

CODATA Update

Robert S. Chen
CODATA Secretary General

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CODATA National Members

- Brazil
- Cameroon**
- Canada
- Chinese Academy of Sciences
- Academy located in Taipei
- Czech Republic
- France*
- Germany*
- Georgia
- India
- Indonesia
- Ireland
- Israel
- Italy
- Japan
- Korea
- Nigeria**
- Poland
- Russia
- Senegal**
- South Africa
- Thailand
- Ukraine
- USA

* Associate National Membership status accepted at 25th General Assembly

** Recommended that Associate National Membership be offered due to arrears



CODATA Union Members

- International Astronomical Union
- International Union of Pure and Applied Chemistry
- International Union of Pure and Applied Physics
- International Union of Biological Sciences
- International Geographical Union
- International Union of Crystallography
- International Union of Biochemistry and Molecular Biology
- International Union of Geological Sciences
- International Union of Psychological Science
- International Union of Pure and Applied Biophysics
- International Union of Nutritional Sciences
- International Union of Pharmacology
- International Union of Immunological Societies
- International Union of Microbiological Societies
- International Union of Soil Scientists



Co-opted Organizations

- ICSU Panel on World Data Centers
- Federation of Astronomical and Geophysical Services
- International Council for Scientific and Technical Information
- World Federation for Culture Collections



Supporting Organizations

- Defense Technical Information
- Springer-Verlag
- All Russian Institute of Scientific and Technical Information
- Chemical Abstracts Services
- Fachinformationszentrum Chemie, GmbH
- Japan association for International Chemical Information
- National Library of Medicine
- Design institute for Physical Property Data (DIPPR)
- American Institute for Chemical Engineers
- Japan Society of Information and Knowledge
- Protein Data Bank
- Protein Information Resources
- Russian Research Centre for Standardization, Information and Certification of Materials (VNITS SMV)
- Stroyteks



CODATA Conference 2006

- More than 600 attendees (nearly half foreign)
- High-level participation by China
 - Keynote by Xu Guanhua, President of MOST
 - Keynote by Liu Depei, President, Chinese Academy of Medical Sciences
- Article appeared in Scidev.net
- Keynotes by Jane Lubchenco, Tony Hey
- Numerous side events, meetings
- Special issue of *Data Science Journal* under development
- Presentations online at:
<http://www.codata.org/06conf/index.html>



CODATA lunch with African remote sensing students in training in China



Elections Results 1

- Officers (4-year terms):
 - President: Krishan Lal, India
 - Vice President: Steve Rossouw, South Africa
 - Vice President: Gordon Wood, Canada
 - *Treasurer: Jean-Jacques Royer, France**
 - *Secretary-General: Robert Chen, USA**
 - *Past President: Shuichi Iwata, Japan*

* terms end 2008



Elections Results 2

- Executive Committee (2-year terms):
 - Jean Garnier, IUPAB (France)
 - Sara Graves, USA
 - Guo Huadong, China
 - Fedor Kuznetsov, Russia
 - Ray Norris, IAU (Australia)
 - Antoni Nowakowski, Poland
 - Michel Sabourin, IUPsyS (Canada)
 - Mikhail Zgurovsky, Ukraine

CODATA Task Groups 2006-08

- Access to Biological Collection Data
- Anthropometric Data & Engineering
- Comprehensive Information System on National Disaster Mitigation
- Data Sources in Asian & Oceanic Countries
- Data Sources for Sustainable Development in SADC Countries
- Exchangeable Materials Data Representation
- Fundamental Constants
- Gas Hydrates
- Global Species Data Networks*
- Polar Year Data Policy and Management
- Preservation of & Access to S&T Data in Developing Countries

* Not recommended for funding due to late renewal application



CODATA Strategic Plan

Recommended by ICSU in its Priority Area Assessment on Data and Information (2005) and the ICSU Strategic Plan (2006)

Draft reviewed by 25th CODATA General Assembly and key initiatives and actions approved

Final plan to be reviewed by the CODATA Executive Committee in March 2007 and sent to the membership for approval



New CODATA Mission Statement

The mission of CODATA is to strengthen international science for the benefit of society by promoting improved scientific and technical data management and use.

