



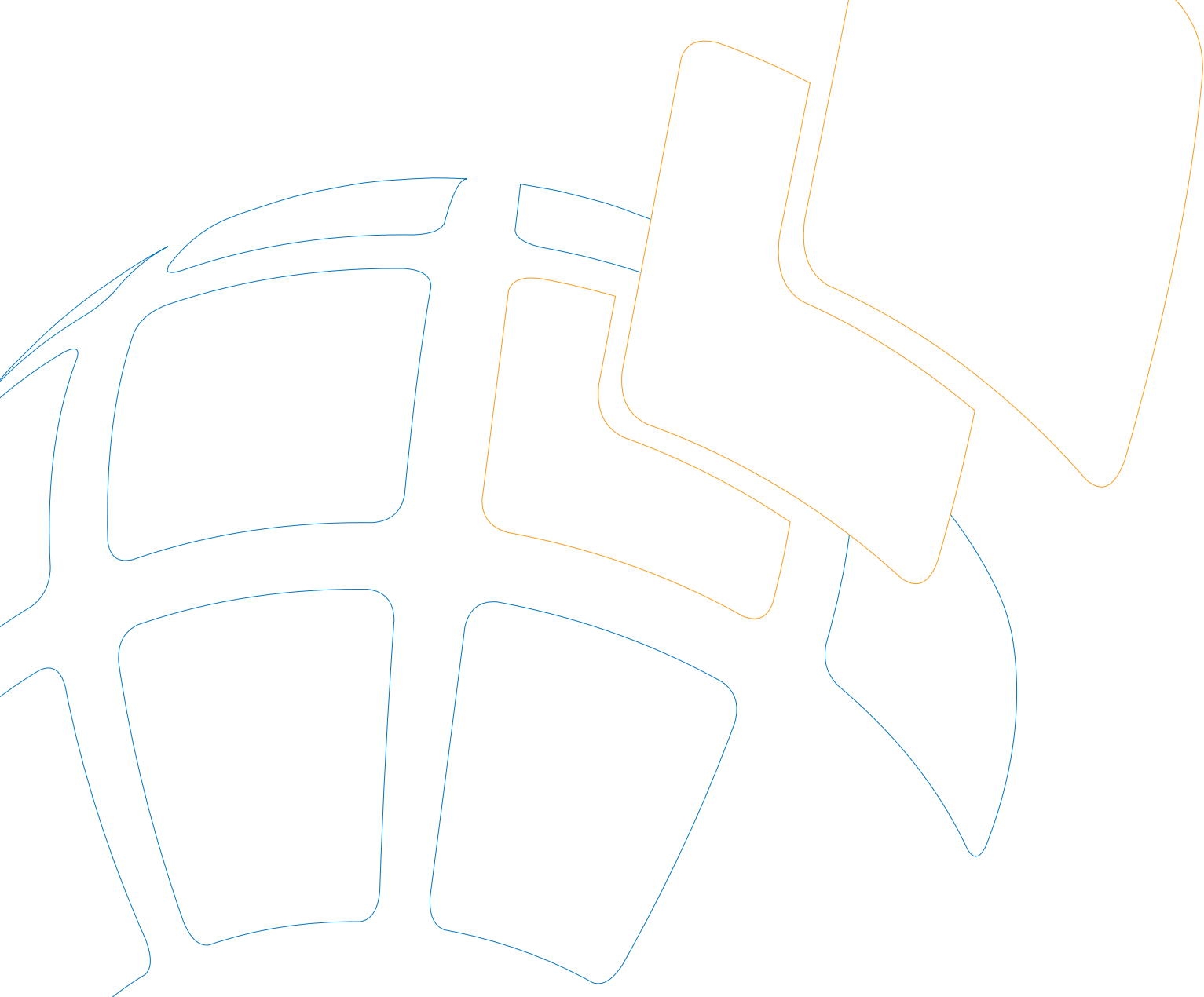
# ICSU World Data System Annual Report 2013–14

Prepared by the WDS International Programme Office

# *Trusted Data Services for Global Science*

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ICSU World Data System  
**Annual Report 2013–14**

Prepared by the WDS International Programme Office

## WDS Goals

- Enable universal and equitable access to quality-assured scientific data, data services, products and information.
- Ensure long-term data stewardship.
- Foster compliance to agreed-upon data standards and conventions.
- Provide mechanisms to facilitate and improve access to data and data products.

## Introduction

The ICSU World Data System (ICSU-WDS) was created by the 29th General Assembly of the International Council for Science (ICSU) with the aim creating a common globally coordinated and distributed data system.

By ensuring universal and equitable access to, and long-term stewardship of, quality-assured scientific data and data services, products, and information covering a broad range of natural sciences and expanding to social sciences, WDS supports ICSU's mission of 'strengthening international science for the benefit of society'.

## 2013–2014 in Brief

Around 100 people gathered at the National Museum of Nature and Science (Tokyo, Japan) on 15–16 October 2013 to participate in the International Forum on 'Polar Data Activities in Global Data Systems'. Co-hosted by ICSU-WDS, the Forum covered all aspects of effective polar data management—in particular, ensuring the data legacy of the International Polar Year 2007–2008.

