opportunity to speak in plenary to the General Conference. This ensured that a formal input from ICSU, on behalf of the international science community, is part of the official record of the Geneva Summit. It enabled the messages that ICSU and CODATA had been communicating throughout the preparatory process to be re-enforced. [This speech and other formal communications and published articles associated with the summit can be obtained via [www.icsu.org](http://www.icsu.org).]

A major exhibition – the ICT for development Platform (ICT4D), was organized in conjunction with the Summit and over 250 exhibitors (UN agencies, companies, governments and NGOs) showcased their activities in this forum. [INASP](#), the ICSU International Network for the Availability of Scientific Publications, presented its activities in a stand organized by the Swiss Commission for UNESCO and dedicated to Content Professionals.

Full information on ICSU and CODATA participation at the Summit is available on [www.icsu.org](http://www.icsu.org).

## Looking forward

### Major continuing/unresolved issues

The major contentious issues in negotiating the formal documents for Geneva were internet governance, freedom of the press and the proposal for a new solidarity fund for developing countries. Multi-stakeholder discussions on these issues will continue over the next 18 months in the hope that some agreement can be reached for the Tunis meeting in November 2005.

From the perspective of the science community the most controversial issues in phase I of the Summit relate to open access publishing and the role of open source software. 'Advocacy' groups in civil society argued for strong statements in both of these areas, with opposition from the private sector. ICSU took a more pragmatic and inclusive position, i.e. both open access publishing and open source software have an important contribution to make but this should not necessarily be to the exclusion of other publishing models and proprietary software. 'Open access', in particular, was variously defined by different constituencies involved in the Summit discussions with considerable potential for misunderstanding. ICSU argued that the emphasis should be on "universal and equitable access" rather than open access *per se*. However, immediately prior to the Summit, several national research funding agencies released the Berlin statement in support of open access publishing and this is already a topic of hot debate in the scientific community.

The importance of the public domain for scientific data and information is recognised in the formal Summit documents but this is also contradicted by references to the importance of strengthening IPR regimes and the absence of any statement that database legislation should ensure access to publicly funded data. The latter wording was opposed by the EC and ICSU and CODATA jointly published an article on this in Parliament magazine to coincide with the Summit and to bring it to the attention of European members of parliament (see [www.icsu.org](http://www.icsu.org)).

The complex issue of establishing IPR regimes that strengthen rather than weaken the public domain for science will require a lot more work and pressure from the science community if it is to be successfully addressed. In this regard, one particularly promising development since Geneva has been the endorsement by OECD Science ministers of a Declaration on Access to Research Data from Public Funding (Paris, 30 January 2004). ICSU will be working with CODATA to help develop a set of OECD guidelines as a follow-up to this but the continued support of national policy makers is essential to this very promising policy initiative.

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## CODATA-ERPANET Archiving Workshop

By Ms. Julie Esanu, Program Officer, Office of International Scientific and Technical Information Programs, National Research Council, USA

The current state of archiving digital scientific and technical data varies widely across disciplines with respect to the volume of data that have already been archived, the degree of standardization and interoperability among the data sets, and the frequency with which they contribute to ongoing scientific research.

For example, researchers, technicians, and information specialists in the human genome project and in the space sciences began consultations from a fairly early date to identify selection and appraisal guidelines to determine which data would be preserved, along with relevant retention schedules. They established standards for metadata and hardware and software that would help ensure that the enormous quantities of data being collected would be maintained in compatible and accessible media. And they developed common policies for deposit and dissemination of the data, and the institutional and financial plans to make their data archiving activities sustainable. As a result, massive centralized databases exist in these disciplines that are funded and maintained on a full-time basis and are available for remote and collaborative research.

In other disciplines, the volume and availability of archived data is more variable, with patchwork endeavors ranging from established policies at the local and national levels at various research institutions and universities to joint disciplinary efforts to larger international programs. Some of these discipline-based activities have become formally networked across institutions and nations, while others have not.

In light of the diverse disciplinary practices related to the archiving of digital S&T data, ERPANET—the European Resource Preservation and Access Network—and CODATA collaborated to convene an international workshop that focused on the selection, appraisal, and retention of such data. The workshop was held on 15-17 December 2003 at the Biblioteca Nacional in Lisboa, and brought together more than 65 researchers, data managers, information specialists, archivists, and librarians from 13 countries to discuss the issues involved in making critical decisions regarding the long-term preservation of the scientific record.

One of the major aims for this workshop was to provide an international forum to exchange information about data archiving policies and practices across different scientific, institutional, and national contexts.

CODATA, along with its U.S. National Committee, provided a supporting role, identifying and supporting speakers and participants, helping to shape the agenda and to identify pertinent issues, participating in the review of the workshop report, and assisting in the publicity and dissemination of the report from the workshop. An online summary of the workshop will be published by ERPANET this spring, and a series of papers from the workshop will be published in a special edition of the CODATA *Data Science Journal*. For more information on the workshop, including speakers' presentations, see <http://www.erpanet.org>.

