

WEBINAR

WATER INFORMATION SYSTEMS, GOVERNANCE AND THE INTEREST OF REMOTE SENSING
FOR AN INFORMED WATER RESOURCES MANAGEMENT AT NATIONAL AND BASIN LEVELS

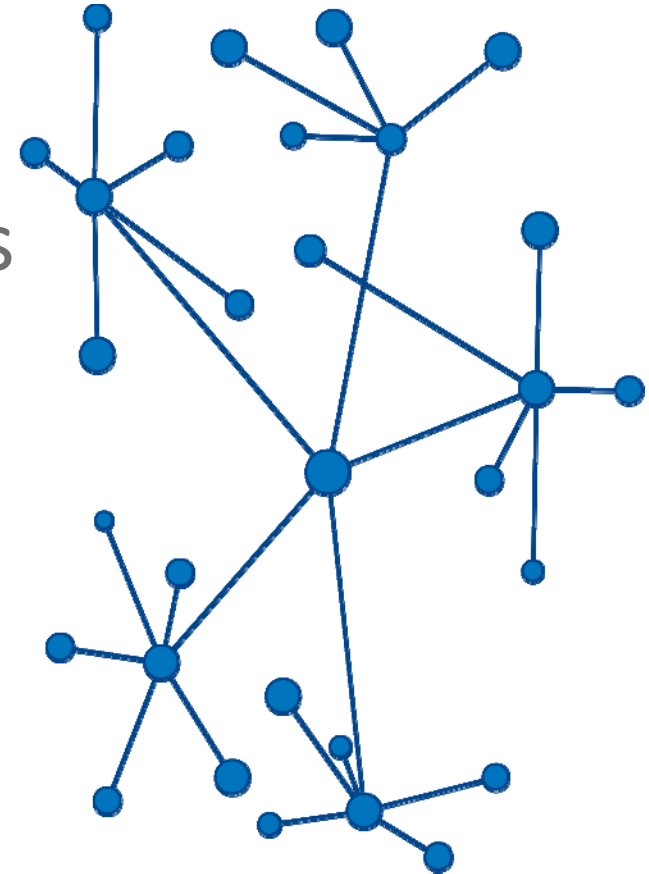


Some key points about the Governance of Water Information Systems

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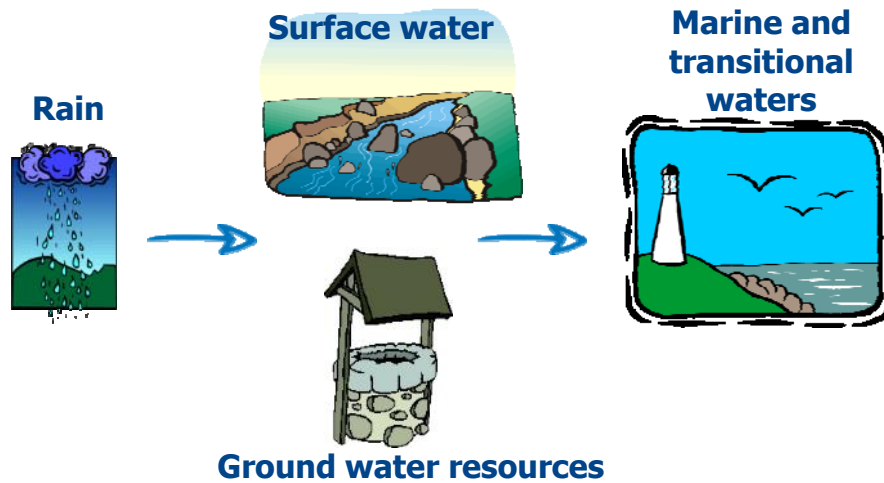
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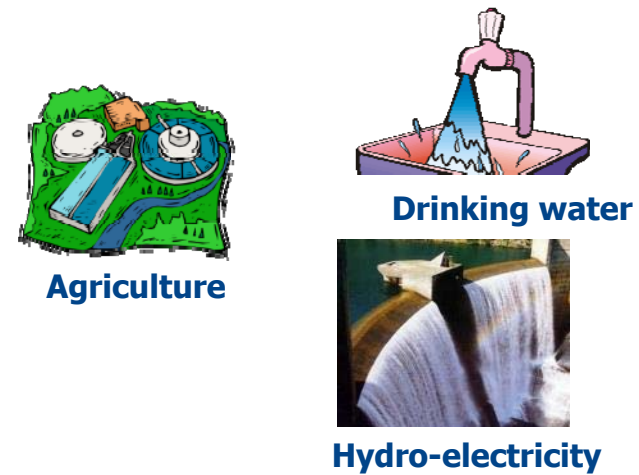