To safeguard the lessons learnt during this stimulating event, a Communiqué has been released in which Forum participants (data managers, scientists, and research coordinators) share their observations about the current state of polar data activities and their recommendations for enhancing and sustaining core data services into the future.

Development continued in 2013 of (1) a WDS Open Metadata Catalogue and Scalable Knowledge Network and (2) a community-based Data Publication and Curation Service,

through the Working Groups (WGs) established by the WDS Scientific Committee to realize these services.

The common links created between ICSU-WDS and the Research Data Alliance (RDA) at the latter's First Plenary, were also built upon in 2013–2014. The four WDS Data Publication WGs and the newly formed Data Seal of Approval–WDS Certification WG seeking official endorsement as RDA WGs under the respective Interest Groups initiated by ICSU-WDS and RDA: 'Publishing Data' and 'Certification of Digital Repositories'.

Finally, details were discussed—and the work was gotten underway—by ICSU-WDS and the Committee on Data for Science and Technology for their first joint biennial conference, SciDataCon 2014, which will be held on 2–5 November 2014 in New Delhi, India.

## Message from the Executive Director

We have made good progress in the implementation of the ICSU World Data System (ICSU-WDS) in fiscal year (FY) 2013. Under the guidance of the WDS Scientific Committee (WDS-SC), the International Programme Office (WDS-IPO) has worked hard to strengthen our partnerships with key stakeholders, communicate about ICSU-WDS, recruit new Members, and ensure that WDS Working Groups are on track for delivering important WDS functions.

The certification of new Member Organizations is one of the missions of the WDS-SC, and many new Members were reviewed, and some approved, in FY 2013. The WDS membership base is stronger with seven new Regular Members and one new Network Member. We have improved our disciplinary coverage in the Social Sciences and our geographical coverage in Less Economically Developed Countries; however, there are still considerable improvements to be made.



ICSU-WDS has also engaged in a new collaboration with the Data Seal of Approval (DSA)—a certification scheme for data repositories mainly in the Social Sciences and Humanities—to identify synergies and to eventually improve the overall framework for certification of data repositories and services for the benefit of scientific research. This DSA–WDS collaboration, as well as the WDS Data Publication Working Groups, was also endorsed by the Research Data Alliance (RDA) initiative of which ICSU-WDS is now recognized as an affiliated Member. FY 2013 was also marked by the hosting—jointly with ICSU’s Scientific Committee on Antarctic Research and the International Arctic Science Committee—of an important international forum in Tokyo, Japan on ‘Polar Data Activities in Global Data Systems’. Supported by various Japanese research organizations including the National Institute of Information and Communications Technology (NICT), the host of the WDS-IPO, this event facilitated increased collaboration between scientific researchers of the two poles. In particular, the forum enabled attendees to foster data activities supporting research in the Arctic and Antarctic regions, and an important output was a widely distributed communiqué in which participating individuals and organizations stated their renewed commitment to improve these activities.

Glancing ahead, we hope for a productive year in FY 2014, and have a number of expected accomplishments. We also look forward to two important events: the triennial ICSU General Assembly in August 2014 and the landmark SciDataCon 2014 Conference, the first time that such an event will be co-organized with CODATA, the ICSU Committee on Data for Science and Technology.

Mustapha Mokrane, Executive Director

## Message from the Chair

ICSU-WDS attracts an ever-growing membership. Of special importance is the increase of WDS Network Members, which is perfectly consonant with the initial concept of ICSU-WDS as a 'system of data systems'. The implications are profound: whereas WDS Regular Members are primarily well-established organizations, often with headquarters in countries within the Organization for Economic Cooperation and Development, Network Members typically have a much larger global geographical footprint—including in Less Economically Developed Countries—so that their participation affords ICSU-WDS an immediate, strong position in all continents.

Some of the largest networks boast elaborate structures, comprising nodes numbering in the hundreds, that are already well-organized around the network's mission. Thus, a simple headcount does not correctly measure the overall scientific reach and impact of ICSU-WDS, and more appropriate metrics will need to be devised. Even more so because increased participation of WDS Network Members is facilitating, and even fuelling, the continued broadening of ICSU-WDS into Socioeconomics, the Humanities, and Health Sciences.

Predictably, ICSU-WDS is emerging as a scale-free complex system, accommodating giant repositories with holdings measured in petabytes that we seek to link harmoniously with small, yet equally important facilities requiring only a few gigabytes of storage. Nowhere was that more evident than at the 2013 International Forum on 'Polar Data Activities in Global Data Systems' co-convened by ICSU-WDS in Tokyo, Japan.

WDS has continued forging closer collaboration with the ICSU-CODATA, which has resulted in SciDataCon 2014, the first of what will be a sustained series of biennial scientific data conferences that cater to a constantly widening scope of



countries and disciplines. Moreover, ICSU-WDS is visible and active in the development of an effective data policy for Future Earth, and is making its voice heard in essential supporting organizations such as the Belmont Forum.

To pursue its strategic targets, the WDS-SC has created several Working Groups to advance concepts such as a WDS Knowledge Network. In keeping with our mandate, these activities are coordinated with other organizations including RDA and DSA. A long-standing wish of the WDS-SC has also been satisfied after considerable effort—notably by Prof Takashi Watanabe—with ICSU-WDS now able to manage contributions from external sources through a newly established nonprofit WDS Scientific Association in Japan.

