

International Conference on African Large River Basins Hydrology

Hammamet, Tunisia, October, 26-30th, 2015

SCOPE

INCREASING POPULATION, increasing water demand, both in quantity and quality, increasing world average temperature, and other climate changes, modify the rainfall-runoff relationships from local to continental scales, and modify the water availability and potability.

ALL HUMAN ACTIVITIES have an important impact on runoff-rainfall processes and runoff regimes: agriculture activities, either pluvial or irrigated, dams and other hydraulic constructions, roads and urbanization, forest management, but also water and soil conservation practices, ecosystem protection, for instance.

FLOW REGULATION throughout the year helps mitigating the floods' impacts, deserving people with freshwater, agriculture, irrigation and leisure with regulated fluxes of water, maintaining ecosystems, producing energy.

DUE TO THEIR SIZE and their central role in countries' resources and activities, **large river basins are key socio-economic objects**.

BUT IN AFRICA, most of them are only poorly monitored and managed. Their water resources have been exploited since long, with poor interest on the sustainability of the water resource and water quality in the ecosystems, and most of all, their management does not take sufficiently into account the preservation of the natural equilibrium along the river stream, from the sources to the coastal areas.

THE REGULATION OF WATER, transferring water from one basin to another, storing sediments into dams, using surface water for irrigation purposes or for locally increase the groundwater level, all these activities have a major impact on downstream hydrology, down to the coast. The dramatic reduction of sediment fluxes to the sea have a direct impact on coastal instability and regression of the shore line, but also changes the equilibriums of coastal ecosystems.

Regulating flows reduces the wet areas and associated ecosystems. Increasing urban areas increases the risk of local flash floods, insufficiently drained by under-dimensioned infrastructures.

IN MANY COUNTRIES the hydrological networks do not record data since decades, while in many other the number of permanent gauging stations is critically low and do not cover the whole country. Rainfall and other climatological data are often difficult to access, preventing researchers from working with accurate data, even in their own countries. Some of the needed data can be fortunately replaced by international data bases, but most of them are most often constituted with only a small part of the existing measured data, and few recent data.

SEDIMENT FLUXES AND WATER QUALITY, eventually, are quite never monitored, except for a very few number of stations, part of international observatories.

IN THIS CONTEXT, it is urgent to re-develop large basins hydrology and observatories, to monitor their activity and better model how the changes of their hydrology have affected the environment, with final impacts on societies and socio-economic activities, and this conference is also a good opportunity to advertise the good experiences already working in Africa, like in several international river basin authorities.

THIS INTERNATIONAL CONFERENCE is placed under the labels of several international programs and institutions, which aim at a better knowledge and data sharing, the increase of the number of permanent observatories for large rivers basins, more international cooperation, specially within shared river basins, and improved cooperation between development agencies, national and international operators, and the research sector.



TOPICS OF THE CONFERENCE are issued from both FRIEND and IAHS main research themes:

- 1 – Global change, climatology and hydrological regimes (Mohamed Meddi-*Algeria*)
- 2 – Erosion, sediment transport and water quality (Gaston Lienou-*Cameroon*)
- 3 – Coastal eco-hydrology and Integrated land-sea management (Maria Snoussi-*Morocco*)
- 4 – Low flows and groundwater/surface water relationships, karstic hydrogeology (Bamory Kamagate-*Côte d'Ivoire*)
- 5 – Extreme events (Ennio Ferrari-*Italy*)
- 6 – Databases and observatories (Jean François Boyer-*France*)
- 7 – Hydrological modeling and water resources scenarios (Denis Hughes-*South Africa*)
- 8 – Relationships between man and the environment and impact on water resources and socio-economic activities (Raphael Tshimanga-*RDCongo*)

Papers about African rivers are of first interest for this conference.

Studies of other rivers around the world are also welcome, bringing anything new about methodology, measurement techniques, modeling, results of the application of river modeling approaches. Trans-disciplinary approaches will be greatly appreciated. Several Journals will be contacted to publish set of papers in regular issues or special issues.

Languages: français and English

IMPORTANT DATES

| 2014 | October | Second call |
|-------------|------------------|---|
| | March 31 | Dead line for the reception of abstracts |
| | May 15 | Notification to authors for oral or poster communications |
| | May 15 | End of discount registration period |
| 2015 | July | Third call, provisional program |
| | July | Notification to granted authors |
| | September | Consolidated program |
| | October | Reception of full size papers |

Send abstracts to: hammamet_lrb_2015@yahoo.fr

Please indicate in your mail if you are candidate for a grant to cover your participation fees (no grants for plane ticket)

The fees are of 295 euros for people from developing countries and students. They are of 395 euros for other participants. These figures are available until May 15th and will be increased up to 370/470 € if registration is done after this date. The bank account for fees transfer will be given on the MEDFRIEND website (armspark.msem.univ-montp2.fr/medfriend) at the beginning of 2015.

IMPORTANT note: the fees will cover all the expenses during the conference, all inclusive from the airport and back, including accommodation, meals, material, local transportation and social event.

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