Multiplicity of topics and data producers

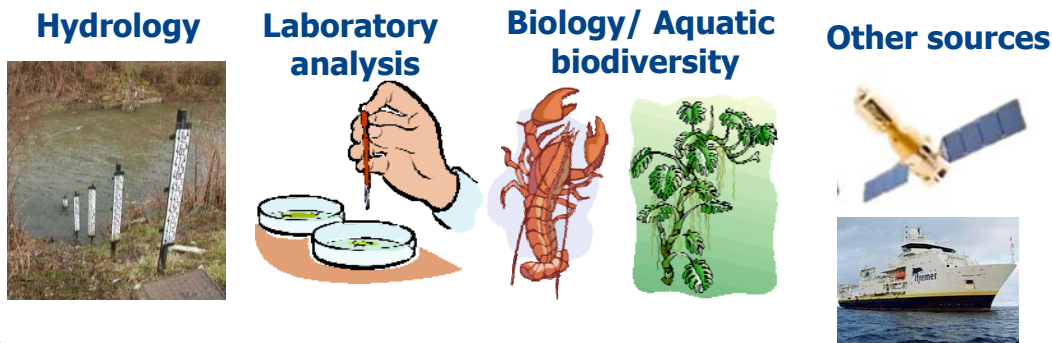
Water resources



Users, uses and infrastructure



Monitoring quantitative and qualitative aspects



Others

- Environmental aspects (DEM, soils,)
- Risk related data
- Health indicators
- Socio -economical aspects
-

Water related data and information fundamental for all activities of the water sector

**Sectorial
water
manage-
ment**

- Drinking water supply
- Irrigation
- Energy
- Health
- Transportation
- ...

**Integrated
Water
sector
planning**

- local level
- Basin level
- National level
- Transboundary basins
- Regional level

**Climate
change
adaptation**

- Hydrological regime modification
- Sea water level rising
-

**Risk
manage-
ment**

- Flood
- Shortage
- Drought
- ...

Reporting

- Global (ex SDG)
- Regional (ex EU)
- National statistics
- Specific conventions
- ...

**Specific
decision
taking**

- Operational management
- Territory management
- Emergency situation
- ...

**Other
water
sector
activities**

- Regulatory aspects,
- Partners/
Public
Information
-



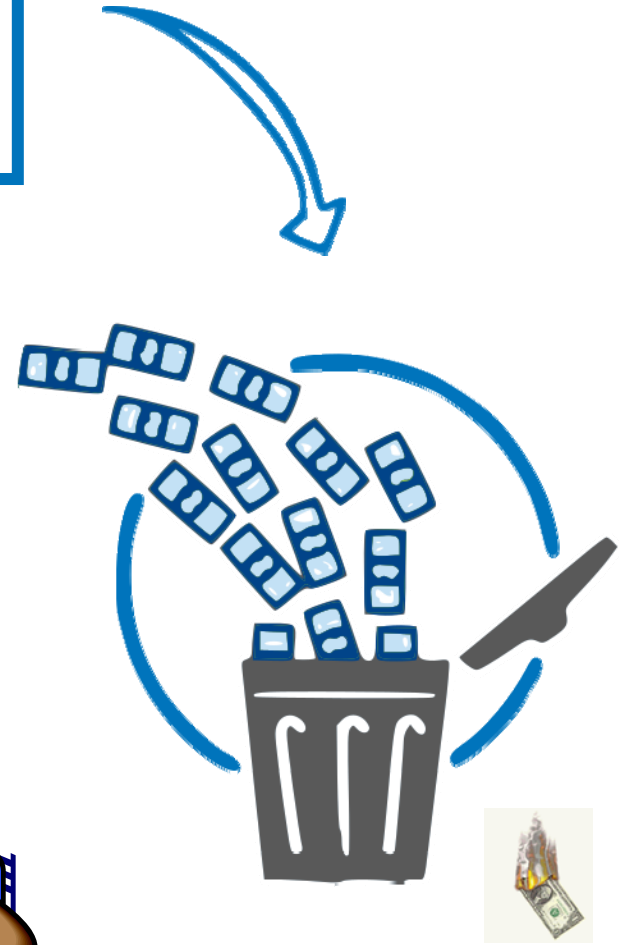
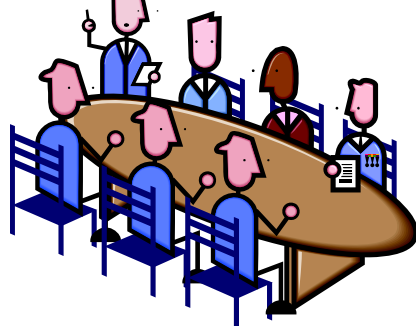
Consequences of lack of easy access to data



