

African Monsoon Multidisciplinary Analysis

1st International Conference

Dakar, 28th November – 4th December 2005



Second Announcement and Call for Abstracts



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Background

African Monsoon Multidisciplinary Analysis (AMMA) is an international project to improve our knowledge and understanding of the West African monsoon (WAM) and its variability with an emphasis on daily-to-interannual timescales. AMMA is motivated by an interest in fundamental scientific issues and by the societal need for improved prediction of the WAM and its impacts on West African nations.

At this time scientists from more than 20 countries, representing more than 40 national and pan-national agencies are involved in AMMA. In addition to the international structure which has been set up, a network of African scientists linked to AMMA has been established (AMMANET) which will help to consolidate existing collaborations in Africa and to federate initiatives through a pan-African partnership.

AMMA is endorsed by the World Climate Research Programme (WCRP) and continues to develop in association with CLIVAR and GEWEX. AMMA has also been endorsed by two projects within the International Geosphere-Biosphere Programme (IGBP): IGAC and ILEAPS. AMMA is working with other international projects and programmes to achieve its aims including GCOS, GOOS and THORPEX.

Conference Objectives

The conference aims to bring together researchers from around the world working on the WAM and its impacts, to review ongoing research activities and to discuss future contributions and directions within the AMMA research programme. It also provides an ideal opportunity for establishing and coordinating collaborations, in particular with African scientists in AMMANET.

The conference takes place within the enhanced observing period (EOP) and just ahead of the AMMA special observing period (SOP) in 2006. The conference provides an ideal opportunity to review and discuss the plans for the observing campaign as well as the opportunities for related research activities.

Conference Themes

Recognising the societal need to develop strategies that reduce the socioeconomic impacts of the variability of the WAM, AMMA facilitates the multidisciplinary research required to provide improved predictions of the WAM and its impacts. This is achieved and coordinated through 5 international working groups: (i) West African monsoon and global climate, (ii) Water cycle, (iii) Land-surface atmosphere feedbacks, (iii) Prediction of climate impacts and (iv) High impact weather prediction and predictability. These 5 research areas also constitute the main themes of the conference and are briefly described here:

- **West African Monsoon and Global Climate:** The 2-way interactions between the West African Monsoon (WAM) and the rest of the globe are important for determining the variability of the WAM and its global impacts on intraseasonal-to-decadal time-scales. Research areas under this theme include (i) Variability and predictability of the WAM (nature and role of teleconnections, intraseasonal variability including easterly waves, predictability issues and the role of the ocean, detection of the global change), (ii) Monsoon processes (scale interactions, the seasonal cycle and the monsoon onset), and (iii) Global impacts of the WAM (e.g. on tropical cyclones, aerosol variability, atmospheric chemistry).

Coordinators: A. Diedhiou, S. Janicot, P. Lamb

- **Water cycle:** The efficiency of the processes controlling the advection of atmospheric moisture, its transformation into precipitation, and the behaviour of rain water over land (e.g. run-off, infiltration etc), is a crucial aspect of the WAM. The role of energy transport and exchanges in related to water vapour advection and latent heat release is also central for monsoon dynamics and its variability. Analysis of the water budget at *regional-scale*, *mesoscale* and *local scale* is promoted in this research theme.

Coordinators: A. Gaye, P. Houser, J.-L. Redelsperger

- **Land Surface-Atmosphere feedbacks:** Recent studies with climate models have confirmed that the WAM is a hot-spot of surface-atmosphere interactions but the processes causing this strong interaction have not yet been identified. Presentations in this section will review our current knowledge and present new ideas on the mechanisms which could explain the strong surface-atmosphere feedbacks. The discussions should foster coordinated studies to explore and better understand the coupling at a regional and mesoscale.

Coordinators: C. Taylor, J. Polcher

- **Prediction of climate impacts:** A major aim of AMMA is to develop the underpinning science that supports the practical use of climate information in improving health, water resources, food security/agriculture and other key climate-sensitive sectors in West Africa countries by, for example, helping to define the relevant climate/environment monitoring and prediction strategies. AMMA will ensure strong linkages between the work taking place on impacts and that taking place on observed variability and predictability of the WAM.

