

CODATA

Newsletter 104

Committee on Data for Science and Technology

RIO+20

CODATA and ICSU World Data System Participation

July 2012

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Plenary Session at the Forum

If you want to publish a short article in a CODATA newsletter please contact Sally Davies at codata.office@gmail.com

CODATA and the ICSU World Data System organized a side event at the recent Rio+20 ICSU led Forum on Science, Technology and Innovation for Sustainable Development. The session on 14th of June focussed on Sharing and Stewardship of Scientific Data for Improved Decision Making and Sustainable Development: Why share data fully and openly?

It was chaired by CODATA Executive Committee member Dora Ann Lange Canhos, Associate Director, Reference Center on Environmental Information (CRIA), Sao Paulo. Dora set the context of the session underlying the importance of data sharing for decision making and sustainable development. These issues are very

relevant given the fact that more than 50,000 policymakers and environmentalists are meeting in Rio de Janeiro for the UN Conference on Sustainable Development.

Susan Adamo, from CIESIN, Columbia University, gave an excellent presentation on “Developing Global Socioeconomic Datasets for Integration with Environmental Data”. She briefly described the work of SEDAC (NASA's Socioeconomic Data and Applications Center) in the development and integration of socioeconomic and environmental data (particularly the Gridded Population of the World, GPW); and the new project Terra Populus (TerraPop), which

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.../... will provide the means to globally integrate individual- and household-level socioeconomic data with contextual data on population, land use, land cover, and climate.

Christovam Barcellos (Fio Cruz, Rede CLIMA) & Antonio Miguel Monteiro (INPE-National Institute for Space Research, Brazilian Ministry of S&T) gave a joint presentation on climate change and health data challenges, focussing on the experience of integrating and disseminating data in the Brazilian Climate and Health Observatory.

Peter Hoeppe, Head Geo Risks Research, Corporate Climate Centre Munich Re spoke on how high quality data of impacts of natural disasters are the basis for effective risk man-

agement. Munich Re, founded in 1880 is one of the largest reinsurance companies in the world and plays a leading role in covering risks of natural disasters. In 1974 the Munich Re NatCatSERVICE Database was established. Comprising some 30,000 data records, NatCatSERVICE is the most comprehensive natural catastrophe loss database in the world. Approximately 1,000 events are recorded and analysed every year. The information collated can be used to document and perform risk and trend analyses on the extent and intensity of individual natural hazard events in various parts of the world.

Details of the forum can be found



Susana Adamo, CIESIN, Columbia University

on <http://www.icsu.org/rio20/science-and-technology-forum>

Details of the CODATA/WDS event and presentations can be found on <http://www.codata.org/Rio/Rio20%20Side%20Event.pdf>

“OPEN DATA” - THE ISSUE AT THE HEART OF THE SCIENTIFIC PROCESS

Science as an Open Enterprise, a policy report from the Royal Society in London, published on June 21st focusses on this very issue. The report highlights the need to grapple with the huge deluge of data created by modern technologies in order to preserve the principle of openness in science, and to exploit data in ways that have the potential to create a second open science revolution. The report can be found at:

http://royalsociety.org/uploadedFiles/Royal_Society_Content/policy/projects/sape/2012-06-20-SAOE.pdf

Six key areas for action are highlighted in the report:

- Scientists need to be more open among themselves and with the public and media
- Greater recognition needs to be given to the value of data gathering, analysis and communication

- Common standards for sharing information are required to make it widely usable
- Publishing data in a reusable form to support findings must be mandatory
- More experts in managing and supporting the use of digital data are required
- New software tools need to be developed to analyse the growing amount of data being gathered

This report started in May 2011. It brought together experts from a wide variety of disciplines for its Working Group. It was Chaired by Geoffrey Boulton, Professor of Geology Emeritus at the University of Edinburgh, UK. Through wide consultation and evidence gathering, the Group reached a comprehensive and in depth understanding of the relevant issues. The report makes recommendations to governments,

universities, publishers and funders for how support for science needs to change in an era of open data.

Neelie Kroes, Vice-President of the European Commission responsible for the Digital Agenda and Huadong GUO, President of CODATA gave video recorded messages at the launch. To view these and more information, evidence submissions, references, details of data repositories and Working Group details visit <http://royalsociety.org/policy/projects/science-public-enterprise/report/>. An Article in Nature on the issues addressed in the report can be viewed on <http://www.nature.com/news/open-your-minds-and-share-your-results-1.10895>. The Chair of the Working Group will also give a keynote presentation at the 23rd International CODATA Conference in Taipei in October this year:

<http://www.codata2012.com/>



CODATA 23
Taipei 2012

23rd International CODATA Conference Taipei 28-31 October 2012

For more information on the Conference, visit the website at:
<http://www.codata2012.com>

You can also follow us on twitter:
<https://twitter.com/#!/CODATANews>

SAVE THE DATE !

PROF. GUO HUADONG ATTENDS THE 2ND SYMPOSIUM OF THE WORLD DATA CENTER FOR MICROORGANISMS (WDCM)



Prof. Guo Huadong, President of CODATA

On June 8, 2012, Prof. Guo Huadong, President of CODATA, participated in the 2nd Symposium of the World Data Center for Microorganisms (WDCM) in Beijing, China.

As an organizer of the symposium, CODATA has a role in advancing the information networks necessary for the progression of modern science. Life sciences, including microbiology, are key players in the emerging field of data-intensive science. In data-intensive science, discovery does not happen only through direct observation. Instead, discoveries are made through the sharing and analysis of observed data. The developments in the past decade have been even greater than reports foresaw. Since 2001, biodiversity observation data, sequence data, and the capabilities and uses of information technologies have all exploded in their quantity and scope. Therefore, microbiology has also become a data science. In the age of microbial data diver-

sification and expansion, CODATA will focus on developing an effective information environment that promotes and sustains microbial research data activities and CODATA will also strive to bridge the gaps within and outside of the microbiology community.