~~Information Knowledge~~

~~Public~~

~~Deciders~~

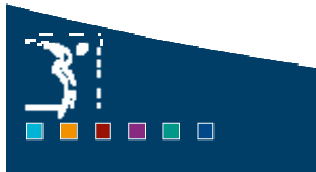


Developing networks of data exchange between actors working as a team

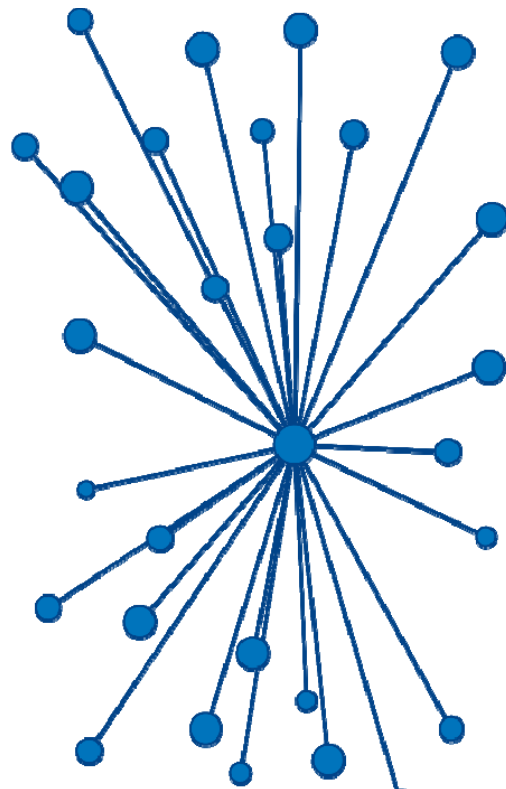


Public

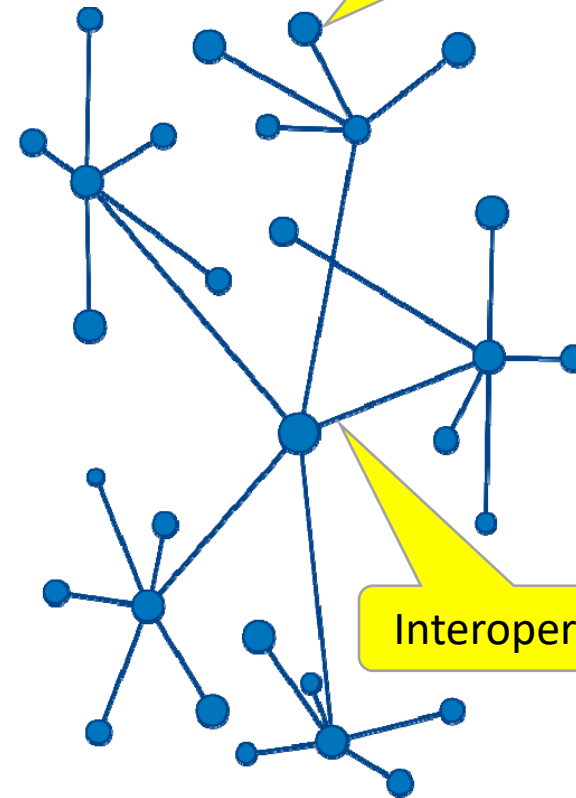
Deciders



About the global architecture



Centralized system



Data producers remain responsible of their data

Interoperability

Decentralized system

The SEIS principles: A good example of procedures for data management/sharing

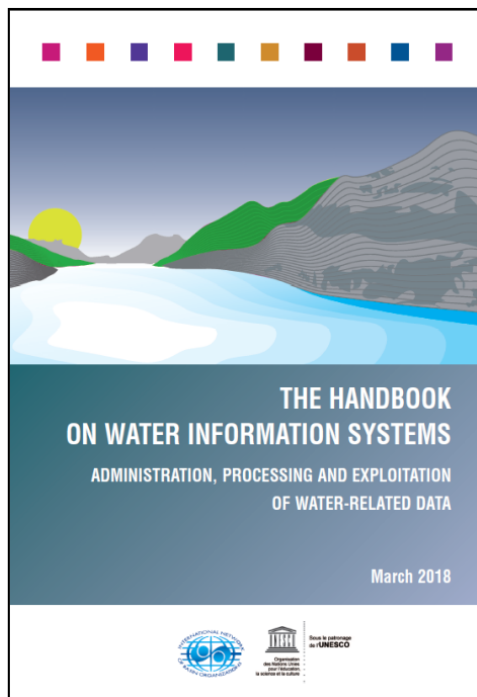


On 1st of February 2008, the Commission adopted a Communication on **SEIS (Shared Environmental Information System)**. The principles are described as follows:

- Information should be **managed as close as possible to its source**;
- Information should be **collected once, and shared with others for many purposes**;
- Information should be **readily available to public authorities and enable them to easily fulfil their legal reporting obligations**;
- Information should be **readily accessible to end-users, primarily public authorities at all levels from local to European, to enable them to assess in a timely fashion the state of the environment and the effectiveness of their policies, and to design new policy**;