Adopted 25th CODATA General Assembly, Beijing, October 2006



Approved Cross-Cutting Initiatives

1. Global Information Commons for Science Initiative (GICSI)

- Launched by CODATA at WSIS in November 2005
- Primary focus is on scientific data, in coordination with other open access information initiatives
- Close collaboration with the Science Commons
- Main purpose: how can we jumpstart the creation of a sustainable global data and information commons?
- Envisioned as a network of nodes aimed at creating critical mass of open access initiatives and data
- Funding initiatives under way with NSF, EU



Approved Cross-Cutting Initiatives

2. Scientific Data across the Digital Divide Program (SD³)

- Follows ICSU recommendation to address digital divide issue; ties in with ICSU strategic initiatives/interests
- Builds on linkages with GEOSS, IPY, eGY, UN GAID, GRIP, etc.
- Builds on CODATA Task Groups (e.g., Archiving, Biodiversity, Disasters); CODATA-ICSTI Portal prototype
- Link with WSIS e-science initiative and follow-up led by UNESCO

EDITORIAL

Science and the Digital Divide

At the launch of the World Summit on the Information Society (WSIS) in Geneva in December 2003, the world community strongly affirmed the central role of science in developing an information society and affirmed the principle of "universal access with equal opportunities for all scientific knowledge and the creation and dissemination of scientific and technical information." The WSIS Declaration of Principles recognized the essential role of the public domain and public institutions such as libraries, archives, and museums in supporting the growth of the Information Society and providing free and equitable access to information.* The WSIS Plan of Action suggested numerous approaches to implement these principles, including "e-science" as a key application of information and communication technologies to support sustainable development.† The international scientific community succeeded in raising these issues at WSIS and securing widespread support from participating governments. Now, with the second phase of WSIS taking place in Tunis in November 2005, the scientific community needs to take the lead in demonstrating how science—and universal access to scientific data, information, and knowledge—can make a critical difference in sustainable development and overcoming the "digital divide."

The deadly South Asian tsunami in December 2004 and what many have called the "silent tsunami" of millions of unnecessary deaths and untold suffering from malnutrition, disease, and poverty remind us that science has far to go. Scientists must work not only to predict future hazards and develop new medicines and vaccines, but also to make scientific data and information much more accessible and useful for real-world decision-making. These disasters underscore the need to better understand how societies can best organize themselves to address pressing problems posed by limited resources, conflict, poor infrastructure, and inadequate skills and knowledge. Scientists, the original developers of information and communication technologies, often take for granted their ready access to data and information, software and hardware, and networks of colleagues. But for billions of people, even the most rudimentary access to life-saving scientific expertise and knowledge, such as an early warning or a new cropping method, is a major challenge.

How can the international scientific community help reduce the digital divide? Already, many scientists and scientific institutions are working to improve the reach and effectiveness of science through information and communication technologies. The International Council for Science (ICSU) and its Committee on Data for Science and Technology (CODATA) are collaborating with WSIS to collect and document such efforts (www.wsis-online.net/science/home_EN/). But more needs to be done.

Scientists can support distance education and training; improve the accessibility of information and communication technologies to disadvantaged, marginalized, and vulnerable groups; communicate technical knowledge to the general public; and establish digital libraries, data archives, and other mechanisms to increase access to scientific information. We urge the scientific community to come up with more creative ideas and outcomes. Noteworthy examples on this front include the efforts by the Massachusetts Institute of Technology to provide electronic access to its course materials (<http://ocw.mit.edu/olab.html>) and by the Global Biodiversity Information Facility to make primary scientific biodiversity data openly available (www.gbif.org). The scientific community should also consider new approaches to open electronic access, such as the Science Commons (<http://sciencecommons.org>), that, among other things, address the complex issue of licensing structures.

Immediately after the South Asian tsunami, critical data on deviation, population location, administrative boundaries, and damage could not be shared because of intellectual property and national security constraints. Even now, the 30-meter resolution data from the Shuttle Radar Topographic Mission (SRTM) flown by NASA in the year 2000 is not publicly available, although it could potentially provide the best available elevation information regarding most of the world's coasts. The pending decision by the U.S. National Geospatial Intelligence Agency to prohibit public access to various astronomical products would be another step in the wrong direction. The scientific community needs to press governments not only to release specific data sets that are vital to disaster management and planning, but also to establish a "good Samaritan" principle for the use of data and information in humanitarian emergencies.


Science helped to create the Information Society—it can now help extend that society to all.

Shuichi Iwata and Robert S. Chen
Shuichi Iwata (University of Tokyo) is president of ICSU's CODATA. Robert S. Chen (Columbia University) is secretary general of CODATA.
CODATA is based in Paris, France.

10.1126/science.1119300

*WSIS Declaration of Principles (document WSIS-03/GENEVA/DOC-4-12 December 2003). Plan of Action (document WSIS-03/GENEVA/DOC-5-12 December 2003).

