

Developing the ICSU World Data System (WDS)

2009-2010

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ICSU's Vision

(A world where) universal and equitable access to high quality scientific data and information is a reality and all countries have the scientific capacity to use these and to contribute to generating new knowledge...

From the ICSU Strategic Plan 2006-2011

ICSU's Strategy

...to facilitate a new, coordinated global approach to scientific data and information that ensures equitable access to quality data and information for research, education and informed decision-making.

From the ICSU Strategic Plan 2006-2011

The reform

the establishment of the **World Data System (WDS)** as a new ICSU Interdisciplinary Body by incorporating the WDCs and FAGS as well as other ‘state of the art’ data centres and services.

Strategic Committee on Information and Data (SCID) Report

WDCs

World Data Centres

- International Geophysical Year (IGY) 1957-8
- 50 WDCs in 12 countries
 - USA (15)
 - UK (3)
 - Germany (3)
 - Belgium (1)
 - Denmark (1)
 - Australia (1)
 - France (1)
 - Russia (7)
 - China (9)
 - Japan (8)
 - India (1)
 - Netherlands (1)
 - South Africa (in progress)

FAGS



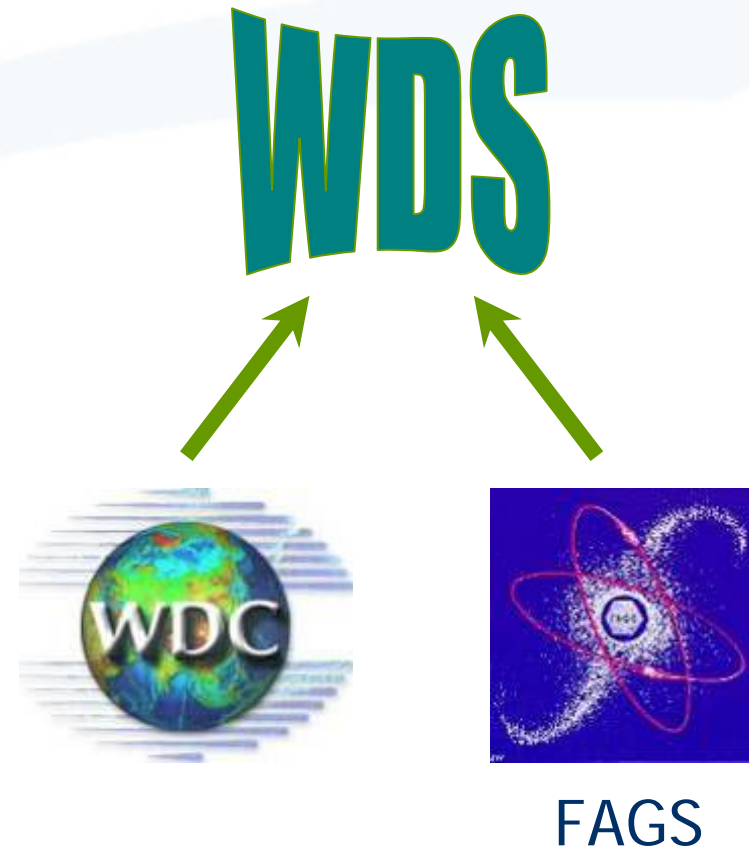
Federation of **A**stronomical and **G**eophysical data analysis **S**ervices

- Established 1956 in the framework of IGY
- 12 permanent services operating under one or more of IAU, IUGG, URSI

WDC and FAGS legacy

Products of history rather than **strategy** ...

They provide the foundation on which a broader, better coordinated and more effective system can be built...



