

World Data System – Scientific Committee Draft Report of the 15th Committee Meeting

16–17 September 2016

Sheraton Downtown Hotel, Denver, Colorado

Goals of the Meeting

The principal focus was to examine the organization of International Data Week (IDW) 2016 that had taken place in the days leading up to the Meeting.

IDW 2016

WDS Members' Forum

- The Members' Forum was extremely successful—over 100 people attended, and there was strong engagement and lots of positive feedback—however, it is obvious that having a meeting once every two years is not sufficient to keep interactions ongoing. WDS Members were glad to see that the Bylaws and accreditation are moving ahead, and that they can be more actively involved in ICSU-WDS. The WDS International Programme Office (WDS-IPO) will follow up with Members on what was agreed to.
- Several suggestions for the WDS-IPO to act on include creation of a mailing list to encourage exchange among Member Organizations, and highlighting Members' data products and services on the WDS website using the carousel and Member Profiles.

SciDataCon 2016

- SciDataCon 2016 was also a great success, with attendance figures reaching more than 600, a very rich programme covering a broad scope of themes, and a series of interesting keynotes. It will be made clearer in future events that meals and breaks are provided for, as this mitigates the attendance fees .
- With the website built for reuse, the conference abstracts form a permanent collection. All authors of abstracts were invited to submit full papers to the Data Science Journal (DSJ), but the deadline is short and the WDS-SC asked for an extension. The WDS-SC worried that although indexing of the DSJ is being improved, people may not contribute since it is still not highly rated by some funders. This is especially a problem for those in Africa and Asia looking to get a citation rate, and ICSU-WDS will have a formal dialogue with the ICSU Committee on Data for Science and Technology (ICSU-CODATA) about exploring options to increase the profile of the conference.
- Many at SciDataCon appreciated that ICSU-WDS is supporting Early Career Researchers (ECRs) and 'nurturing the next generations'—in particular, because of the great contributions of the WDS Data Stewardship awardees. In this regard, ICSU-WDS may have more prizes in the future; for example, for a network of Young Scientists, or one that promotes interaction between those early and late in their careers. A session that looks at research challenges and with an ECR focus might be included at the next SciDataCon. There could also be a separate stream for Young Scientists/students, who are possibly more keen on having their own sessions.

- Many ECRs mention issues with funding, and a number of organizations may not have been able to send an ECR to Denver for one week in addition to a senior scientist. IDW 2016 registration did not include a discount for ECRs/Young Scientists, and ICSU-WDS will look to reduce the fees for them in future if more money is available and to find travel support for at least those from developing countries. An aim is for SciDataCon to become as well recognized as other large meetings such that it can be included as a training opportunity for ECRs in grant proposals.
- ICSU-WDS will launch an ECR network for anyone 'hands on' when it comes to data across all disciplines. This will be opened up and some level of initial sustainability provided, but then the group should become self-governing and with a rolling remit. ICSU-WDS can then hold thematic events explicitly for ECRs that are separate or tied to the Members' Forum and SciDataCon. The WDS Data Stewardship awardees are enthusiastic about establishing an ECR community within ICSU-WDS, and the WDS-IPO will hear their ideas about how to build such a group.

Recruitment and Engagement of WDS Members

Conferences and Workshops

- The 16th WDS-SC Meeting is to be held in April 2017 in France. It will be followed by a two-day Workshop to discuss with people running repositories and data services in Africa about the benefits of certification, and to explore how ICSU-WDS can support this network of data practitioners. The main aim of the Workshop is to enable interactions and capacity building among those in data to serve the African community in terms of accreditation and developing expertise. ICSU-WDS will also talk with African data services about becoming involved with the African Open Science Platform.
- The Workshop will be a closed, invite-only meeting for 15–20 key people involved in nodes already connected (formally or informally) with activities. It will not be discipline specific, and will look at what people want to achieve: a network to think about policy and to build things in background. A larger Workshop can then be held in Africa in the future to continue developments.
- One expectation is that the African Workshop will offer a model for co-locating future WDS-SC Meetings with events involving (potential) WDS communities. This concept was presented at the WDS Members' Forum, and the WDS-IPO will poll Members' interest in hosting and organizing an event for their community such that the WDS-SC can see identify the opportunities that are available.
- Provisional discussions have taken place between WDS-Japan and WDS-China about organizing a WDS Asia–Oceania Conference in September 2017 at Kyoto University. The idea is to build a WDS network to make advances with problems of concern in the region and to plan for a Southeast Asian contribution to Future Earth. Once concrete decisions have been made on the venue and date, other WDS Members in the region will be asked to participate in the Conference's organization.

