

# The International Council of Scientific Unions (ICSU) **World Data System**

Françoise Genova

SPS15, IAU GA 2012

*Thanks to Mustapha Mokrane who provided WDS  
viewgraphs*

# Foundation






ICSU 29<sup>th</sup> General Assembly in Maputo (Oct. 2008) decided:

- To confirm that ICSU will continue to assert a strategic leadership role in relation to scientific data and information;
- to establish a new ICSU-World Data System as an Interdisciplinary Body to replace the WDC and FAGS



# ICSU Data Track Record



<p>PAST</p>	 	<p>World Data Centers Federation of Astronomical and Geophysical services</p>
<p>PRESENT</p>	  	<p>ICSU International Scientific Unions data bodies ICSU National Members data bodies ICSU Interdisciplinary Bodies data activities</p>

# WDS Scientific Committee



## 2012-2015

- **Bernard Minster** (*Chair, USA*)
- **Michael Diepenbroek** (*Germany*)
- **Kim Finney** (*Australia*)
- **Françoise Genova** (*France*)
- **Wim Hugo** (*South Africa*)
- **Jane Hunter** (*Australia*)
- **Vasily Kopylov** (*Russian Federation*)
- **Guoqing Li** (*China*)
- **Ruth Neilan** (*USA*)
- **Lesley Rickards** (*UK*)
- **Ryosuke Shibasaki** (*Japan*)
- **Ariel Troisi** (*Argentina*)

## **Ex-Officio**

- **Howard Moore** (*ICSU*)
- **Yasuhiro Murayama** (*NICT*)



WDS-SC 6<sup>th</sup> Meeting at the Royal Society, London  
(Committee 2009-2012)

# Objectives



The WDS ensures the **long-term stewardship** and provision of **quality-assessed data** and data services to the international science community and other stakeholders. The WDS incorporates new scientific data activities into a common, **globally interoperable**, distributed data system. The WDS advances interconnections between data management components for **disciplinary and multidisciplinary scientific data applications**. WDS has a broad disciplinary and geographic base and strives to become a **worldwide ‘community of excellence’** for scientific data.

# WDS first steps



1. Constitution
2. Data Policy
3. Certification criteria
4. Applications for Membership
5. International Programme Office (Tokyo, 2012)

# Requirements



- ✓ Full and open access data policy
- ✓ Broad disciplinary and geographic coverage
- ✓ Trustworthiness
- ✓ Adoption of data standards/conventions

# Membership types



<b>Regular</b>	Data curation and data analysis services.
<b>Network</b>	Groups of regular members, umbrella organizations
<b>Partner</b>	Do not deal directly with data collection, curation, and distribution, but contribute support to WDS
<b>Associate</b>	Organizations interested in the WDS endeavour



# WDS Membership (Aug. 2012)



- 39 Regular Members
- 2 Network Members
- 2 Partner Members
- 6 Associate Members

150 Expressions of Interest, 60 applications

Evaluation by the WDS Scientific Committee

Many applications were discouraged

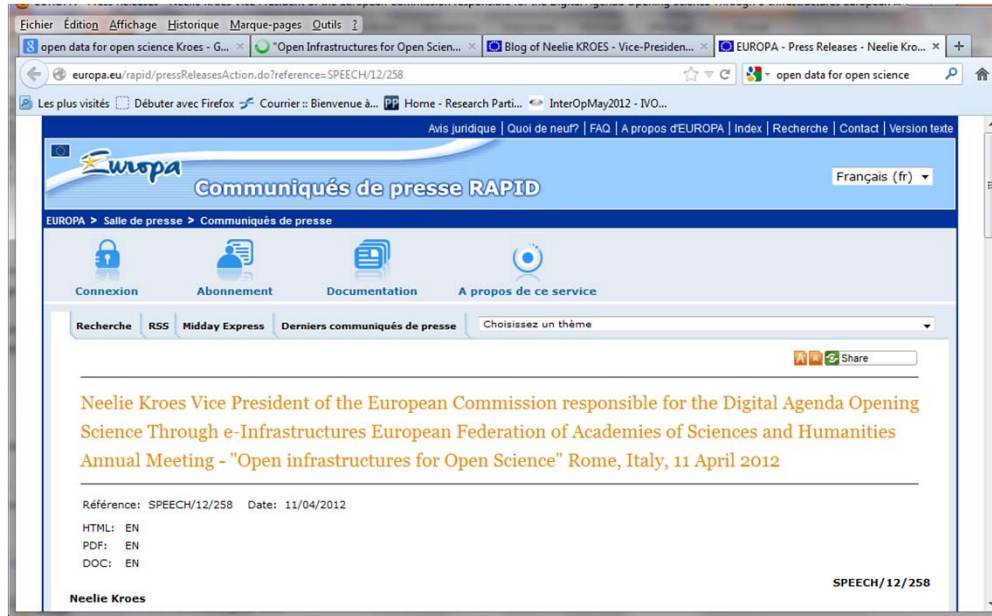
Many other applications are in progress...

