

# **Conclusions of the ENSEMBLES/AMMA meeting**

**7-8 June 2007, Barcelona**

**Present :** Paco Doblás-Reyes, Clare Goodess, Chris Hewitt, Franco Molteni, Andy Morse, James Murphy, Tim Palmer, Nathalie Philippon, Jan Polcher, Paolo Ruti, Alberto Troccoli, Antje Weisheimer.

The 3 topics for the collaboration proposed in Bamako were adopted and the discussions centered on planning the implementation of this collaboration. The objective of the collaboration, on season forecasting in particular, were refined. Coordination teams were designated. Their task will be to propose an implementation of the collaboration and encourage an active participation from ENSEMBLES and AMMA partners.

## **Regional climate modeling and climate change**

The RCM simulations ENSEMBLES proposed to perform over a non European regions will be over West Africa. This will complement the RCM work already underway in AMMA.

The climate change scenarios to be refined using RCMs should meet the needs of the water resource management WP of AMMA (WP3.3). These simulations also need to help determine whether the usage of RCMs allows to reduce the large variability over West Africa in the response of GCMs to increased greenhouse gas concentrations.

The detailed implementation of this collaboration area will be left to RT3, WP4.1 and WP3.3. Milestones and deliverables for the final 2 years of ENSEMBLES and AMMA need to be established together by end of July 2007.

Coordination team : RT3 leader (Jens Christensen), RT2B leader (Clare Goodess) WP4.1 leader (Paolo Ruti) and WP3.3 (Harouna Karambiri/Sandra Garcia)

## **Seasonal forecasting**

It is proposed that the collaboration in this area aims at developing improved products and methods for producing seasonal forecasts for the usage of agronomic applications and early warning systems for food security. The objective is to achieve a quantum leap compared to today's PRESAO forecasts.

The proposed new forecasts need to be validated over the stream 1 & 2 period (1960-2005). Their potential for application in decision making in West Africa should be established by a comparison with past PRESAOS (1997-2005) forecasts.

The implementation of this collaboration can not be achieved fully within the lifetime or resources of both projects. The planning thus needs to distinguish between two phases :

1. The milestone and deliverables which can realistically be achieved within the last 2 years of ENSEMBLES and AMMA (deadline end of July).
2. The results which could be obtained with an additional funding.

Coordination group : RT1 (Paco Doblás-Reyes), WP5.2 (Andre Kamga/Anton Beljaars and Nathalie Philippon), WP5.2 (Lorenzo Genesio/Birama Diarra), RT6/WP3.4 (Andy Morse).

## Model development and evaluation

AMMA has collected a unique data set on continental convection, land/atmosphere and ocean/atmosphere interactions which could be used for model development and validation. Within AMMA, groups work on understanding the underlying processes and can share their knowledge with model developers.

At this stage it is for ENSEMBLES to determine their needs. Once this is done a coordination group can be selected.

## Other topics of common interest.

Additional areas where some collaborations could be of mutual benefit have been identified. It was decided that it would be for the coordinators to encourage and monitor progress. The topics identified are :

- Disaggregation methods and tools. ENSEMBLES has developed powerful web-based tools which were evaluated over Europe. Recently they have been extended and there are no more limits to perform statistical downscaling over any area in the world. How well do the algorithms perform over West African and how could they be extended still needs to be determined.
- Training and capacity building on seasonal forecasting and climate change in West Africa is clearly an area where a collaboration would be beneficial for the West African scientific community. The needs and opportunities will be identified by the project management and contributions from scientists in ENSEMBLES and AMMA solicited.
- Data exchange is an area which might pose some problems for institutions which are not partners in both projects. The needs for data exchange between the projects first need to be identified. The seasonal forecasts of ENSEMBLES is, unless stated otherwise, freely available from the [ECMWF](#) site. Access to the other two databases requires specific permission. AMMA distinguishes for the access to its data base between members of [AMMA-EU](#), governed by the consortium rules, and other scientists using the rules set by [AMMA-INT](#).

Chris Hewitt and Jan Polcher will monitor these areas and involve the partners as needed.

## First steps in the collaboration

Some actions can be undertaken quickly and will help build a working relationship between both projects. It has been decided to try and accomplish the following actions within the next 3 month :

- Provide to the AMMA-MIP database the output of the seasonal model runs of ENSEMBLES so that they can be evaluated over West Africa together with the other simulations.
- Produce PRESAO type forecasts from the available data of the stream 1&2 ensembles. The DEMETER based hindcasts prepared by U Bourgone will be transferred to stream 1 of ENSEMBLES in order to prepare new predictions for Western and Central Sahel that could be compared with the PRESAO forecasts over 1997-2001
- Propose a first set of variables relevant for AMMA applications so that ENSEMBLES partners can prepare their validations in the hindcasts.
- Continue the dialogue on the technical details of the proposed RCM simulations.
- Consider how to involve AMMA and ENSEMBLES in the annual meetings of the two projects to be held in November.