Certification

- The new Catalogue of Requirements has been approved by DSA and ICSU-WDS, and will now be implemented. However, there are still two certification bodies, and DSA and ICSU-WDS have appointed a joint implementation team to work out how to align their certification procedures, with the goal of having a single authority that brings together all reviewers. The first priority is to create a common

identity for the certification such that repositories can display their trustworthiness. Once this is in place, certification of all new and renewed WDS memberships will come under this banner.

- Certification may eventually be conducted by a professionalized spin-off body steered by DSA and ICSU-WDS, possibly with an administration fee (WDS membership will remain free). In this regard, the review system must be robust to challenges, and all reviewers must have undergone the same minimal level of training. Hence, once the DSA and WDS review processes are aligned, training webinars for all reviewers will be held to walk through each Requirement and say what is needed based on the guidance text. These webinars will be recorded as a permanent tutorial resource.
- The WDS-IPO will ask Member Representatives if they are willing to nominate a reviewer within their organization even before undergoing periodic review. A page will be created on the WDS website recognizing all those who agree to take on this role. The website will also make it clearer that certification is a procedure whereby one has to go over certain minimum: not everyone passes first time, and it is a process of feedback and support from the WDS-SC to assist an organization's development. Furthermore, one does not have to be certified immediately to be part of the WDS community.

Training

- A training curriculum framework has been created by the WDS-IPO based on DANS' online training and directed mainly towards WDS Member Organizations. The thinking is not that ICSU-WDS necessarily runs courses, but rather it understands what exists such that WDS-branded training can be provided in cases where: (1) opportunities arise; (2) training of Members is wanted; and (3) something is needed that builds on data topics, but is focussed on a discipline or application.
- The first stage is to look at what training opportunities and materials can be found, try to categorize them according to the DSA-WDS certification criteria (since that will be most useful to WDS Members), and then document them on the WDS website as a Training Resources Guide. The WDS-IPO has surveyed WDS Members on the training they provide, and they will be asked about sharing their resources. The Guide will also go beyond what is provided by WDS Members, since there is a lot of good material available. The Guide will be revised on a regular basis, and gradually updated over time to include foci on domain specificities and courses on Members' products.
- Face-to-face training is most effective, and ICSU-WDS will look to partner and compile courses with organizations in the business of training using one of two models:
 1. ICSU-WDS asks the partner to add subject matter it wants covered to a course that is then co-branded.
 2. ICSU-WDS delivers the partner a specially designed package with a WDS-flavour for it to run. The second option involves more work since ICSU-WDS will provide the modules, but is more desirable if a partner can be found who can offer infrastructure.
- The long-term plan is to map out WDS training so that ICSU-WDS has a package for the future. Emphasis will not be on only training though, but also
 - i. Provisioning. Providing linkages between programmes collecting data and people who archive data, develop the interfaces, and deal with the technicalities.
 - ii. Utility and translation. To answer questions, data must be translated into knowledge to facilitate understanding and utilization.

ICSU-WDS' links with disciplinary aspects will be part of the appeal of such a package: modules can tap into the domain experiences of WDS Members to offer specific flavours for each research area.

- ICSU-WDS will ensure that parallel efforts with ICSU-CODATA in the area of training are complementary, and build on and support the collective ICSU brand.