- Information should also be **accessible to enable end-users, both public authorities and citizens, to make comparisons at the appropriate geographical scale (e.g. countries, cities, catchments areas) and to participate meaningfully in the development and implementation of environmental policy**;
- Information should be **fully available to the general public, after due consideration of the appropriate level of aggregation and subject to appropriate confidentiality constraints, and at national level in the relevant national language(s); and**;
- **Information sharing and processing should be supported through common, free open standards.**



HANDBOOK ON WATER INFORMATION SYSTEMS



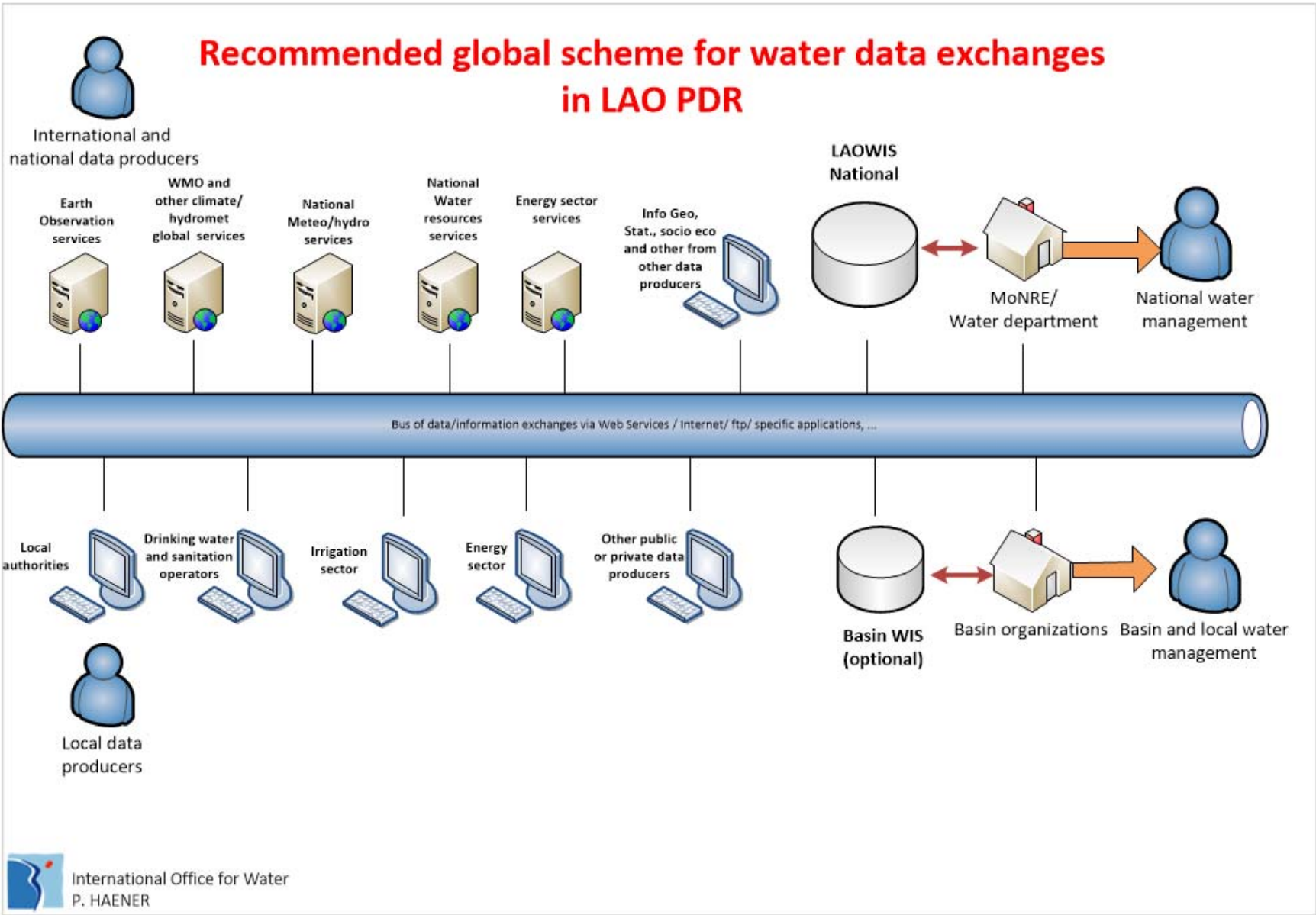
- Joined production from INBO/UNESCO with contributions from WMO, WWDI(WMO/BoM-Australia), under the coordination of IOWater
- Underlines why water data management is so important for efficient water resource management
- Introduces **five main processes** to be considered :