Coordinators: A. Amani, A. Morse, M. Thompson

- **High impact weather prediction and predictability:** This joint AMMA-THORPEX research initiative is concerned with improving our knowledge and understanding of the predictability of high impact weather in different regions: (i) over the West African continent (e.g. intense rainfall events, onset and duration of dry/wet spells), (ii) the downstream tropical Atlantic (e.g. tropical cyclone genesis and intensity change) and (iii) the extratropics (e.g. extratropical transition events, large-scale tropical-extratropical interactions). In addition to addressing key science issues related to the nature and predictability of these high impact weather events, operational activities will be promoted including (i) Assessment of the impact of additional observations (especially radio-soundings over West Africa) in analysis/forecasting systems for the three regions; (ii) Development of targeted observing strategies and (iii) Tailoring of forecast products for users.

Coordinators: E. Afiesimama, S. Jones, F. Rabier, C. Thorncroft

Scheduled programme

The programme will include a mixture of plenary sessions, poster sessions and parallel working sessions. The plenary sessions will include invited and contributed oral presentations. The working sessions are designed to provide an opportunity to discuss future research directions in AMMA as well as to coordinate and promote international collaboration. A brief summary of the expected programme is included below; a more detailed version of this is available on the conference web pages. A workshop dedicated to climate impacts is scheduled to occur on Saturday and Sunday after the conference.

Monday 28/11	09:00 – 10:00	Welcome address
	10:15 – 12:30	Presentation of AMMA AMMA Africa
	14:00 – 18.00	Plenary "West African Monsoon and Global Climate"
	18:00– 19:30	First poster session "AMMA field Observations"
	20:00	Cocktail reception
Tuesday 29/11	08:30 – 12:30	Plenary "Water cycle"
	14:00 – 18:00	Parallel working sessions: "West African Monsoon and Global Climate 'Water cycle'"
	18:00 – 19:30	Second poster session "West African Monsoon and Global Climate" 'Water cycle'"
	20:30	Parallel sessions of AMMA committees
Wednesday 30/11	08:30 – 12:30	Plenary "Land Surface atmosphere feedbacks"
	14:00 – 18:00	Parallel working sessions "Hydrology-Surface-Atmosphere feedbacks" "Aerosol-Chemistry-Atmosphere Coupling" "Ocean-atmosphere coupling"
	18:00 – 19:30	Third poster session "Land surface atmosphere feedbacks"
	20:30	Parallel working sessions of AMMA pan-national components

Thursday 01/12	08:30 – 12:30	Plenary "High impact weather prediction and predictability"
	14:00 – 18:00	Parallel working sessions "Atmospheric chemistry and aerosols" "Weather prediction & predictability"
	18:00 – 19:30	Fourth poster session "High impact weather prediction and predictability" "Prediction of climate impacts"
	20:30	Parallel working sessions of AMMA pan-national components
Friday 02/12	08:30 – 12:30	Plenary "Prediction of climate impacts"
	14:00 – 16:00	Conclusions of working sessions
	16.30 – 18:00	Discussions Closing ceremony
Sat/Sun 3-4/12	08:30 – 18:00	Workshop "Closing the gap: Developing the use of seasonal forecast products and climate observations by operational users in West Africa"

Undefined acronyms used in this announcement

AMMANET	AMMA network of African scientists
CLIVAR	Climate Variability and Predictability
GEWEX	Global Energy and Water Cycle Experiment
IGAC	International Global Atmospheric Chemistry
ILEAPS	Integrated Land Ecosystem – Atmosphere Processes Study
GCOS	Global Climate Observing System
GOOS	Global Ocean Observing System
THORPEX	The Observing System Research and Predictability Experiment

Abstract Submission

Please submit your abstract (max. 250 words) by e-mail to Cheikh Kane (dakar2005@amma-int.org) indicating the research theme you wish to contribute to. Please submit your abstract by

August 15th 2005

indicating whether you prefer an oral or poster presentation. Whether your paper has been accepted for an oral or poster presentation will be communicated to you by mid-September 2005. After this, extended abstracts will be sought for inclusion in a conference publication.

Conference package

A single conference fee will be charged to cover registration, hotel costs, reception, and all meals (breakfast, lunch and dinner). Details of the fees (amounts and payment methods) will be provided on the conference web page by the end of July.

Hotel and Conference meeting place

Hotel N'GOR Diarama, Dakar, Senegal

Further Information and Contacts

AMMA International Project Office

Contact : Cheikh KANE: dakar2005@amma-int.org

Local contact in Senegal:

Contact: Amadou Thierno GAYE: atgaye@ucad.sn

Conference web page

www.amma-international.org/conferences/dakar2005

International AMMA web pages

www.amma-international.org