Local action report
Draft version

LOCAL ACTION:
The Water Information System (SIE) in France

Framework theme:
Risk Management
Cross-cutting perspectives:
Institutional Development and Political Processes.
Application of Science, Technology and Knowledge.
Targeting, Monitoring and implementation Knowledge.

SESSION
5.13 Developing and implementing Water Information Systems- WIS

SYNOPSIS
Knowledge of the aquatic environment has become necessary to ensure the application of the water legislation, which requires a balanced management of the resource. This knowledge is even the basis for the definition of master plans for development and management of water resources (SDAGE) and water development and management plans (SAGE) and their follow-up.

To deal with this necessity, but also to respond to the requirements of the European Directives and to satisfy the users' requests for information, an information system was put into place as from 1992, within the framework of a memorandum of understanding named "National Water Data Network".

The European Directive of 23rd of October 2000, fixing a framework for a community policy in the water sector, has brought new requirements, by imposing the surveillance and the follow-up of the environmental status, and the taking into account of pressures and uses, in requesting that economical analyses be undertaken. It also provides for public participation in the form of information made available to the fore-mentioned.

To respond to all these needs, the partners of the present agreement have decided to build up a new Water Information System (WIS).

The WIS agreement has for aim to constitute a Water Information System (WIS) which is coherent between the main stakeholders of the sector, ensuring :

- the production of all kinds of water data,
- the management and the preservation of this data,
- easy access to the data.

The WIS concerns **all available data, useful for the general knowledge of the water resources and the aquatic environment** : quality, quantity, uses, legal data, economic data, etc… to meet the necessary needs for actions of the State and its public institutions in the implementation of the water policy, and of its assessment at national or European levels, whether of a legal order or necessary for planning and for public information.

It aims to involve all the stakeholders intervening in the production, the management, the processing, the development and the diffusion of data.

This information system was also developed according to the French policy on environmental information, in line with the Rio declaration and Århus convention: In France, the public benefits from a right of access to the environmental information which has been constitutional since 1st March 2005. All the data related to environmental information, according to the Århus convention, are therefore included in the water information system: status of the resource and aquatic environments, pressures, responses, economic analyses, etc.

On its organisation, WIS-Fr is a distributed information system which:

- Reflects the distributed nature of water public stakeholders in France
- Is aligned on the public environment/water policy
- Endorses the " evaluate, perform, report " schema, with risk assessment as a key component, and reporting as a linking process across geographic levels
- Is endowed with a shared information framework, consistent with external requirements and an information infrastructure based on open standards and metadata

LESSONS LEARNED

A distributed information system as WIS-FR should not be expected to naturally strengthen cooperation between its partners. On the contrary, it highlights the need for preliminary governance, not only to control the information system, but also to formulate the general (strategic, political) interest that the system, and thus all the partners, should meet, beyond their individual interests. There is no distributed information system without a clearly formulated strategy (in the professional world) or a policy (in the public sphere) with which it complies.

A distributed information system needs a shared **information framework** to secure internal interoperability:

- **Conceptual interoperability**
  ex: what an "agglomeration" actually is

- **Referential interoperability**
  ex: what WWT plant #060913001005 refers to, in the real world

- **Syntactic interoperability**
  ex: how to write and read messages using "trames" or coded tags

As a distributed information system such as the WIS-fr lives in multiple global contexts:

- the information framework must be **consistent with external requirements** (Ex: European Commission, European Environment Agency, OECD, UNEP, International conventions, ...)
- these external requirements should be **mutually consistent**!

KEY MESSAGES

Knowledge of the resource and of its status is a major stake for water policy: regarding either regulatory actions, planning, risk management or public information, the administrators

of water resources need to have reliable, updated and relevant information at their disposal in a lasting manner.

The organization of **shared water Information Systems (IS)** allows the enhancing of existing data and information at the various levels of action with an overall approach which benefits to all the stakeholders. These information systems thus often constitute **one of the priority tools to be implemented in order to support an efficient policy for water resources management and risk prevention.**

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Additionally, the implementation of such a Water Information system supposes in particular:

- **Organization and facilitation of the partner network of producers and users** of data and information from the information system;

- **Inventory of existing data and information sources** and analysis of the conditions for their production and availability (metadata, etc.);

- Definition and adoption of a **common semantic language** for allowing the exchange of comparable data;

- Definition of an **overall technical architecture for the information system** in order to optimize exchange capacities according to the existing ones and to expectations, and of **technical specifications** allowing technical compatibility of exchanged data;