- Presents a picture of the main challenges and case studies showing how information systems are implemented to meet needs in various water sector management domains ... with a total **47 case studies** from all continents provided by the partners and by INBO network members
- Firstly addressed to water-sector decision-makers (considering the importance of water data management in IWRM) and to all organization willing to reinforce their capacities in data production, data administration and data exploitation for a better water resource management
- Available at <https://www.riob.org/pub/HandBook-SIE-en/>



Example of implementation at national level

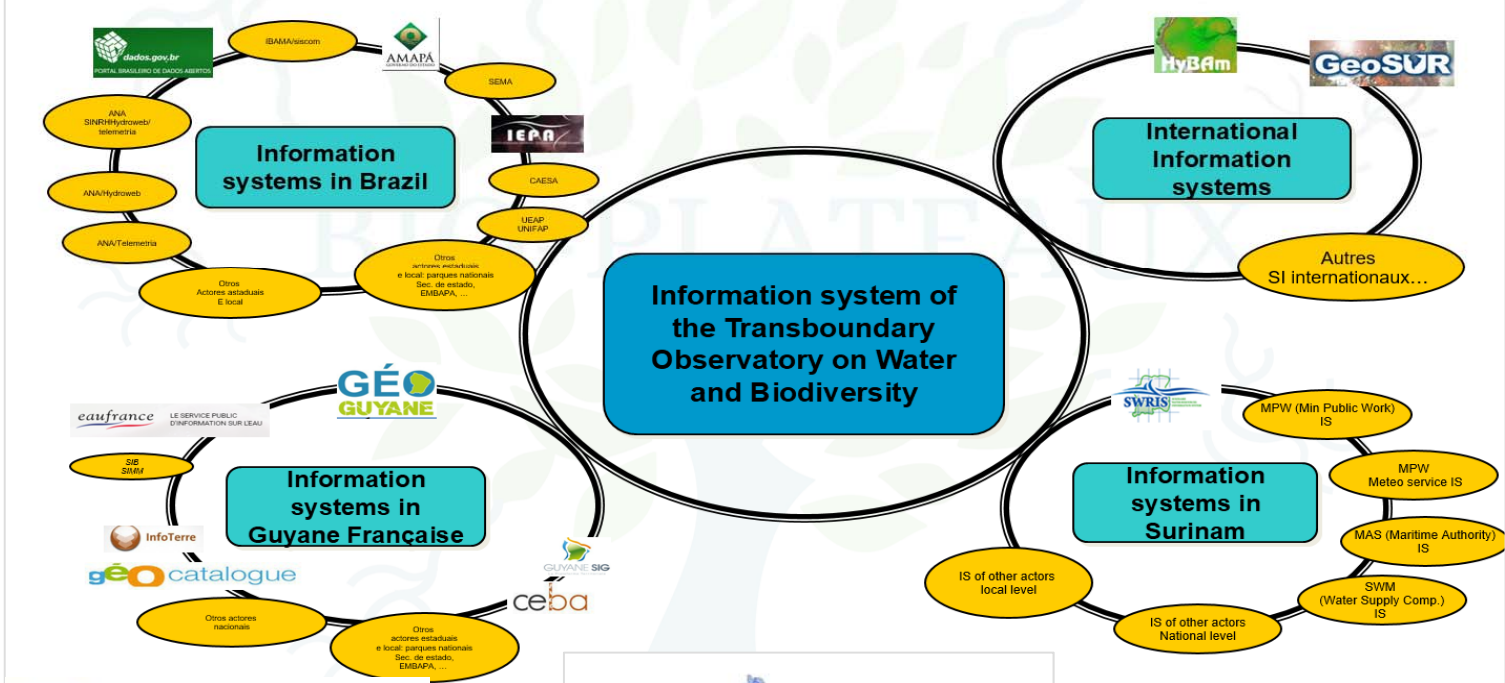


Example of implementation at transboundary level

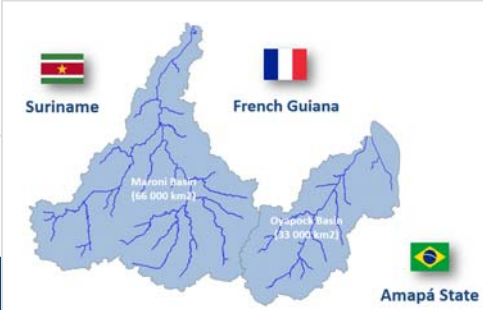
Case study of the Maroni / Oyapock transboundary basins (Brazil/French Guyana/Surinam – Bio Plateaux Project)



Organization of water/aquatic biodiversity information systems *Transboundary Observatory on Water and Biodiversity* *Proposal of global organizational diagram*



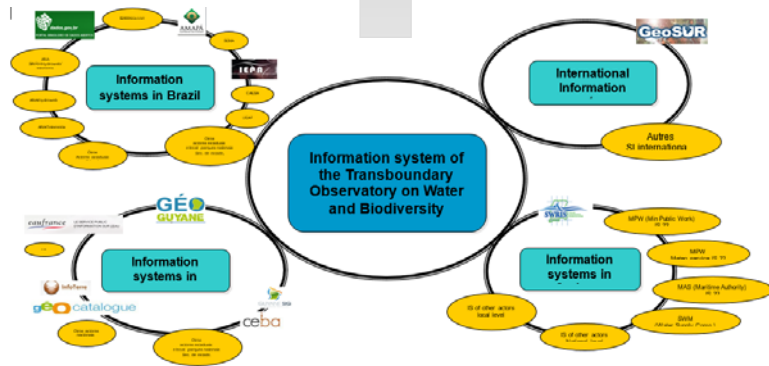
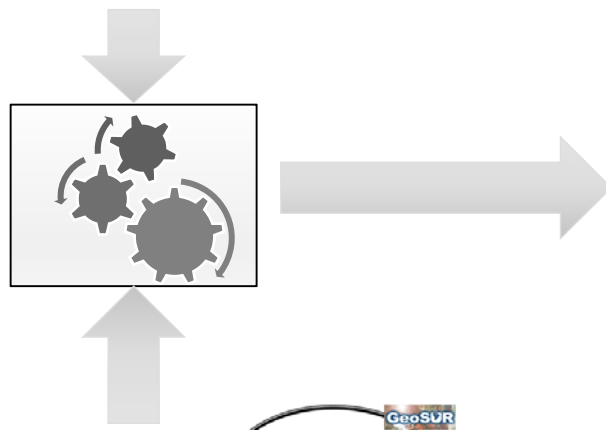
International Office for Water
P. HAENER



