METADATA CATALOGUES IN THE WATER INFORMATION SYSTEM FOR FRANCE

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Water Information System for France (WISF)

- 1992: public actors of the water domain in France signed an agreement for a common information system (WISF protocol)

- 1993: creation of **Sandre**, in charge of the design and management of a common data framework

- Main trends in 15 years:
  - From a data network (data dictionaries, core datasets, data exchanges, …)
  - To an architecture of services (geoservices, catalogue services, web services, …)

WISF main components

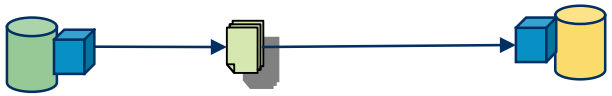
- **Data**
  - Hydrometry (HYDRO database);
  - River quality (River basin district databases);
  - Marine water quality (Quadrige database);
  - Fresh water ecosystems (BDMAP database);
  - Groundwater quality and quantity (ADES database).
  - *In progress*: lake quality, waste water, usage and pressures, economics
- **Metadata**
  - **Description of all information available, including datasets and GIS layers (with geometric features)**
- **Services**
  - Allowing search, analysis, data presentation and download

WISF global architecture

- WISF global architecture relies on :
  - a data framework
  - business rules for managing databases
  - websites for data dissemination
  - pure web

- A data framework (Sandre): a common language for water
  - data models (dictionaries)
  - core datasets (reference data) including:
    - Geographic datasets
    - Water domain registries
  - data exchange specifications
  - service specifications

Use of a common language for water

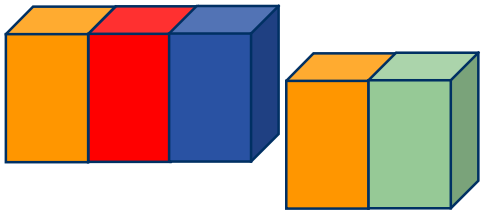


Workgroups

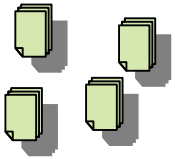
Web service specifications

Data access / Web service implementation

Data Exchange format for a specific usage

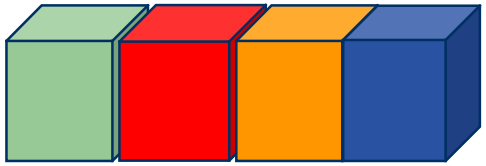


Data exchange

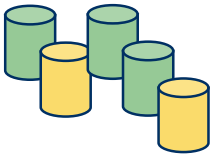


Data model : XMLEau

http://xml.sandre.eaufrance.fr



Databases



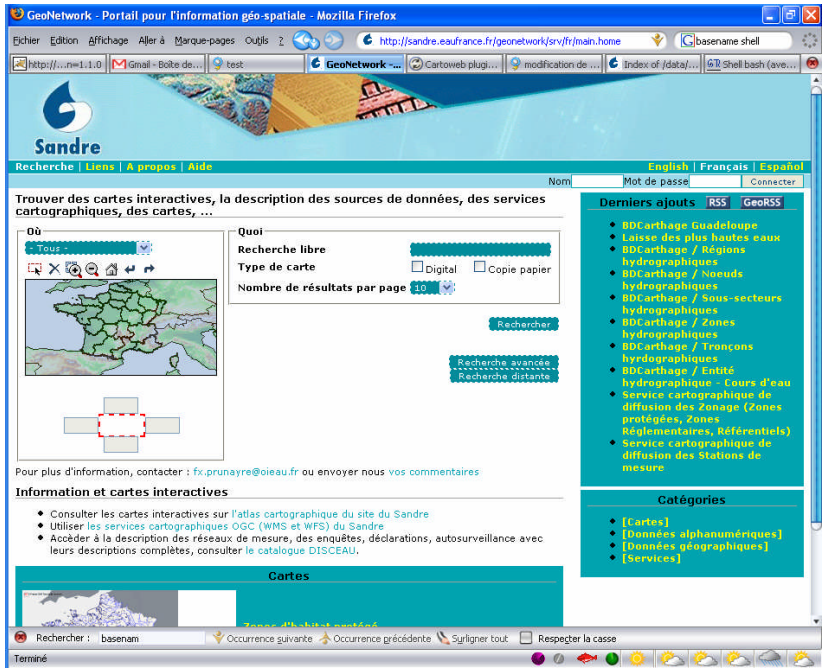
Existing data standards

Context: a national Spatial Data Infrastructure

- A national SDI project led by the Ministry of Economy
- Since 2004, working groups on a ISO 19115 profile for France
- In 2006, launch of
  - “Géocatalogue” : metadata catalogue (operated by BRGM).
  - “Géosource” : opensource tool for metadata editing and publication, available for all organisations (public, private) (based on GeoNetwork from FAO)
  - “Géoportal” : a viewer (operated by IGN)