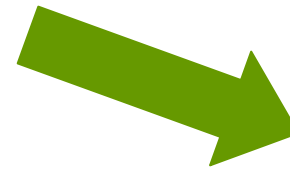
WDS Scientific Committee (May 2009)



- *Leading scientists with experience in using large data resources and data centre/service Directors (12 members).*
- *Dedicated secretarial support (min 0.5 fte)*
- *ICSU financial support for WDS-SC during the initial 3-year period*



WDS Transition-Team



WDS-SC

WDS by-laws (end 2009)

WDS Scientific Committee's

- *Operating procedures*
- *By-laws and rules*



Accreditation process (end 2009)

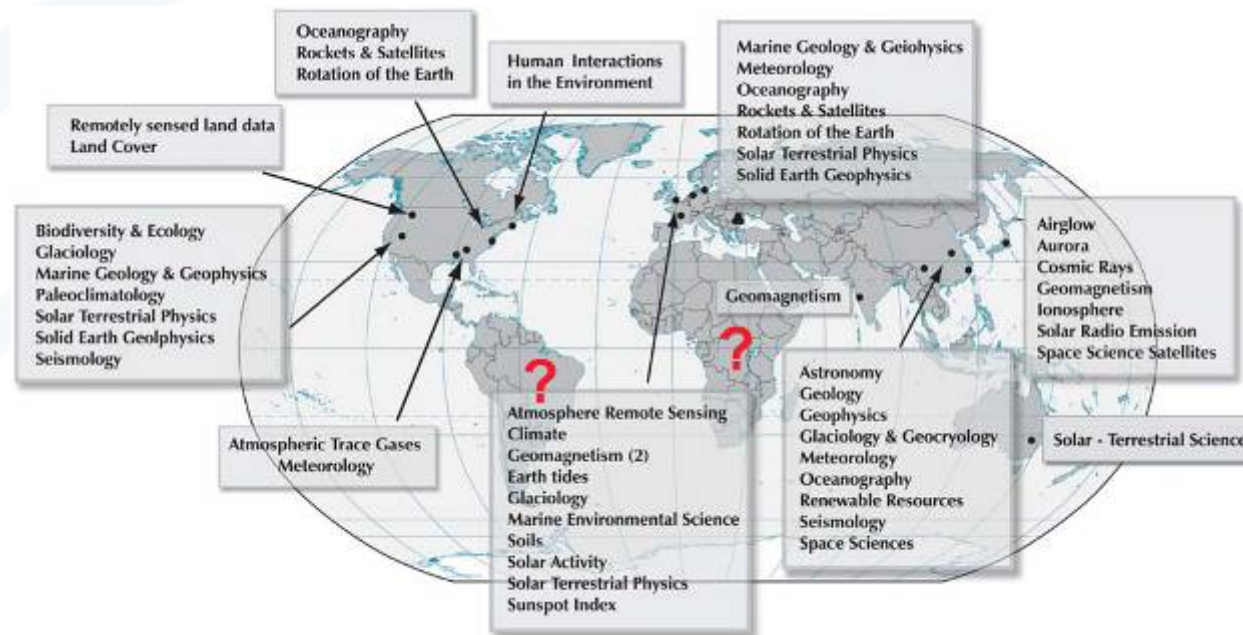


*Accreditation process for all existing
data centres and services:
Role for **ICSU Unions** and
Interdisciplinary Bodies*



New facilities and Services (start in 2009)

*New Facilities and Services to be introduced into WDS, including those in **LEDCs** and transition countries*



Minimal Interoperability (2010)



*Define and achieve
minimal interoperability
across the large majority
of centres and services*



On line Data Portal (2009-2010)



*Single Data Portal for
locating and accessing
all WDS data and
services on line*