Combining needs and resources to develop new products and services

Case of the Bio-Plateaux project

Expectations from partners and public



Products and potential services

Portal for dissemination

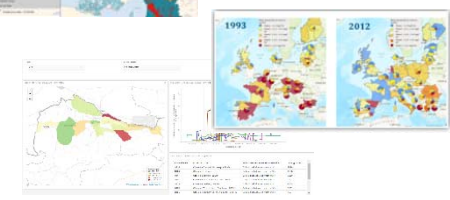
Metadata catalogues

Interactive maps

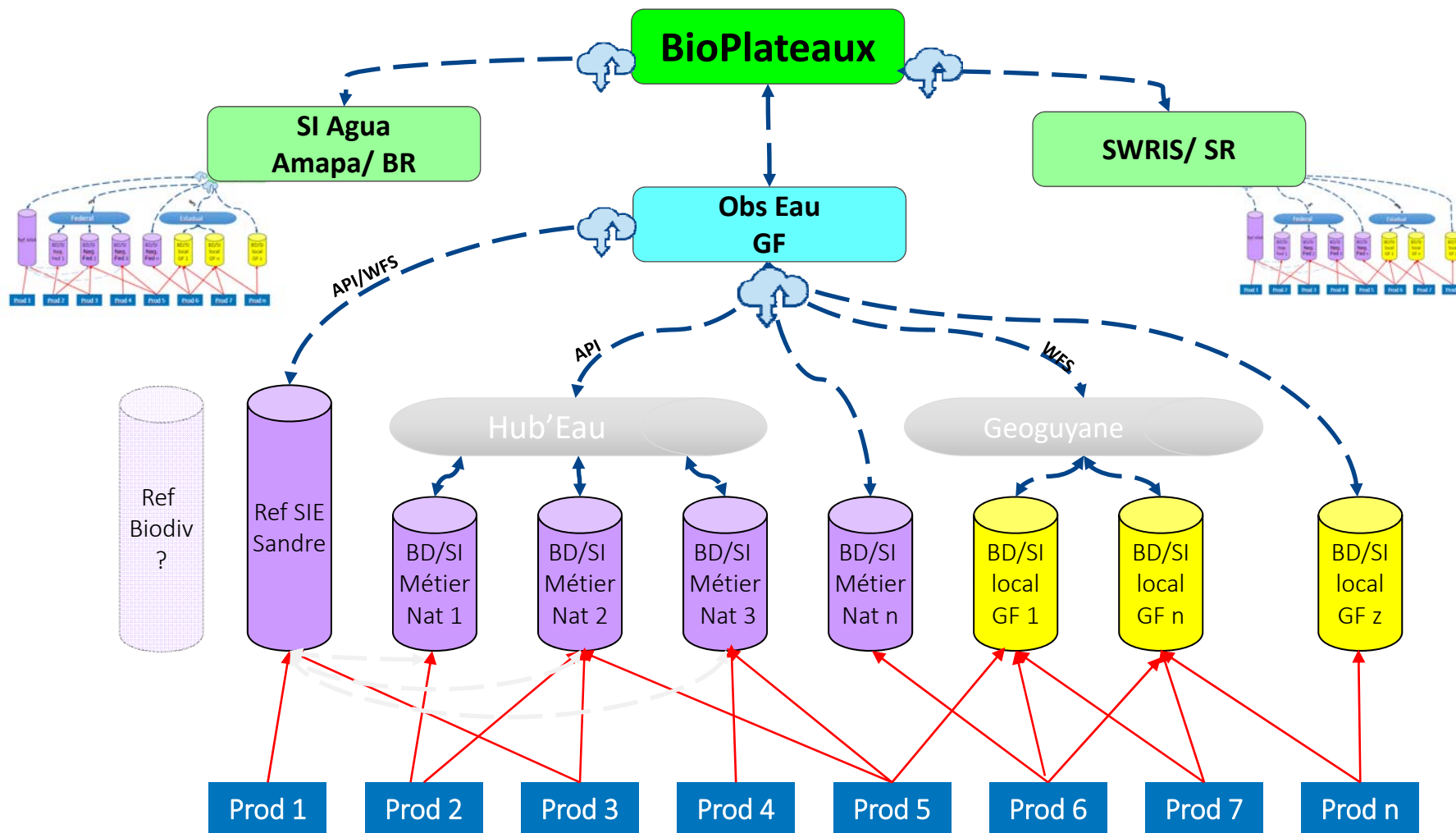
Processing and Visualization of indicators

Bulletins, documents supports for training, ...

