

CODATA

Newsletter Special Issue

Committee on Data for Science and Technology

The importance of data sharing for science and society

CODATA speaks to Catherine Brechignac, President of the International Council for Science, ICSU*.

March 2010

CODATA's Mission:

To strengthen International Science for the benefit of society by promoting improved scientific and technical data management and use.

<http://www.codata.org>

*** ICSU's Mission:** In order to strengthen international science for the benefit of society, ICSU mobilizes the knowledge and resources of the international science community to:

- Identify and address major issues of importance to science and society.
- Facilitate interaction amongst scientists across all disciplines and from all countries.
- Promote the participation of all scientists — regardless of race, citizenship, language, political stance, or gender — in the international scientific endeavour.
- Provide independent, authoritative advice to stimulate constructive dialogue between the scientific community and governments, civil society, and the private sector.

Background:

Professor Brechignac took office as President of ICSU at the 29th ICSU General Assembly in Maputo in October 2008. Over seventeen months into her Presidency CODATA discusses with Professor Brechignac her views on the goal of ICSU, the importance of data and information sharing within the scientific research community, its benefit for science and society and her vision of the role of ICSU in promoting access to and preservation of scientific data.



Catherine Brechignac: President, ICSU, the International Council for Science

CODATA: *Firstly, Professor Brechignac, on behalf of CODATA I would like to congratulate you on your election as President of ICSU. As President of this vibrant international scientific community what do you see as the vision and goals of ICSU and its role in international science?*

Catherine Brechignac:

ICSU's vision is clearly encapsulated in its tag line: Strengthening international science for the benefit of society. The ICSU vision is for a world where science is used for the benefit of society and excellence in science is valued. A world where scientific knowledge is effectively linked to policy making. Universal and equitable access to reliable

high quality data and information is a prerequisite to the realization of this vision.

CODATA: *During your incoming Presidential Address in Maputo, you said that "It is not possible to make science nowadays without technology". Given the huge amount of data that are being generated as a result of the growth in new technologies, what do you see as some of the barriers to accessing and sharing of these data?*

Catherine Brechignac:

Many barriers can hinder the access and sharing of scientific data and information and these barriers are not necessarily related to economics. The attitude of scientists themselves can be the first obstacle to scientific data and information access. Although most researchers agree on the principle of data sharing, it is not always happening in reality. The scientific community should encourage a change of culture to enable effective data sharing and open access. This change can happen by creating incentives such as data publication and citation. The funding agencies can also play a unique role by asking for more openness and sharing of data and information in return for their support. Creating and maintaining the facilities for data and information storage and distribution is also an immense challenge. Political obstacles can also hamper the access to scientific data as it is the case for seismic data which in some circumstances can reveal sensitive information about nuclear tests.

CODATA: *Adama Samassekou, Convenor of the UN World Summit on the Information Society once said that «Data are the common wealth of humanity». If one were to interpret this in the context of scientific data, can society and indeed humanity directly benefit from a more open data and information environment?*

Catherine Brechignac:

Yes, undoubtedly. A perfect illustration of that is the recently launched ICSU interdisciplinary programme Integrated Research on Disaster Risk (IRDR) addressing the challenge of natural and human induced environmental hazards. This programme will both generate new information and data and leave a legacy of coordinated and integrated global data and information sets across hazards

and disciplines with an unprecedented degree of access. One of the main contributions of IRDR will be to serve as a framework for the development of a range of modern information systems devoted to disaster risk reduction which will directly benefit humankind. IRDR can only realise its full potential if the scientists uphold the principle of full and open access to data.

CODATA: *I would like to focus now on ICSU's data activities. One of the decisions of the 29th ICSU General Assembly was "To confirm that ICSU will continue to assert a strategic leadership role in relation to scientific data and information". What challenges do you see ICSU having to address in order to assert its leadership role in this area? Do you have suggestions on how CODATA could work with ICSU to meet some of these challenges?*

Catherine Brechignac:

The International Council for Science is able to mobilize the knowledge and resources of the international scientific community and is therefore uniquely positioned to assert this strategic leadership and coordination role by working together with other organizations such as CODATA. The main challenge for ICSU is to successfully implement the reform of its Interdisciplinary Bodies in the area of scientific data and information. ICSU has recently established the World Data System which will play a major role in responding to the data and information management and stewardship needs of other ICSU programmes such as IRDR. ICSU has also established a Strategic Coordination Committee for Information and Data (SCCID) to provide the overall strategic direction and advice for ICSU's data and information related activities. This committee will work closely with CODATA and other partners to ensure good coordination between the different ICSU bodies and the other stakeholders.

CODATA: *What is the current status of the new ICSU ad hoc Strategic Coordinating Committee on Information and Data and how do you see it contributing towards assisting ICSU assert its strategic leadership role referred to in the previous question?*

Catherine Brechignac:

The SCCID committee—chaired by Professor Ray Harris, Emeritus Professor of Geography, UK—met

for the first time in Paris last October. The SCCID is primarily intended as a forum to bring together ICSU's data and information bodies and key partners in order to achieve coordinated collaboration. CODATA is obviously a key actor of this forum and might be an implementer of some of its activities. This committee has been initiated by ICSU for a limited period of three years, renewable once. In the long-term the committee will develop a sustainability plan for maintaining the established strategic coordination and leadership role of ICSU for consideration by the ICSU General Assembly.

CODATA: *What are your thoughts on the new ICSU-World Data System and the goals it needs to set?*

Catherine Brechignac:

The World Data System (WDS) vision is very ambitious. It builds up on the legacy of the former ICSU's World Data Centres and the Federation of Astronomical and Geophysical data Analysis Services. The new system will support ICSU's mission and objectives, ensuring the long-term stewardship and provision of quality-assessed data and data services to the international science community and other stakeholders. WDS aims at a transition from existing stand-alone data centres and individual services to a common globally interoperable and distributed system that incorporates state-of-the-art and emerging technologies as well as new scientific data activities. One of the main challenges for the World Data System is to succeed where its predecessor failed, reaching-out to the least economically and transitioning countries.