I wish in closing to acknowledge gratefully the generous support of the Japanese Government, through NICT, in hosting and supporting the WDS-IPO. This year again, the IPO staff have worked tirelessly to meet the demands increasingly placed on their resources by both the SC and WDS Members, and NICT's backing has been critical to their success.

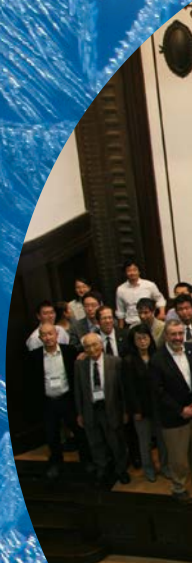
Bernard Minster, Chair WDS-SC

# Activities in Priority Areas

International Forum on 'Polar Data Activities in Global Data Systems'

WDS Working Groups

Links with Partners





## International Forum on ‘Polar Data Activities in Global Data Systems’

Around 100 people gathered at the National Museum of Nature and Science (NMNS) in Tokyo, Japan on 15–16 October 2013 to participate in the ICSU-WDS co-hosted International Forum on ‘Polar Data Activities in Global Data Systems’. During this stimulating two-day event attendees enjoyed nearly 50 oral and poster presentations, in addition to several lively panel discussions, on a variety of multidisciplinary topics surrounding data management from the perspective of both polar communities.

In spite of the second day having to be condensed due to a typhoon hitting Tokyo on the morning of the 16th, the Forum was considered to be highly successful in its aims of not only bringing together Arctic and Antarctic researchers under a collaborative umbrella but also addressing the data legacy of the International Polar Year 2007–2008. To ensure that the lessons learnt at the Forum are not lost and the momentum generated continues, the Scientific Organizing Committee subsequently released a Communiqué for wide dissemination. In this document, Forum participants (comprising of data managers, scientists, and research coordinators) share their observations about the current state of polar data activities and their recommendations for enhancing and sustaining core data services into the future.

The WDS Scientific Committee would like to express its appreciation to all of the Forum organizers and, in particular, to the sponsoring organizations—the National Institute of Polar Research, the National Institute of Information and Communications Technology, and NMNS.



# WDS Working Groups

## Data Publication

The WDS Working Group (WG) on Data Publication has the aims of identifying and defining best practices for publishing data, and testing its implementation by involving core stakeholders. The WDS concept addresses essential problems and practical issues such that publication of research data can become part of the scholarly record. Because the involved issues are interlinked, four WGs have been established—Bibliometrics, Cost Recovery, Services, and Workflows—under one coordination umbrella. Interaction and exchange of results between WGs is thus monitored and guided by a common structure that ensures contribution by all interested parties.

### Bibliometrics

Bibliometrics of research data are almost non-existent at present. Data are referenced using inconsistent methods and data citation is not common practice. Similar indicators to those widely used for citation of scholarly articles are thus needed to measure the importance and impact of published data. In doing so, the value of data will be raised, as well as the appreciation of sharing them—a lack of recognition is a major cause for reluctance by producers to publish scientific data.

This WG will investigate solutions that enable proper analysis of data content and citations, and address several different levels:

- Organizational: What changes are needed to foster proper dataset attribution? Which building blocks and stakeholder interactions provide an optimal system? Do we need commonly operated services?
- Technical: Which technical components, interfaces, and standards need to be developed and used? What current capabilities can be adopted and what is missing from these?

- Methodological: What methodologies for metrics must be developed? What are the costs/benefits of altmetrics versus traditional processes? What research is needed on indicators and what are their strengths/weaknesses?
- Financial: What is the cost of data metrics as a component of data publication? Who will pay for it?

### Cost Recovery

The editorial process leading to quality assured and efficiently usable data requires resources be quantified. The budgets of data services generally cover a precise scope; predominantly production of data for the host institution. So, who will pay for public access to research data? Basic funding of data infrastructure is not keeping pace with increasing costs, and alternative cost recovery options, and diversification of revenue streams, must be considered.

This WG will supply cost estimates, and elaborate a business model that compensates for the additional costs of publishing data in an open access environment. Its deliverables will build on five areas of work:

- A summary of current work on cost models.
- A survey of funding policies related to how data availability/publication costs may be recovered.
- A survey and case studies on existing cost recovery approaches/business models.
- A survey of other stakeholders to understand their position and policies in relation to charging models, and their role in the publishing process.
- The outcomes of the Workflows WG.

### Services

The publishing of data has traditionally concentrate on registration of data entities. Cross-referencing services for research data/literature, and data publishing services are

recent innovations and are still limited in their scope and functionality. The lack of a common framework for cross-referencing datasets and published articles creates barriers and inefficiencies for interlinking and contextualizing research outputs, and better connectivity will improve the visibility, discoverability, and usability of scientific content.

This WG will investigate content requirements for data services and academic publishers and will address the problem of limited interoperability among these and the tools for bibliometric analysis. It will focus on the conception and implementation of a one-for-all cross-referencing service; building on existing processes, workflows, and solutions between parties in the data publication landscape. Such a service will enable identification of datasets associated with articles and vice versa, and might also link metadata of different granularity to describe the nature of relationships. The quality—both in terms of content and operational performance— inclusivity, and availability of the service will be decisive factors in its successful adoption.

