ICSU World Data System: Trusted Data Services for Open Science

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WDS–IPO Executive Director

SCOSTEP–WDS Workshop on Global Data Activities for the Study of Solar-Terrestrial Variability
Technological developments
History

‘all observational data shall be available to scientists and scientific institutions in all countries.’

International Geophysical Year 1957–58
History

IGY 1957–58

ICSU

WDCs

FAGS
Foundation of WDS

ICSU’s 29th General Assembly in October 2008:

To establish a new ICSU World Data System as an Interdisciplinary Body
ICSU’s long-term vision is of 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 …’
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
WDS Members

**Scientific Data Services:** Assist organizations in the capture, storage, curation, long-term preservation, discovery, access, retrieval, aggregation, analysis, and/or visualization of scientific data, as well as in the associated legal frameworks, to support disciplinary and multidisciplinary scientific research.
WDS Members

• Full and open access data sharing principles
• Trustworthiness and adoption of data standards/conventions *(certification)*
• Broad disciplinary and geographic coverage
WDS Membership (September 2015)

61 Regular Organizations that are data stewards and/or data analysis services

10 Networks umbrella bodies representing groups of data stewardship organizations and/or data analysis services (ESDIS, IODE, IVOA...)

5 Partners Contribute support to WDS Membership

18 Associates Interested in the WDS endeavour
WDS Membership

- Regular Members
- Network Members
2014–15 Certified and co-opted Members

Regular Members
- Permanent Service for Mean Sea Level (PSMSL)
- Socioeconomic Data and Applications Center (SEDAC) NASA DAAC
- UNAVCO Inc.
- Land Processes NASA Distributed Active Archive Center
- Alaska Satellite Facility (NASA, USA)
- Canadian Astronomy Data Centre (NRC, Canada)
- Environment Climate Data Sweden
- Ocean Networks Canada

Network Members
- Intermagnet (BGS, UK)

Partner Members
- SCOSTEP
- Federation of Earth Science Information Partners (ESIP, USA)

Associate Members
- Committee on Data for Science and Technology (CODATA)
- International Council for Scientific Technical Information (ICSTI)
- Research Data Alliance (RDA)
Scientific Committee
2015–18

• Sandra Harrison (Chair, UK)
• Aude Chambodut (France)
• Arona Diedhiou (Senegal/France)
• Ingrid Dillo (The Netherlands)
• Claudia Emerson (Canada)
• Elaine Faustman (USA)
• Wim Hugo (South Africa)
• Toshihiko Iyemori (Japan)
• Rob Kitchin (Ireland)
• Guoqing Li (China)
• Alexander de Sherbinin (USA)
• Sanna Sorvari (Finland)

Ex Officios:
• Heide Hackmann (ICSU)
• Yasuhiro Murayama (NICT)
Strategic Targets

1) Make trusted data services an integral part of international collaborative scientific research

2) Nurture active disciplinary and multidisciplinary scientific data services communities

3) Improve the funding environment

4) Improve the trust in and quality of open scientific data services

5) Position WDS as the premium global multidisciplinary network for quality-assessed scientific research data

https://www.icsu-wds.org/organization/strategic-plan
Strategic Target 1

Make trusted data services an integral part of international collaborative scientific research
Support Future Earth

- Identify data challenges and opportunities
- Define data policy and management principles
- Expand WDS membership in Social Sciences:
  - Inter-university Consortium for Political and Social Research
  - DataFirst
  - The Language Archive
- SciDataCon 2014: four conference tracks
  - bridge cross-cutting data themes and research themes of Future Earth
Strategic Target 3

Improve the funding environment for data services
ICSU-WDS and the Belmont Forum
E-Infrastructures and Data Management Collaborative Research Action

Goal: data management as an integral part of research funding

– Funding provisions for national calls
– Monitoring of applied & current research projects
Strategic Target 4

Improve the trust in, and quality of, open scientific data services
WDS Certification

Evaluation criteria based on a compilation of international standards and best practices:

– General requirements & policies
– Organizational framework
– Management of data, products and services
– Technical infrastructure

Reviewers board - certification agency (CA)
Strategic Target 5

Position ICSU-WDS as the premium global multidisciplinary network for quality assessed data
ICSU-WDS a system of systems
More...

www.ICSU-WDS.org