Prof. Guo gave a speech at the opening ceremony in which he delivered his support and enthusiasm for the step forward the WDCM is taking. WDCM has contributed much to the informatization of microbial resources. He observed that with similar commitment and tasks, WDCM and CODATA can collaborate to further facilitate the sharing and utilization of scientific data.

In the keynote session, Prof. Guo presented a lecture "CODATA: Unlocking the Power of Data", which addressed the theme that technology has been pushing science into new frontiers for decades. These advances in science in turn have

required advances in technology, creating a cycle of progression. At the center of all this have been data—persistent, scientific data of ever-increasing volume. Scientific data include data entities from observations, experiments, simulations, models and higher-order assemblies, along with the associated documentation needed to describe and interpret the data. The use of digital technologies to collect and manage these data has transformed the scientific landscape. Data that are "born-digital" — available only in digital form and preserved only electronically — are increasingly becoming the primary output of science and the starting point for new research. Data-intensive science has emerged as a new paradigm of science. It is clear that the need for well-developed, globally-coordinated data strategies is now even more important than it was at CODATA's inception. As CODATA is an interdisciplinary body of ICSU, it strengthens international science for the benefit of society by promoting improved scientific and technical data management and use. CODATA's outreach and collaborative activities fall under what has been dubbed the 'Hand in Hand Program', whereby CODATA links together various international organizations through their common interest in and reliance on scientific and technical data. CODATA will explore cooperation with the WDCM in the future to implement data sharing best practices as they are developed by the international data science community. This is CODATA's place in science and society: doing all that is necessary to unlock the power of data.

Finally, Prof. Guo believes that, with the joint effort of WDCM and CODATA, as well as the support from respected experts, we can render scientific data in the field of microbiology more accessible, reliable and beneficial to better serve academia, industry and the public.

For more information on this event: <http://www.wdcm.org/wdcm2012.html>

EARLY CAREER SCIENTISTS AT THE 23RD CODATA INTERNATIONAL CONFERENCE : PARTICIPATION, INTEGRATION, AND STRATEGIC PLANNING



CODATA 23 Taipei 2012

In recognition of the role that early career scientists play in the science, technology, and policy areas, especially in the scientific data area, and building on the highly successful early career scientist events that took place during the 21st and 22nd International CODATA Conferences in Ukraine (2008) and in South Africa (2010), CODATA Young Scientists Working Group (YSWG)

is planning several activities during the 23rd CODATA International Conference in Taipei, in October 2012.

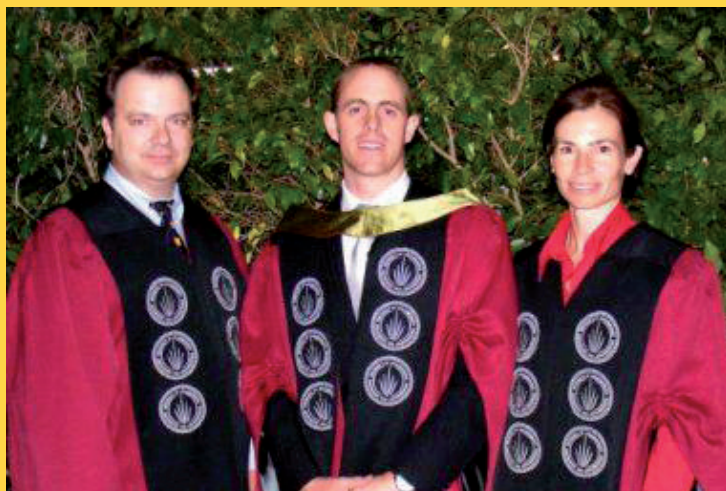
These activities include a roundtable discussion of issues (i.e., challenges, opportunities, resources, etc) that are of special interest and importance to early career scientists and to their future career. There will also be a special session for early career scientists to present and discuss their research and related activities. The main theme of this session will be "open data and information for knowledge discovery and sustainable development in Asia".

As a result of these activities, the YSWG is planning to release a declaration, similar to the Cape Town Declaration during CODATA22, focused on the building and strengthening a new generation of South-East Asian early career scientists and scholars.

In preparation for these activities, the YSWG is planning to involve early career scientists who are intending to participate in the CODATA 23 using social media tools such as Twitter, Wiki page, and a special LinkedIn group. Please follow us on <https://twitter.com/#!/CODATANews> for upcoming news.

Congratulations to **Paul Laughton** who just completed his Doctorate at the University of Johannesburg. The primary objectives of Paul's study were to investigate the Open Archival Information System (OAIS) as a data curation standard in the World Data Centre (WDC) and to develop a framework for the curation of data in the WDC.

Paul is a full time lecturer at the Department of Information and Knowledge Management, University of Johannesburg, and is Co-Chair of the CODATA Young Scientist Working Group.



Prof. Chris Rensleigh, Dr Paul Laughton, Prof. Tanya du Plessis

FORTHCOMING MEETINGS

Interdisciplinary Conference on Digital Cultural Heritage, 2-4 July 2012 - St Dié, France
<http://intercarto18.net/>

30th International Congress of Psychology - ICP 2012, 22-27 July 2012 - Cape Town, South Africa
<http://www.icp2012.com/index.php?bodyhtml=home.html>

6th International Workshop on Web APIs and Service Mashups (Mashups 2012) at ESOC 2012, 19th September 2012 - Bertorino, Italy <http://mashups2012.aifb.kit.edu/>

3rd Conference - World Complexity Science Academy "Mapping Systemic Knowledge", 18-19 November 2012 - Vienna, Austria <http://www.wcsaglobal.org/>