## Workflows

Researchers are increasingly expected to make data available for reuse. However, submissions rates for publishing data are often low due to (perceived) insufficient incentives. Even when research data are submitted, they usually come with minimal metadata, which inhibits reuse. Although workflows exist in certain disciplines to facilitate data publishing and accreditation via citation mechanisms, these may not be applicable without modification. Furthermore, most researchers are unaware of them. Information on workflows is hence crucial for understanding the available options to practice open science. These workflows must enable persistence, quality control, and access to data in order to enhance discoverability, as well as efficient and reliable reuse.

This WG will analyze a representative range of existing and emerging workflows and standards for data publishing, including deposit and citation, and provide reference models and implementations for application in new workflows. It will

- Investigate and classify current workflows for publishing data.
- Identify a set of reference workflow models to examine
  - When and where quality control and peer-review fit into the data publishing process.
  - The role of all stakeholders in the data publishing process.
  - Key barriers for identified use cases.
- Select organizations in which components of a reference model can be applied and promoted to the wider community.

## Progress in 2013–2014

Early–mid 2013 was spent setting up the four WGs. Member recruitment was highly successful with approximately 50 people becoming involved across all stakeholder groups and many scientific domains, leaving the WGs well positioned to have a genuine global impact.

The WGs then spent the latter half of 2013 preparing case statements for official endorsement under the framework of the Research Data Alliance (RDA), and these were submitted in January 2014. This culminated in three WGs receiving positive feedback towards endorsement at the RDA Third Plenary. The fourth, Cost Recovery, will transition to an RDA Interest Group. In the meantime, work was started by the WGs.

Coordination of the WGs has been key to their success, with a teleconference structure created such that all members, the members of each WG, and WG leaders meet regularly. WG interaction has also been ensured by having common members. WG members met face-to-face on three occasions in fiscal year 2013, at the RDA Second and Third Plenaries, and for a two-day meeting co-located with the EUR-OCEANS 2013 Conference in November 2013 in Gran Canaria.

# Open Metadata Catalogue & Scalable Knowledge Network

ICSU-WDS has a stated objective to establish an aggregated Metadata Catalogue (MC) of WDS Members' metadata holdings so that the extent of their offered data and services are discoverable through a single interface. However, ICSU-WDS would like to go further than this; it would also like to create a broader Knowledge Network (KN) in which additional information sources—including ICSU-WDS' existing database of Member information—are used to supplement the metadata by means of Linked Open Data repositories. This extension into KNs enables ICSU-WDS to significantly enhance the usefulness of its metadata resource, and improve the ability of researchers, funding agencies, and data service managers to understand and apply this information.

## Progress in 2013–2014

A survey was sent out on behalf of the Working Group (WG) to all WDS Regular and Network Members at the start of July 2013 to determine the status of their metadata holdings for the MC and the information they have available for the KN. Specifically, the survey

- Outlined the proposed conceptual model and the aspects requiring software/services for implementation, and asked for inputs on these to validate how the WG proceeds.
- Mapped the landscape; assessing how WDS Members' metadata are managed.

The WG met in early October 2013 to examine the survey results and to determine the specifications of a proposed prototype implementation of the KN. The prototype development work, as a starting point for discussion, was completed in late October. The next stage for the KN is to build a practical implementation of value and refine this.



A structured approach has been conceived for the MC that involves efficient communication with WDS Members, and a plan for operationalizing this is to be constructed.

## Global Registry of Trusted Digital Services

One component needed to realize the KN is a global inventory of certified data services. Such a registry was proposed at a 'Birds of a Feather' (BoF) session at the Second Plenary of the Research Data Alliance (RDA) since it would benefit many users. A second BoF session was held at the RDA Third Plenary. Establishing a formal RDA–WDS Interest Group/WG is still under discussion, because several projects of this nature already exist—albeit without a focus on 'trusted' services. In anticipation that it will ultimately prove fruitful to embark on this endeavour, Co-chairs have already been proposed for the nascent WG and experts in various initiatives have been approached. This consortium had two teleconferences in early 2014, to try and reach a common view of the overall objectives.

## Certification

Data sharing enables reuse of data and ultimately makes science more transparent. To ensure the quality and usability of shared data and to provide long-term preservation and access, sustainable data services are key components of scientific infrastructure. However, it is vital to guarantee the trustworthiness of a digital service to perform these functions, and certification by an appropriate authority is fundamental in promoting confidence in shared data resources.

The Data Seal of Approval (DSA) and ICSU-WDS are two organizations that have set up basic certification mechanisms for trusted digital services. Their catalogues of requirements and review procedures are based on the same principles of openness, and of balancing the simplicity and robustness of the work involved. By reconciling the certification mechanisms of DSA and ICSU-WDS, this will simplify the array of certification options, and show the value to be gained from a certification procedure requiring relatively low investment of time and effort.

### Objectives

- Develop a partnership. DSA and WDS targets do not fully overlap, and differences between them must be addressed.
- Coordinate certification at the basic level. The WG will attempt to combine the certification methods of the two organizations.
- Make apparent the value of certification to all communities. The advantages provided by certification must be clarified and the worth of associated effort demonstrated.
- Establish a global framework for certification. The DSA–WDS organizational framework will highlight issues arising from having diverse approaches, and will serve as an exemplar to encompass other bodies that deal with data service certification.