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## The Road to Tunis

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### Tunis, Nov 2005

On December 11<sup>th</sup>, when addressing the WSIS General Conference, ICSU President, Professor Jane Lubchenco, stated that “The challenge now is to turn these words into actions and in this respect; the international science community is willing to play its part.”

Prior to the Geneva Summit, many ICSU and CODATA members formally endorsed the “Science in the Information Society” agenda for action that was developed at the March 2003 workshop. If the good words from Geneva are really to have a positive effect for science, it will be important that the ICSU and CODATA members and relevant interdisciplinary bodies now take responsibility for this agenda and implement appropriate actions.

The CODATA International Conference (Berlin, November 7-10) is a key event in ensuring that the impetus from Geneva will not be lost. It is also very encouraging that discussions are taking place at the CODATA national level, initially in the USA and France, on implementation of the Geneva commitments. In the end it is the national policy-makers who will be key in deciding just how far we can go towards achieving the vision of a society where there is universal and equitable access to scientific data and information and the necessary scientific capacity in all countries to exploit this for their own development.

Preliminary discussions are underway with regard to a possible science side-event at the Tunis Summit, focusing on the past, present and future of science in the information society. In the meantime, the ongoing ICSU Priority Area Assessment on Scientific Data and Information will also consider the future role of ICSU, in relation to the WSIS, as part of the overall strategy for this area.

## Thank You

Thank you to Herve Barioulet from ICSU for his contribution to this newsletter.



## CODATA France Initiative for WSIS Tunis 2005

In the perspective of Tunis in 2005, an informal meeting was organized on January 28 by CODATA France to discuss the implementation of the Geneva commitments. French scientists together with government representatives and UNESCO reviewed the priority actions of the French scientific community. Long-term support for and open access to scientific data and information, but also quality-insurance for scientific data on Internet were among the major issues addressed.

An insight into the follow-up mechanisms for the World Summit on Sustainable Development (WSSD) was delivered as well as a presentation of WSIS–online, an initiative to help monitoring the implementation of the Geneva Plan of Action from now to Tunis.

Participants will meet again in April 2004 to propose concrete actions that might be presented during the CODATA International Conference in Berlin, November 2004. In the meantime, a short inventory of the existence, the use and practices of databases in French research centres and laboratories will be made; further information will be available soon on [www.codata.org](http://www.codata.org).



*Above Picture, left to right: Jacques Emile Dubois, CODATA, Jean Bonnin, CODATA, Suzy Mouchet, INSERM, Francis Andre, INIST. Picture at left : Herve Barioulet, ICSU (seated) and Jean Jacques Royer.*

## New Addition to the CODATA Series "Data in a Changing World"

### Thermodynamic Data, Models, and Phase Diagrams in Multicomponent Oxide Systems

An Assessment for Materials and Planetary Scientists Based on Calorimetric, Volumetric and Phase Equilibrium Data

**Fabrichnaya, O.B., Saxena, S.K., Richet, P., Westrum, E.F**

This book presents thermodynamic data on oxides in the system MgO-FeO-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>. These data are produced by a process of assessment that involves the integration of thermochemical (calorimetric) and phase equilibrium data. The latter have been selected from a number of publications in high-pressure research conducted at pressures and temperatures in the range of 1 bar to several Giga Pascals and 300 to 2500 K respectively. A unique feature of the database is that the assessment involves not only the thermodynamic data on pure end member species, but also the data on multicomponent solutions. Since the solution description follows the format used in the popular thermodynamic computational packages such as FACTSAGE, ChemSage and Thermocalc, the database is easy to incorporate in the currently used databases in these packages. The database is highly useful to those working in the field of metallurgy (e.g. slags) and ceramics. It is essential for all those who do thermodynamic modeling of the terrestrial planetary interiors.

To acquire this book, please contact the CODATA Secretariat [CODATA@dial.oleane.com](mailto:CODATA@dial.oleane.com) or directly on the Springer-Verlag website: <http://www.springeronline.com>.

### Task Group on Natural Gas Hydrates: Regional Meeting in New Delhi

A regional workshop of the Task Group on Natural Gas Hydrates was held at Indian National Science Academy, New Delhi on 19-20 February 2004. The purpose of this meeting was to involve experts from different organizations and institutes to put forward their views and perspectives.

This group has been actively involved in improving quality, reliability, processing, archiving and dissemination of data in the field of gas hydrates. A special project grant is being used to create a network for collection and exchange of data related to gas hydrates and compounds of direct interest. Its aim is to establish world distributed information system. More information on this CODATA Task Group can be found on <http://www.codata.org>.

#### CODATA Newsletter Editor:

Kathleen Cass  
CODATA Secretariat  
51, Boulevard de Montmorency  
75016 Paris, France  
Tel: +33 1 45250496 / Fax: +33 1 42881466  
Email: [codata2003@dial.oleane.com](mailto:codata2003@dial.oleane.com)  
Website: <http://www.codata.org>

Page Layout: Cheryl Levey