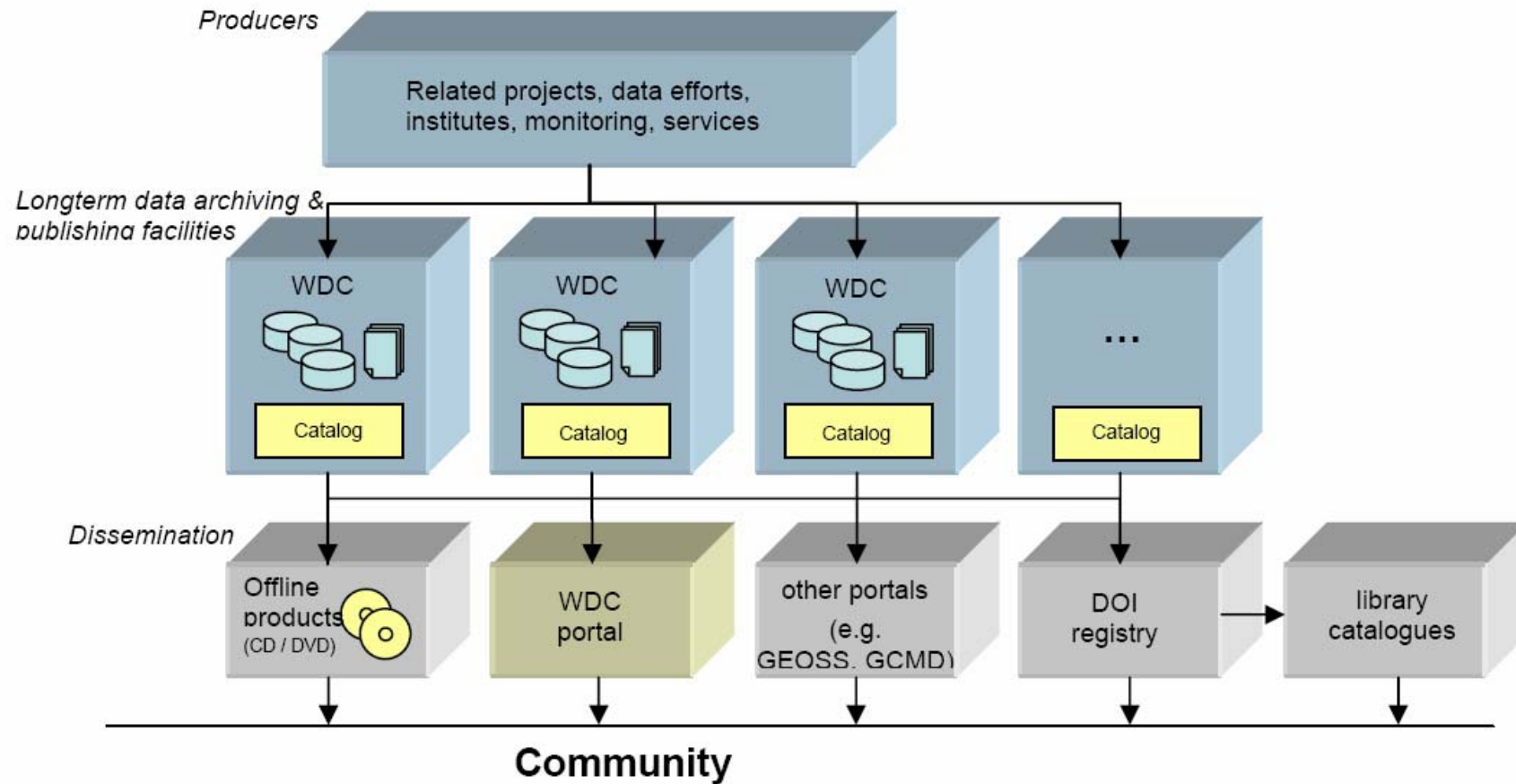


WDS Common Data Portal Prototype



The prototype *interoperable network of WDC and Services with a common data portal* explores a tentative architecture, implemented as a pilot project focused on ocean data.