### Deliverables and Milestones

**Deliverable 1** (end August 2014): Comparative description and mapping of existing DSA and WDS certification catalogues.

**Deliverable 2** (end November 2014): Comparative description and mapping of existing DSA and WDS certification procedures.

**Deliverables 3 & 4** (end February 2015): Certification catalogue comprising DSA and WDS criteria, and a common certification procedure.

**Deliverable 5** (end May 2015): Implement the certification catalogue and procedures through both DSA and ICSU-WDS.

**Deliverable 6** (end November 2015): Testbed for peer review and certification driven by DSA and ICSU-WDS.

**Deliverable 7** (end May 2016): Extended comparative description and mapping between common DSA–WDS catalogue and other trustworthiness assessments.

**Deliverable 8** (end February 2017): Establishment of necessary requirements to create a global framework for certification.

### Progress in 2013–2014

The RDA–WDS Interest Group on Certification of Digital Repositories was created in early 2013. Its charter proposed a WG to look at merging and streamlining the DSA and WDS catalogues of criteria; bringing these two initiatives together to work, find synergies, and avoid a duplication of efforts.

The DSA–WDS Certification WG—evenly composed of participants from both organizations—was in place, and its teleconferences underway, by mid-2013 such that it could prepare to present its draft case statement at the RDA Second Plenary. The finalized statement was posted on the RDA website for general comments in December 2013, before official RDA endorsement was sought in early 2014

### ICSU Committee on Data for Science and Technology

The ICSU Committee on Data for Science and Technology (CODATA) and ICSU-WDS moved ahead with preparations for SciDataCon 2014; the first in a new biennial Conference series co-organized by the two organizations, and to be held on 2–5 November 2014 at the Jawaharlal Nehru University Convention Centre in New Delhi, India (hosted by the Indian National Science Academy).

Under the theme 'Data Sharing and Integration for Global Sustainability', the Conference has been specifically directed towards Future Earth (see below), and is being designed as a unique platform for bringing together a diverse multidisciplinary audience, including international experts and practitioners in data management and technologies, researchers from the Natural Sciences and Social Sciences, research funders, and policy makers.

By 31 March 2014, ICSU-WDS and CODATA had launched the Conference website ([www.SciDataCon2014.org](http://www.SciDataCon2014.org)); put in place the International Scientific Programme Committee, in addition to the National Organizing Committee; opened the online registration; and sent out a Call for submissions of abstracts for oral presentations and sessions.

### Research Data Alliance

The Research Data Alliance (RDA) was started in 2012 by funding agencies in Europe, the United States of America, and Australia to lower the technological and social barriers to data exchange and interoperability. RDA held two Plenaries in fiscal year 2013–2014: the RDA Second Plenary was held on 16–18 September 2013 in Washington, DC; and its Third Plenary was held on 26–28 March 2014 in Dublin. There was significant WDS presence at both of these business meetings, and the environment RDA has created has encouraged useful exchanges (positive liaisons) between ICSU-WDS and other groups (from many backgrounds: governmental officials, researchers, data services (including non-WDS Members), publishers, librarians, and funders)—enabling promotion of ICSU-WDS, and its ideas and activities. In addition, a formal discussion took place on cross-affiliation of RDA and ICSU-WDS at the Second Plenary, and the two organizations will sign a Memorandum of Understanding in 2014.





## Future Earth

Future Earth is a global sustainability research programme due to commence from 2015 for an initial period of 10 years. In late 2013, ICSU-WDS and CODATA jointly worked with the interim Future Earth Secretariat to assist in identifying and addressing the data needs of this major international enterprise. In particular, the organizations together provided the interim Secretariat with text regarding data sharing principles for the Memorandum of Understanding to be signed between Future Earth and the projects it approves, also adding the requirement for those projects to supply a data management plan.

More recently, CODATA and ICSU-WDS attended a 'Core Projects' Meeting (20–21 January; Washington, DC) to interact with the ventures being transitioned under the Future Earth umbrella. After that meeting, further communication took place with one of the proposed Future Earth 'Fast Track Initiatives', and recommendations and feedback were provided by the WDS Scientific Committee.

## Belmont Forum

ICSU-WDS has pledged to work more closely with research funders to advocate for improved sustainability of scientific data infrastructure. To address this, strong ties have been established with the Belmont Forum—the major group of national Global Change Research Funders—and ICSU-WDS is represented on the Steering Committee of the *Infrastructure and Data Management for Environmental Research Collaborative Research Action*. ICSU-WDS is significantly contributing to this action, which will formulate a community strategy and make recommendations to improve Belmont Forum activities and funding in these areas.