Other products and services



Reinforcing data exchanges at transboundary and national level relying on existing resources thanks to interinstitutional cooperation

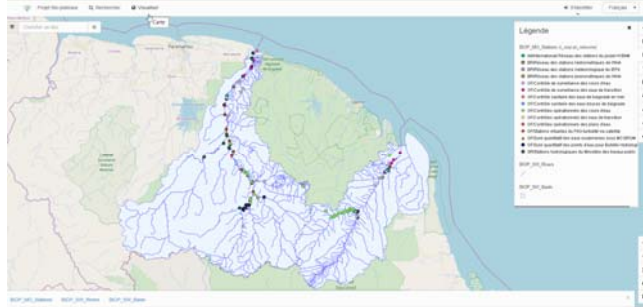


Examples of on-line visualization “consuming” data directly from producers databases

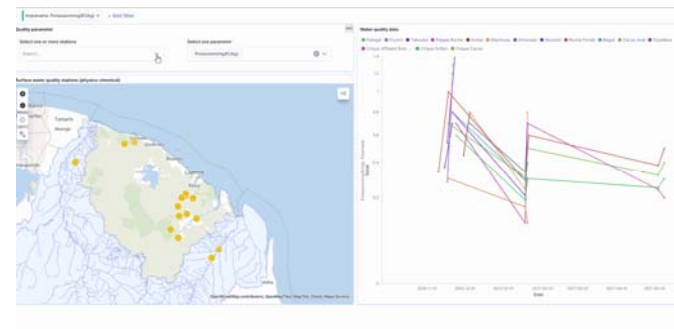


Monitoring stations for all networks

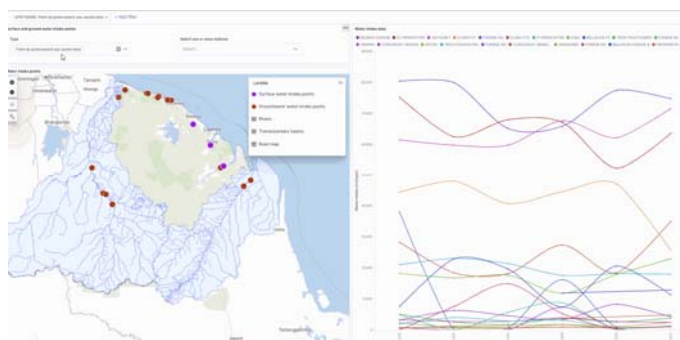
... with access to last updated data of the producers



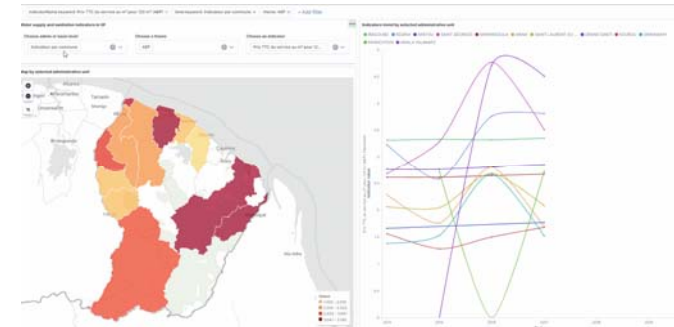
Surface water quality data



Water intake data



Water supply/sanitation indicators



Key points / recommendations for data and information management



- Water information systems are key instruments of any water sector policy (transboundary / national / local water resource management)
- Development of inter-institutional collaboration is fundamental
 - Due to multiplicity of topics and data producers, need to work as a team, each player having its specific function
 - Collaborative approach allows to involve the main actors within regular/ automatized data exchange processes, and helps to release energies!
- Adapting the systems to the existing resources, needs and objectives
- Considering the potential of new technologies
 - Today technical IT issues are no more issues : we know how to develop interoperability (automatic data exchanges) whatever the format / structure
 - Huge potential of remote sensing (water quantity, water quality, water uses, ...)
 - Possibilities to involve final beneficiaries (crowd sourcing , interactions, ...)
- Taking benefit of the experience of others countries / basins in terms of data management and water information systems



Thanks for your attention
and at your disposal for any questions



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