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Approved Cross-Cutting Initiatives

3. Advanced Data Methods and Information technologies for Research and Education (ADMIRE)

- Provides state-of-the-art technology focus
- Builds on past TG activities and collaborative projects and larger research community interested in data mining and integration
- Positions CODATA with respect to new e-science/cyberinfrastructure initiatives and programs
- Potential EU funding, industry partnerships



CODATA and the GEO Data Policy Task

- GEO 2006 Work Plan, Task DA-06-01 (continuing in GEO 2007-09 Work Plan)
 - Furthering the practical application of the agreed GEOSS data sharing principles
- CODATA is now the lead on this task, working with the GEO Secretariat
 - White paper to be developed
- Declaration for next GEO Ministerial in South Africa in November 2007 to include data policy component

GEO Group on Earth Observations

Welcome

- ▶ About GEO
- ▶ GEOSS Progress
- ▶ GEO Members & Participating Organizations
- ▶ Meetings & Events
- ▶ Newsroom
- ▶ Document Library
- ▶ GEO Plenary
- ▶ GEO Committees & Working Groups

Contact GEO
secretariat@geosec.org
+41 22 730 8505 phone
+41 22 730 8520 fax
GEO Secretariat
7 bis, avenue de la Paix
Case postale 2300
CH-1211 Geneva 2
Switzerland

Understanding the Earth system is crucial to enhancing human health, safety and welfare, alleviating human suffering including poverty, protecting the global environment, reducing disaster losses, and achieving sustainable development. Observations of the Earth system are critical to advancing this understanding.

“ GEO is an organization dedicated to developing and instituting a Global Earth Observation System of Systems, or GEOSS.”

Conrad C. Lautenbacher, GEO Co-Chair for the United States, U.S. Under Secretary of Commerce for Oceans and Atmosphere

NEWS

9 May 2006
[CloudSat and CALIPSO to Study Weather, Climate and Air Quality](#)

10 April 2006
[Indian Ocean Tsunami Warning System \(IOTWS\) Update](#)

Call for Papers
Special Issue of *Remote Sensing of Environment* on Earth Observation for Biodiversity and Ecology.
Deadline: July 15, 2006

For more information about GEOSS, please download the following documents:

- ▶ [GEOSS 10-Year Implementation Plan](#)
- ▶ [GEO 2006 Work Plan version 4](#)

The **Group on Earth Observations, GEO**, was established by a series of three ministerial-level summits. GEO includes 62 member countries, the

Expected GEO Task Outputs

- 1) “White” Paper on Guidelines for Implementing the GEOSS Data Sharing Principles
 - Writing team to include Joanne Gabrinowycz, University of Mississippi and Dave Clark, NGDC
 - Workshop later this year to develop and agree on text
- 2) New language on data policy in the Declaration planned for the November 2007 Ministerial Summit in Cape Town, S. Africa
 - *“Finally, the Declaration should address data sharing principles. Developing more open data policies and data sharing agreements in Earth Observation remains a priority for several GEO Members. The Declaration could identify specific goals to reduce data policy barriers to align with the GEO goal of ‘free and open exchange’ by a target date.”*
- 3) Possibility of side event(s) in conjunction with Summit to address data policy issues



CODATA and the International Polar Year

- CODATA IPY Task Group approved--same membership as IPY Data Committee
 - Met in conjunction with CODATA 2006
 - Three IPY Sessions at CODATA 2006
- CODATA should be able to provide longer-term framework for IPY data activities beyond 2007-08





CODATA and the electronic Geophysical Year

- CODATA endorsed the eGY at its 24th GA
- Five eGY organized sessions at CODATA 2006
- C. Barton participated as an observer (and vote counter!) in 25th GA
- CODATA community participating in various IGY+50 and eGY activities
 - Annual eGY meeting in Boulder last week
 - eGY launch event in Perugia, Italy (IUGG) on 7 July 2007
 - Russian Conference in Sept 2007



Other Strategic Efforts

- Improve Membership
 - Revitalize existing members
 - Attract new members (Europe, Africa), working with ICSU
 - Active efforts to encourage UK, IUGG to rejoin
- Recruit Supporting Organizations
 - Focus on data centers, networks, research institutes
- Develop CODATA Associates Program
 - Build an international community of data scholars, specialists
- Establish endowment fund
- Participate in ICSU data planning activities
- Work with WDCs



Contact Information

CODATA Executive Director: Ms Kathleen Cass
CODATA Secretariat
51 Bld du Montmorency, 75016 Paris, France
Tel: + 33 1 45 25 04 96; Fax: + 33 1 42 88 14 66
E-mail: codata@dial.oleane.com
<http://www.codata.org>
The CODATA Mailing List: <http://www.codata.org/instr.html>

CODATA Secretary General: Dr. Robert S. Chen
CIESIN, Columbia University
61 Route 9W, Palisades NY 10964 USA
Tel: + 1 845 365-8952; Fax: +1 845 365 8922
E-mail: bchen@ciesin.columbia.edu
<http://www.ciesin.columbia.edu>