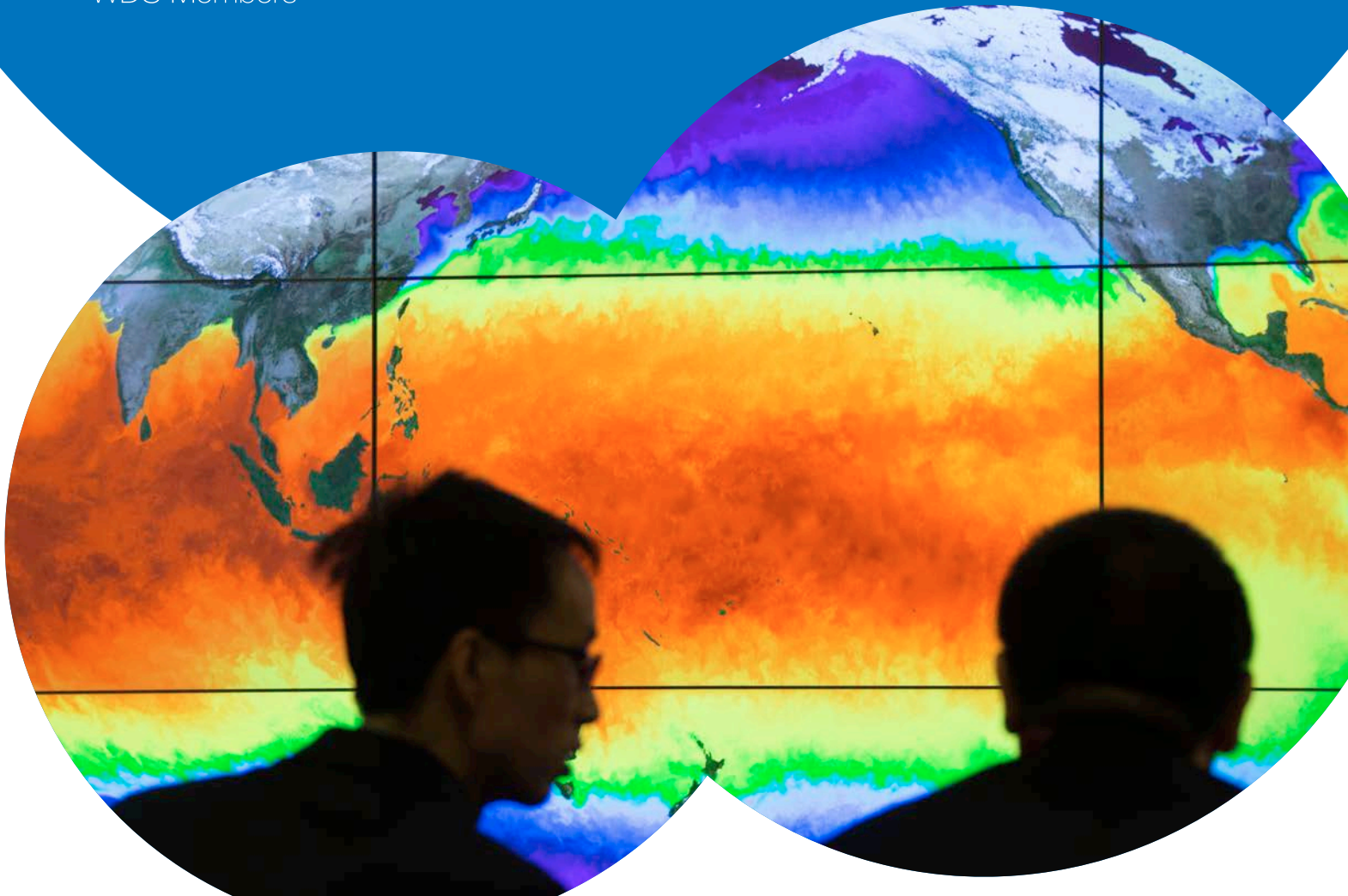
# Administration & Governance

Communication Tools

WDS Scientific Committee

WDS International Programme Office

WDS Members







## Communication Tools

### WDS Website

ICSU-WDS launched a new and improved website in February 2014 ([www.icsu-wds.org](http://www.icsu-wds.org)). Although the functionality of the website was still being upgraded during the remainder of the fiscal year, the feedback received by the WDS International Programme Office (WDS-IPO) was highly positive, and it was generally regarded that the new website is aesthetically pleasing and user friendly.

The new website—which uses plone, an open source content management system—is the first stage towards the realization of a bespoke WDS integrated platform that will be rolled out in 2014.

### Webinars

In late July 2013, the WDS Scientific Committee (WDS-SC) announced its intention to introduce a series of Webinars for the WDS community at large. The WDS-SC instigated this service in response to suggestions by WDS Members

surveyed following its 7th Meeting, in which it mandated that ICSU-WDS would provide a 'community building' function. WDS Members were found to be in favour of this strategy and proposed that ICSU-WDS facilitate them to naturally form networks by offering a platform for (virtual) workshops.

WDS Members will thus be encouraged to host short talks on data topics of their choosing such that synergies can be found amongst themselves and the broader data community. In addition, data experts external to ICSU-WDS will be invited by the SC as guest speakers on subjects considered to be of wide interest.

The inaugural WDS Webinar was held on 9 September 2013 and was given by Dr Fiona Murphy (John Wiley and Sons Ltd. [WDS Associate Member]; WDS Data Publication Working Group), who presented on the outcomes of PREPARDE; a 12-month JISC-funded project that looked to summarize the processes necessary to publish scientific datasets.

### Communications Kit

To enhance the visibility of ICSU-WDS, the WDS-IPO worked with a graphic designer throughout the 2013 fiscal year to develop a consistent and strong WDS 'corporate branding'. Specifically, the WDS-IPO required a reusable communications kit—a set of digital templates for ready-to-print publicity materials to communicate the WDS message via a cohesive design style and colour scheme.

