IAHS2017-300
IAHS Scientific Assembly 2017


# The importance of organizing data access, its processing and use

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Today human societies must confront significant changes in the environmental context in which they are developed. The use that societies make of natural resources is a primordial factor in their development. Water resources, in particular, are linked to crucial and very diverse challenges related to environmental, nutritional, societal and health issues, as well as economic, financial and geopolitical concerns, etc.
Yet water resources are often little known, poorly managed and poorly protected. Water resources are increasingly stressed as a result of many different factors: climate change, demographic growth, pollution, etc.
In such a context, there can be no effective action without knowledge and understanding of all the challenges related to water resources. Organizing access to existing data, and processing this data are fundamental to the success of policies and action plans for the sector.
Data and information are often scattered, heterogeneous or incomplete; they are rarely comparable and suited to needs. Numerous public, semi-public and private organizations produce and manage data, but often they do not have the resources to exchange, assemble, standardize, summarize and capitalize on the data that they possess. Over and above these difficulties, there is also the more general problem of a natural and widespread reluctance to share information, particularly when it is considered strategic because it can be used for paid services or to provide access to power.
While most countries and basins (national or transboundary) clearly need to make an effort to alleviate current data deficiencies, it is also vital that they develop links between data producers and users no matter what the theme or level of intervention (local, basin, national and international) and reinforce capacities for accessing, processing and using existing data.
It is in this context and aware of these stakes that Hydro-Sciences Montpellier Laboratory (HSM) has developed an information system, known as SIEREM, which contains several types of environmental variables for the whole of Africa. With 13,000 measurement stations and 33,000 chronological series (i.e. more than 117 million recordings) for 1837-2015, this is the largest environmental information system in Africa. Hydro-climatic data is combined with spatial data: 201 contours of catchment basins and 2,962 rivers. SIEREM has also been enriched with data recovered from hydrological archives. More than 1,342 photos have been brought together in 391 geo-referenced albums. The SIEREM site provides free access to all information except raw measurement data, which is the property of the national services of African countries.