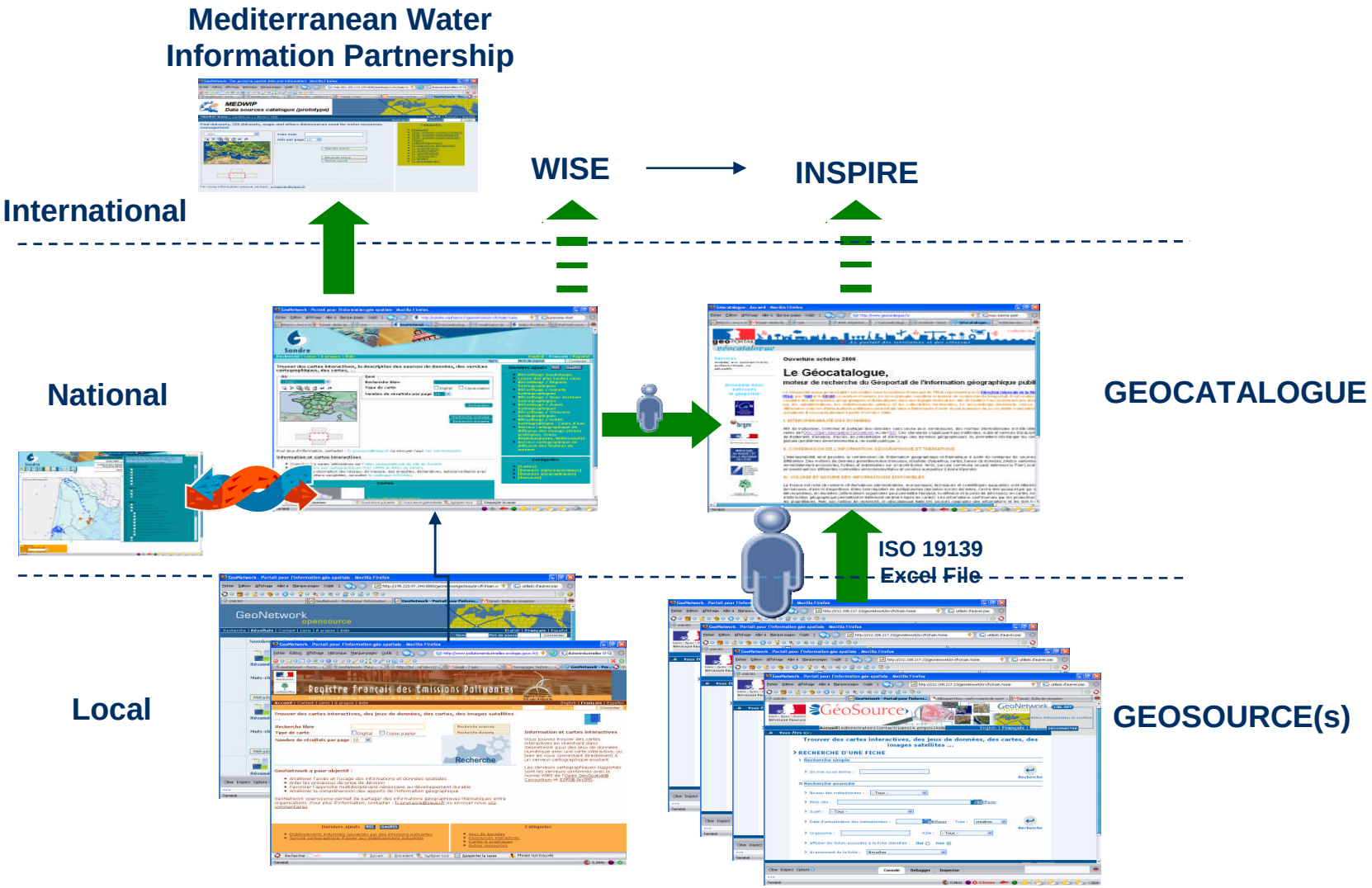
Metadata catalogue for the WISF

- 2004 : WG on metadata for the water community in France (Ccl : follows OGC & ISO standards)
- 2005 : Metadata catalogue on water (Sandre) as one of the building blocks :
  - Find and download data
  - linked to web mapping apps to propose new data **and** services to users
  - (management : versioning, updates, …)
- Tools :
  - Geonetwork (Opensource Project led by FAO) / Géosource = Geonetwork + profile for France



http://sandre.eaufrance.fr/geonetwork/srv/fr/main.home

Water data cataloguing as part of a global approach

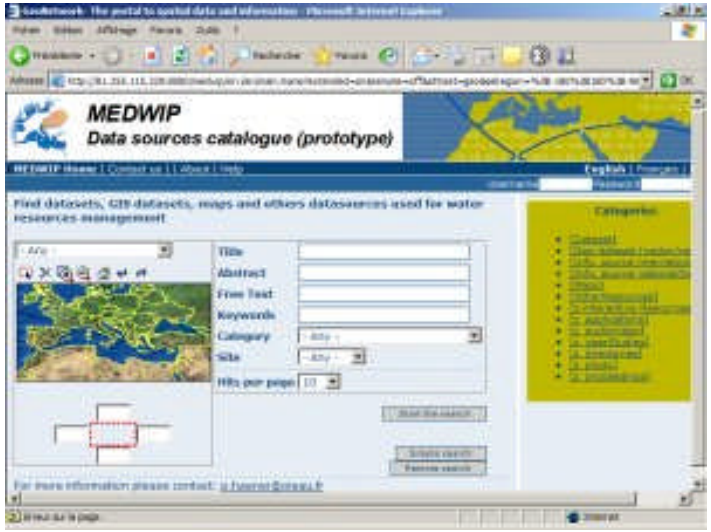


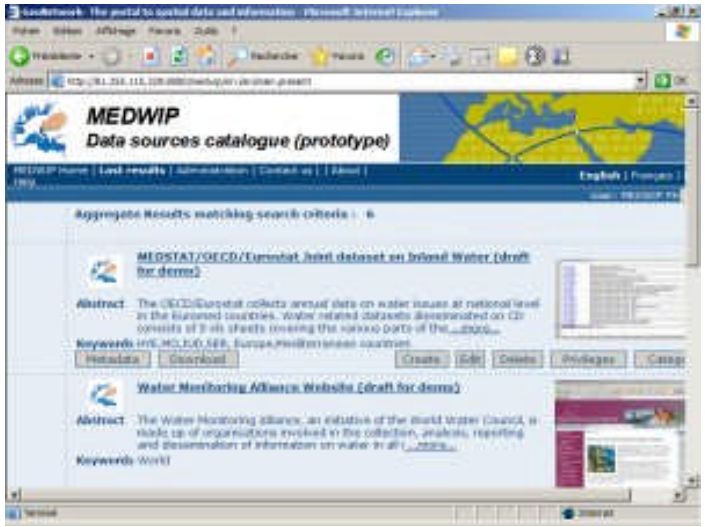
A regional use of the WISF metadata catalogue

- Test in the context of a feasibility study for a "**Regional water observation mechanism in the Mediterranean region**":
  - Identification of available datasets and data sources
  - Download or access to interactive maps following access rights defined by the data producers
  - Visualisation / capture of the metadata

http://81.255.115.229:8080/medwip/srv/en/main.home

http://www.semide.net/medwip





Strength and shortcomings of « Geonetwork »

- Strengths
  - Open Source (OSGeo incubation)
  - Support for Dublin Core, FGDC, ISO (and profiles) / Profile mapping on import/export
  - Multilingual interface (en, fr, es, cn)
  - Multilingual thesaurus support
  - Harvesting : XML indexing and search engine
  - Community : UN, France, Spain, Italy, Japan, China, …
- Shortcomings
  - Management of various versions of metadata datasets
  - Keywords : how to deal with keywords coming from different sources
  - Multilingual management of metadata
  - Metadata for services
  - Link metadata on service with metadata on data
  - ….

Thank you
for your attention