Links with Partners

- The scientific and statistical communities creating the United Nations (UN) Global Sustainable Development Report and the Progress Report of the Sustainable Development Goals are not well connected, and ICSU is exploring how to increase their links. The ICSU Secretariat will help WDS establish contact with the UN Statistical Commission, and the WDS-SC will then invite someone from the Commission to one of its next face-to-face Meetings to raise awareness on topics of mutual interest.
- The UN World Data Forum is scheduled in Cape Town in January 2017. The programme is still being developed, and there are possibilities for ICSU-WDS to have a side event or some other presence. This is a very useful opportunity, and the WDS-SC will brainstorm on ICSU-WDS involvement.
- ICSU-WDS is playing a leading role in the first Data Providers workshop of the Group on Earth Observations (GEO) that will take place at its next Plenary. This workshop is a one-day appetizer before a main one in early 2017. ICSU-WDS is urging that data providers to the Global Earth Observation System of Systems become certified, and GEO is expected to formally endorse the Data Seal of Approval (DSA)–WDS Certification Requirements and to include certification within its Data Management Principles.
- A Memorandum of Understanding between ICSU-WDS and ORCID will be formally endorsed imminently. Both organizations want to see the world of Open Science and reproducibility move forward, and will explore a number of synergies to strengthen their efforts. A working group (WG) will be set up to define clear actions and products: to explore practical steps that will help WDS Members and help socialize the concept of using ORCID application programming interfaces, which can assist in enhancing trust in digital information.
- One of the next steps for the Scholarly Link Exchange project is to include researchers, and ORCID will be involved in this work. ICSU-WDS wants to build links among registries of persistent identifiers in the larger landscape of scientific data, and a valuable starting point is to align the communication offered to stakeholders to promote the use of persistent identifiers.

WDS Administrative Matters

WDS International Technology Office

- ICSU-WDS wants to establish capabilities beyond those of the WDS-IPO, and these are to be fulfilled by a WDS International Technology Office (WDS-ITO). There will be strong coordination between the WDS-IPO and ITO, with their relationship being that the WDS-IPO is the public face of ICSU-WDS responsible for services delivered by the WDS-ITO, its new operational unit.
- Once consensus is reached by the WDS-SC on the concept note for the WDS-ITO, ICSU will be asked for its endorsement. WDS Members will also be consulted regarding whether the WDS-ITO, as defined, is useful

for them/ICSU-WDS/the international community. Since the WDS-ITO will give ICSU-WDS the capability to share things at a global level, support will furthermore be sought from WDS partners.

- The Hosting Call will be prepared at the same time as seeking endorsements. The Call will need to be supplemented with information on governance, functions, likely composition, human resource and physical infrastructure requirements, and outreach/liaison obligations. These additional details will not be overly prescriptive, but minimal indications of the person and technology resources needed.

WGs/Subcommittees

- The two WDS–CODATA activities within the Global Science Forum of the Organization for Economic Cooperation and Development held meetings during IDW 2016. The activity on International Coordination of Data Infrastructure organized a breakfast at which 15 of 25 invited stakeholders attended. Its next event will be a workshop in March 2017. The activity on Sustainable Business Models will also hold workshops in November and March that will include funders, policy makers, and others.
- The Road-mapping Exercise is still needed and the Subcommittee charged with this will organize a teleconference to move things forward. The goal of the Exercise is to recognize how ICSU-WDS should position itself and to identify science (funding/support) opportunities. In particular, there are agencies designing funding calls worldwide, and the mapping will show who needs to be targeted in each region. The Exercise will also determine appropriate people who should be explicitly approached to explain the role of ICSU-WDS. A two-page document will be generated to highlight data management requirements at a non-technical level: talking about their context and importance.
- To assist in the realization of the WDS Knowledge Network and Metadata Catalogue, a document is in progress to examine Member Maturity Improvement: a starting point to approach WDS Members individually on what needs to be implemented for ICSU-WDS to access their data directly/automatically. A Member Organization must at least offer standardized metadata aligned with its community, and the document must integrate and align with other influential guidance to form a template of what is ideal for an organization to achieve from a disciplinary perspective.

Miscellaneous

- The WDS Association previously operated under a quasi-legal status, but this was not optimal and the WDS-IPO has created a legal structure that gives it more flexibility.
- The WDS website is hosted in the cloud, and it is not clear whether a proposed privacy statement has dependencies on jurisdiction and compliance with specific rules. The WDS-IPO will check what is needed.