# Why does this concern astronomy?

- WDS is fully interdisciplinary - Earth Sciences are at present widely represented by legacy of the World Data Centres
- The Federation of *Astronomical* and Geophysical Centres is a parent body of WDS and IAU has been associated to the brainstorming which led to the creation of WDS

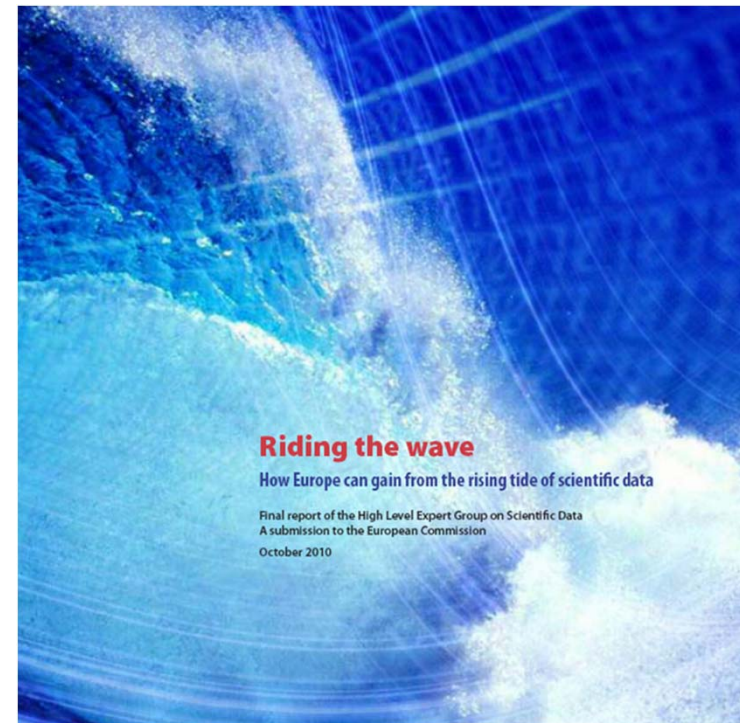
# Why does this concern astronomy?

- Open Scientific Data is a very hot topic
- Astronomy has historically been at the forefront and astronomy data centres and services are fully WDS-compliant
- It is important to keep astronomy visibility
- Astronomy has the capacity to enrich WDS with its wide variety of potential WDS members



Examples from Europe but a hot topic in MANY countries

Open access to publications has long dominated the debate. Now understood that data is one of the research infrastructures



# Astronomy data centre and services

- A Census of European Data Centres and Services by the Euro-VO Data Centre Alliance project (2007-2008)
- An inclusive definition: provide a *service to the community*, with some *added-value* built on expertise, some kind of *sustainability*, concern for *quality*
- *~70 answers*

# European Census results

- A huge diversity of resources
  - Large services provided by international agencies, with archives of the large ground-based and space instruments
  - Large systematic surveys of the sky, results of large simulations
  - Generalist data bases and services
  - Smaller, focussed contributions of scientific teams which share their expertise
- There are ‘historical’ data archives and data centres (CDS is 40 years old this year!)
- The provision of data & services has clearly been strongly encouraged by the development of the VO (including theory but not only)

- In practice, membership application questionnaire is do-able and the evaluation process is fair
- IVOA applied as a Network member and the application has been approved
- Huge, widely used data and services to expose to a wider audience
- We should be more present in WDS