CODATA: *Regarding the International Polar Year, the ICSU delegates in Maputo urged "all ICSU Members to support formal stewardship and long-term preservation of IPY data through a distributed, internationally recognized and supported IPY Data and Information Service in collaboration with the proposed ICSU World Data System". As you are aware, CODATA, thanks to an award it received under the 2009 ICSU Grants Program, is looking at this very issue under the project "Polar Information Commons (PIC): Establishing the Framework for Long-term Stewardship of Polar Data and Information". Why, in your opinion, is it important to ensure that data generated by IPY projects are accessible and preserved for future generations, and what do you see*

as some of the challenges to overcome to reach this goal?

Catherine Brechignac:

The International Polar Year has generated invaluable data on the polar regions in a time where these are undergoing significant and rapid changes as well as attracting political and economic interests. This data represents a legacy for the future generations hence the importance of long-term full and open access. All IPY projects have adhered to the IPY Data Policy which advocates for "free and open access to IPY data, including operational data delivered in real-time, are made available fully, freely, openly, and on the shortest feasible timescale". Implementing this policy is proving difficult and some major challenges, including political barriers are in the way. The IPY data legacy touches at the very heart of the Universality of Science Principle embedded in the ICSU statute 5, this is why the ICSU Executive Board has decided to release a statement on the Universality of Science in the Polar Regions.

CODATA: *Finally, Delegates in Maputo were asked to note the recommendation contained in the ad hoc SCID report presented to them that "Members of ICSU are encouraged to establish committees or commissions, where these do not already exist, focusing on data and information issues". How do you see ICSU promoting the establishment of such committees or commissions? Could CODATA assist ICSU in this respect?*

Catherine Brechignac:

Some ICSU National Members and International Scientific Unions have already responded to this recommendation and established data and information. The new SCCID committee will constitute the best platform for linking these committees with ICSU bodies. The committee will soon reinforce this recommendation and undertake a stocktaking exercise of the ICSU membership. CODATA can of course contribute by linking its national committees to the SCCID committee as well as to the World Data System Scientific Committee.

CODATA: *Professor Brechignac, many thanks for taking the time to carry out this interview. It is most appreciated by our readers and we wish you every success as President of ICSU over the coming year.*



SCIENTIFIC DATA AND SUSTAINABLE DEVELOPMENT

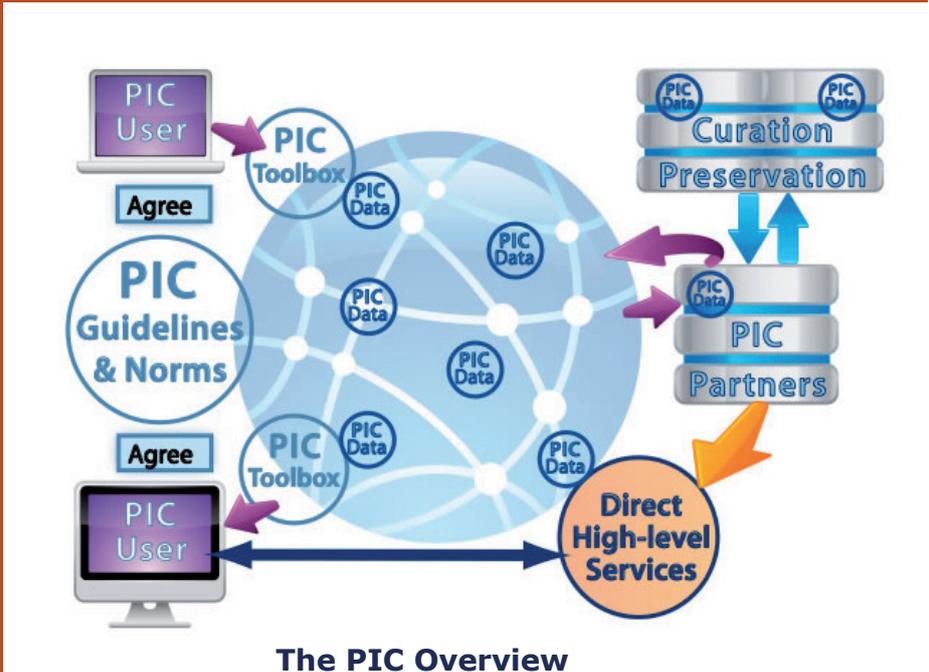
CODATA, in collaboration with the National Research Foundation, South Africa, is delighted to announce the
22nd International CODATA Conference, 24-27 October 2010, Stellenbosch, Cape Town, South Africa

The 22nd International CODATA Conference «Scientific Data and Sustainable Development», will take place in the beautiful Cape wine lands town of Stellenbosch, some 35km outside Cape Town, South Africa.

For information the Call for Papers, Call for Session Organizers, CODATA Prize nominations, Young Scientist Activities and much more please visit our conference site at : <http://www.codata2010.com/>

THE POLAR INFORMATION COMMONS (PIC):
 Establishing the Framework for the Long-term Stewardship of Polar Data and Information

CODATA is pleased to announce the launch of its site highlighting its work on the Polar Information Commons initiative. Please visit the site at <http://www.polarcommons.org/>
 The initiative aims to establish a sustainable long-term framework for the preservation and access of polar data, building on recent «commons» approaches developed in other scientific fields and entraining new stakeholders and participants into polar data management.



An invitation meeting of polar data experts will take place in Paris on March 22 and March 23, 2010. Watch this site as activities develop!

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