The final package contains designs for the WDS Annual Report (which can be seen in both the 2012–2013 and present document), other WDS reports, and our posters, flyers, standing banners, and presentations. They will be used both in documents released by the WDS-IPO and events attended by the WDS-SC and WDS-IPO. Several of the publicity materials will also be made available on the 'Promotions' page WDS website for download and display by the WDS community.

# WDS Scientific Committee

ICSU-WDS is governed by a Scientific Committee (the WDS-SC) composed of prominent scientists actively involved in Data/Computer Sciences, and dealing with large dataset issues and long-term data stewardship. The WDS-SC includes directors of WDS Member Organizations and covers a broad range of disciplines and geographical areas.

## Chair

**Jean-Bernard Minster:** Scripps Institute of Oceanography, University of California, United States of America (USA)

## Vice-chairs

**Michael Diepenbroek:** Institute for Marine Environmental Sciences, University of Bremen, Germany

**Françoise Genova:** Centre de Données Astronomiques de Strasbourg, France

## Ex Officio Members

**Howard Moore:** ICSU Secretariat, France

**Yasuhiro Murayama:** National Institute of Information and Communications Technology, Japan

## Members

**Claudia Emerson:** Sandra Rotman Centre, University Health Network / University of Toronto, Canada

**Kim Finney:** Australian Antarctic Data Centre, Australia

**Wim Hugo:** South African Earth Observation System, South Africa

**Jane Hunter:** School of Information Technology and Electrical Engineering, University of Queensland, Australia

**Vasily Kopylov:** All-Russian Research Institute of Hydrometeorological Information–World Data Centre, Russian Federation

**Guoqing Li:** Centre for Earth Observation and Digital Earth, People's Republic of China

**Ruth Neilan:** Central Bureau of the International Global Navigation Satellite System Service, USA

**Lesley Rickards:** Permanent Service for Mean Sea Level, National Oceanography Centre, United Kingdom

**Ryosuke Shibasaki:** Center for Spatial Information Science, University of Tokyo, Japan

**Ariel Troisi:** Oceanography Department, Naval Hydrographic Office, Ministry of Defence, Argentina

## WDS-SC Meetings in 2013–2014

The WDS Scientific Committee (WDS-SC) met twice in 2013. It convened for its 8th biannual Meeting on 17–19 April at the ICSU Secretariat in Paris, France. The goals of the meeting concerned strengthening the ties between ICSU-WDS and its partners, and addressing a number of membership issues. In particular, details were discussed between the Executive Committees of ICSU-WDS and the ICSU Committee on Data for Science and Technology on their first joint biennial conference—SciDataCon 2014—

which will be held on 2–5 November 2014 in New Delhi, India.

The WDS-SC' 9th Meeting was then held on 17–18 October at the NICT Kojimachi Office in Tokyo, Japan; immediately following the conclusion of the International Forum on 'Polar Data Activities in Global Data Systems'. The meeting predominantly centred on the formulation of the ICSU-WDS Strategic Plan for the period 2014–2018, alongside the generation of an Implementation Plan for 2014–2015 listing a number of annually reviewed actions towards achieving the proposed strategic targets.

## Kim Finney Leaves WDS-SC

Kim Finney resigned from the WDS Scientific Committee in January 2014. Kim also left her post as Manager of the Australian Antarctic Data Centre (WDS Regular Member) at the end of March 2014 to start her own consultancy business.

We would like to thank Kim wholeheartedly for the time and energy she dedicated to ICSU-WDS—especially for the peerless work put into realizing the International Polar Data Forum—and we wish success in all of her future endeavours.



# WDS International Programme Office

The WDS International Programme Office (WDS-IPO) coordinates the daily operations of ICSU-WDS and implements the decisions of the WDS-SC. Moreover, the WDS-IPO organizes the twice-yearly meetings of the WDS-SC and the biennial WDS Conference, as well as conducting outreach and promotional activities.

Following an agreement with ICSU, the WDS-IPO will be hosted and financially supported until 31 March 2016 by the National Institute of Information and Communications Technology in Tokyo, Japan.

## Financial Summary

The main source of income for financing the WDS International Programme Office (WDS-IPO) and its activities comes from the contributions of the National Institute of Information and Communications Technology (NICT), the WDS-IPO host organization. In addition, the International Council for Science (ICSU) supports the costs incurred for one of the WDS Scientific Committee's biannual meetings. This meeting is typically held at the ICSU Secretariat in Paris, France.

### Statement of Income and Expenditure

Income	Japanese Yen
2012 Contribution from NICT	¥31,000,000
<b>Total income</b>	<b>¥31,000,000</b>
<hr/>	
Expenditure	Japanese Yen
Communication and Promotion	¥11,833,042
Administrative Support	¥13,731,382
Travel and Meeting Costs	¥6,843,888
Other Costs (Insurance, Bank Charges, etc.)	¥1,022,975
Equipment	¥181,925
<b>Total Expenditure</b>	<b>¥33,613,212</b>
<b>Net (Income - Expenditure)</b>	<b>-¥2,613,212<sup>1</sup></b>

<sup>1</sup>The negative balance is compensated by a special NICT contribution of the same amount.