WDS Common Data Portal Prototype



WDS Common Data Portal Prototype



Major step in the technical implementation of a WDS

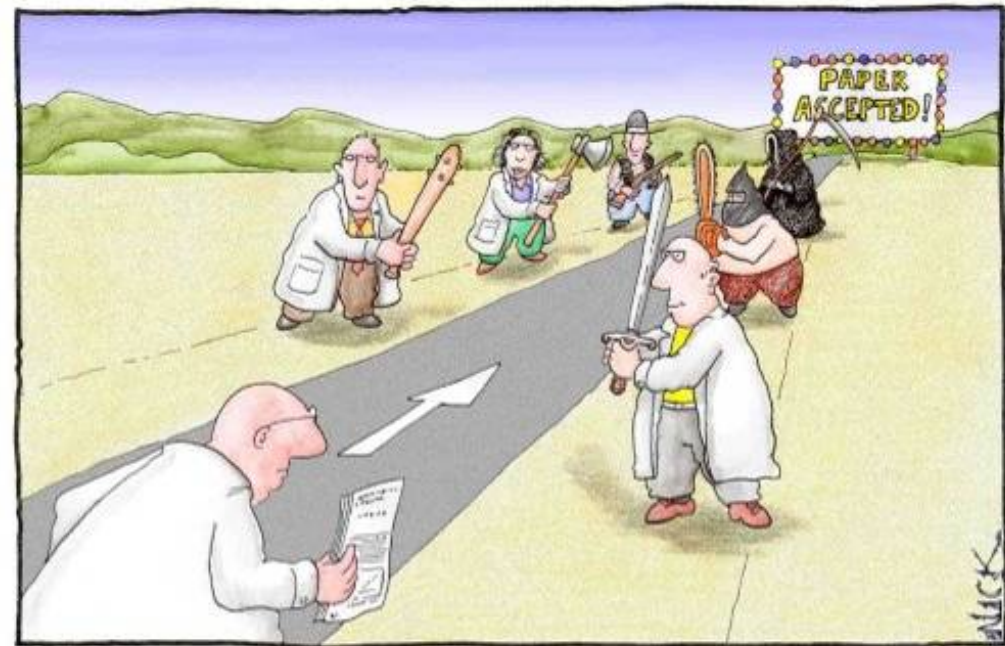
- In line with GEOSS concepts and concentrates on metadata catalogues served with standard protocols:
 - OGC catalogue service (OGC-CSW)
 - Open Archives Initiatives Protocol for Metadata Harvesting (OAI-PMH)
- Metadata contents are compliant with ISO19115.
- Full text search engine (Apache Lucene) allows for efficient retrievals and mapping of results.
- Pilot implementation comprises catalogues from 10 participating WDCs: **Operational**

<http://www.world-data-centers.org>

Data publication *(2009-2011)*

Stimulate the development of formal, peer-reviewed data publications accompanied by formal citation procedures and author recognition.

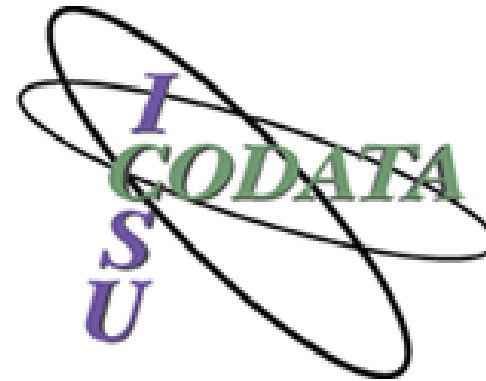
Collaboration with
ICSTI/CODATA



SCCID and CODATA (2010)



Work with SCCID and CODATA to organise forum sessions in the CODATA bi-annual conference in 2010.



**22nd International Conference in
Cape Town, South Africa
October/November 2010 ?**

WDS General Assembly (2010)



*Convene a General Assembly of WDS
Directors in 2010.*

Key Performance Indicators (2009-2012)



What WDS has done
to enable Interdisciplinary research?

- International Polar Year (IPY)
- Integrated Research on Disaster Risk (IRDR)
- GEOSS
- Global Observing Systems

to serve discipline-based research?

- Astronomy