

## Climate Change in Africa

The Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) projects a warmer climate for Africa, a drying in subtropical West Africa, and an uncertain rainfall trend in tropical West Africa. From a state-of-the-art regional model operated in IMPETUS taking into account land-use changes, it turns out that in the future a general decrease in rainfall together with a prominent surface heating can be expected for sub-Saharan Africa and north of the Sahara until 2050. It is very likely that anthropogenic climate change in combination with soil degradation and migration will impact hydro-climate with a weakening of the hydrological cycle in tropical and subtropical West Africa and with the implication that a decreasing fresh water availability is opposed to an increasing water demand. With the ongoing GLOWA initiative the German government has set up in the year 2000 a long-term research strategy to mitigate the anticipated global change effects in the water sector.



## The GLOWA Research Program

The development of integrated strategies for a foresighted and sustainable management of regional water resources is of paramount importance to mankind, and thus, the aim of the research program on global water cycles (GLOWA). It is taking into account ecosystem as well as socioeconomic contexts, analyzing larger watersheds (approx. 100.000 km<sup>2</sup>) as examples. Consequently research aims at assessing the interrelations between the hydrological cycle, large-scale climatic variability, and changes in the biosphere, with their influence on water availability. All GLOWA projects are developing simulation tools which will create and support decision-making processes.



## Deadlines

- Submission of contributions (oral, poster):  
June 30, 2008
- Acceptance of submissions:  
July 31, 2008
- Last registration for the participation:  
September 15, 2008
- Conference fees of 500 Dirham are payable at the conference

## Organizing committee

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- Mohamed Ouhssaïn (Administration du Génie Rurale-Rabat, MAPM)
- Abddaim Lahmouri (Secrétariat d'Etat auprès du Ministère de l'Energie, des Mines, de l'Eau et de l'Environnement, Chargé de l'Eau et de l'Environnement, Rabat)
- Dr. M. Christoph, PD Dr. A. Fink, Prof. Dr. P. Speth (Institute for Geophysics and Meteorology, Cologne)
- Prof. Dr. B. Diekkrüger (Geographical Institute, Bonn)
- Prof. Dr. H. Goldbach (INRES - Dept. Plant Nutrition, Bonn)
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- Prof. Dr. B. Reichert (Steinmann Institute, Bonn)
- Prof. Dr. M. Rössler (Institute of cultural anthropology and social, Cologne)

[www.impetus.uni-koeln.de](http://www.impetus.uni-koeln.de)

## Concepts and Tools for Sustainable Water Management

International Conference  
Ouarzazate/Morocco  
IMPETUS-Project

**28th - 30th October, 2008**



Secrétariat d'Etat auprès du Ministère de l'Energie, des Mines, de l'Eau et de l'Environnement, Chargé de l'Eau et de l'Environnement.



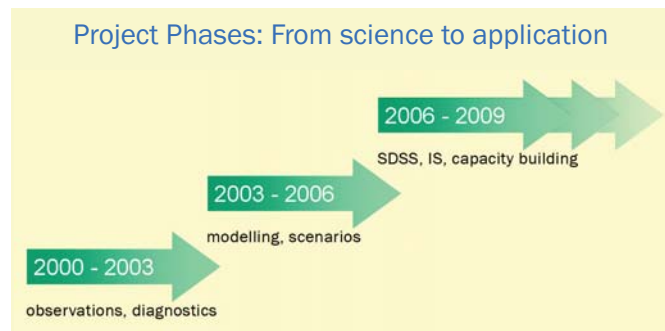
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## IMPETUS Synopsis

IMPETUS assesses the hydrological cycle of two watersheds in West and North-West Africa in a multidisciplinary approach, involving natural, socio-economic, and health sciences. The upper Ouémé river in Benin is representative of sub-Saharan tropical West Africa, the wadi Drâa in Morocco of the subtropical North Africa.



## IMPETUS 3<sup>rd</sup> Phase

Sustainable water management in the watersheds of the Drâa and the Ouémé requires reliable data and projections for regional planning and political decision makers. For this purpose nearly for every problem cluster a spatial decision support system (SDSS) or information system (IS) is developed which provide tailored tools for decision makers. Functions of the SDSS/IS range from information retrieval from the database up to the simulation with dynamically-coupled models. In addition the effects of certain measures (interventions) can be studied on the basis of different scenarios.

## Project Region Morocco

General water shortage and severe local water deficits bear a high conflict potential. IMPETUS is focussing on the Drâa valley which shows a climatic gradient from semiarid regions of the High Atlas down to the hyperarid northern Saharan foreland. An efficient use of available water resources and an improvement of water management is the prerequisite for adequately dealing with water shortage. In close cooperation with stakehol-



ders IMPETUS develops realistic scenarios until 2020 and management options for local decision makers within 11 problem clusters.

## Concepts and tools for sustainable water management

The conference focuses on the sustainable use of water in the Drâa watershed. Thus, a set of spatial decision support systems (SDSS) has been developed by IMPETUS. These systems will be introduced through presentations or posters. Other contributions related to natural resources, their use and management in similar arid regions, are welcome.



## Conference time table

	Tuesday, 28.10.08		Wednesday, 29.10.08		Thursday, 30.10.08
		9.00 - 11.00	Presentation of IMPETUS	9.00 - 11.00	Partners presentations
		11.00 - 11.30	BREAK	11.00 - 11.30	BREAK
		11.30 - 13.00	Presentation of IMPETUS	11.30 - 13.00	Partners presentations
13.00 - 14.00	Welcome Addresses	13.00 - 14.30	BREAK	13.00 - 14.30	BREAK
14.00 - 15.00	IMPETUS project introduction	14.30 - 17.30	Demonstration of IMPETUS SDSS and poster presentation	14.30	Departure for the excursion
15.00 - 15.30	BREAK				
15.30 - 17.30	Partners presentations				
				ca. 22.00	Return