The accounts of the WDS-IPO are maintained and audited by NICT, its host institute. The above statement of income and expenditure is for the period 1 April 2013 to 31 March 2014; corresponding to the Japanese fiscal year 2013.

### Japan WDS Scientific Association

ICSU-WDS has launched the Japan WDS Scientific Association: a not-for-profit and quasi legal entity with limited membership (a 'Voluntary Association' under Japanese law) for accepting and utilizing funding from external bodies—outside that provided to the WDS-IPO by NICT—for specific projects.

The constitution of this lightweight structure not only details the nonprofit nature of its activities but also the WDS-SC's role in the decision-making process. In particular, clear ties between the Association and the WDS-SC are enforced through a Memorandum of Understanding attached to the Constitution.

# WDS Members

Member Organizations of ICSU-WDS from wide-ranging fields are the building blocks of a worldwide 'community of excellence' for scientific data. Not only do these Members participate in advancing WDS goals; their data holdings, services, and products are the cornerstone of the federated data system.

On 31 March 2014, ICSU-WDS had 80 Member Organizations in four different categories.

**53 Regular Members:** Organizations that deal directly with data curation and data analysis services.

**9 Network Members:** Umbrella organizations representing groups of data centres and/or data services, some of which may or may not be WDS Regular Members. Usually serve as coordinating agents for nodes that have common characteristics and mostly common disciplines.

**3 Partner Members:** Organizations that do not deal directly with the practical details of data collection, curation, and distribution, but that contribute funding or other support to ICSU-WDS.

**15 Associate Members:** Organizations that are interested in the WDS endeavour and participating in our discussions, but that do not contribute direct funding or other material support.

Member Organizations are formally accepted into ICSU-WDS by the WDS Scientific Committee, who safeguard the trustworthiness of ICSU-WDS by certifying Regular and Network Members according to internationally recognized standards (Partners and Associates are co-opted).

## IPO Staff

**Executive Director:** Mustapha Mokrane

**Senior Advisor:** Takashi Watanabe

**Programme Officer:** Rorie Edmunds

**Administrative Officer:** Yuko Nikaido



The following organizations were affiliated as WDS Members during fiscal year 2013.

## Regular Members

Organization Name	Host Institution(s)	Country
Atmospheric Science Data Center	National Aeronautics and Space Administration (NASA)	United States of America (USA)
Chinese Space Science Data Center	Center for Space Science and Applied Research, Chinese Academy of Sciences (CAS)	People's Republic of China (PRC)
Cold and Arid Regions Data Center at Lanzhou	Cold and Arid Regions Environmental and Engineering Research Institute, CAS	PRC
Global Hydrology Resource Center	NASA	USA
Interuniversity Consortium for Political and Social Research	University of Michigan	USA
Italian Centre for Astronomical Archive	Istituto Nazionale di Astrofisica	Italy
World Data Centre for Geomagnetism, Mumbai	Indian Institute of Geomagnetism	India

## Network Members

Organization Name	Host Institution(s)	Country of Secretariat
International DORIS Service	Centre National d'Etudes Spatiales	France

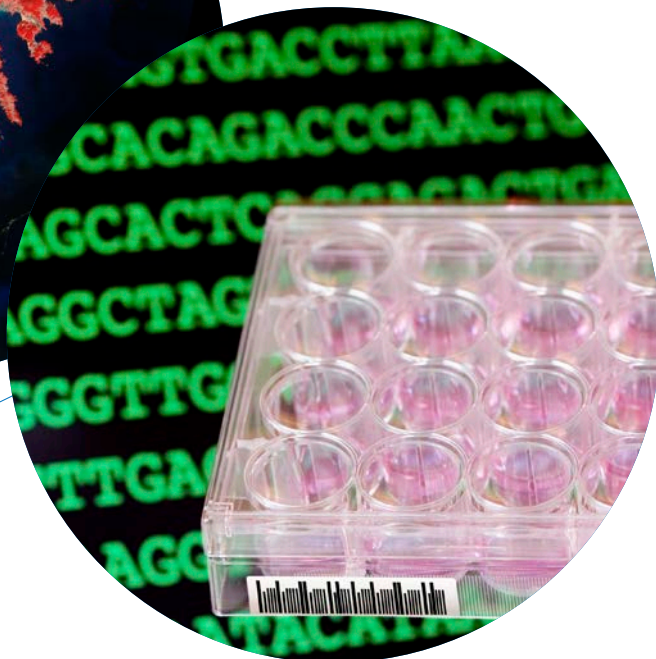
## Partner Members

Organization Name	Host Institution(s)	Country of Secretariat
DataCite	German National Library of Science and Technology	Germany

## Associate Members

Organization Name	Host Institution(s)	Country of Secretariat
Byurakan Astrophysical Observatory		Armenia
International Union of History and Philosophy of Science/ Division of History of Science and Technology		Greece
Research Council of Zimbabwe		Zimbabwe

The long-term  
ICSU vision is for a world  
where excellence in science is  
effectively translated into policy making  
and socio-economic development. In such  
a world, universal and equitable access to  
scientific data and information is a reality and  
all countries have the scientific capacity to  
use these and to contribute to generating  
the new knowledge that is necessary to  
establish their own development  
pathways in a sustainable  
manner.



WORLD DATA SYSTEM

IPO Host:



World Data System

International Programme Office (c/o NICT)

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