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Workshop on meningitis

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From AMMA to MOUSSON, a historical and scientific overview..

The MOUSSON Programme was created in October 2006, an interdisciplinary interdepartmental decision of the then newly nominated scientific directors of CNRS, the purpose of which is to build up stronger collaboration between AMMA (CNRS) and social and human sciences, and increase the participations of those involved in the geographic and thematic grounds. Then, amplifying and develop the research and skills of the SHS researchers in the subject and geographical field can help reach the goal so as to interpret, place in a pertinent perspective, complete the results already obtained by sciences of the Universe in full cooperation with the sahelic countries. Another goal of MOUSSON is to promote interdisciplinarity in studying the interactions between man and nature in relation with the seasons. Then it appears that the usual linear approach of expertise does not give a true picture of the reality; that relationships between climate, environment and societies are in complex interactions, that more account has to be taken of anthropic actions and data have to be built up, moving out from a local to a fuller picture.

The MOUSSON programme is a structure with following steering:

A honorary chairman, Ms. Nadine Gordimer, winner of the Nobel prize in Litterature, a south African writer involved in the political and environmental trends at stake in her country; a country that has always been a precursor in social developments among those crossing Africa. An artist, she is most representative of the complexity of situations. She was also a member of the G8 Commission for Africa experts.

The chairpersons we asked are Marie-Françoise Courel, scientific director of the programme and SHS department, but also a Burkinabe citizen who lived over 20 years in the Sahel.

The directorate associates the directors of the scientific departments of CNRS: Dominique le Quéau (INSU), Bernard Delay (EDD), Marie-Françoise Courel (SHS), Serge Bauin (IPAM) as well as Elisabeth Giacobino, executive director of CNRS, and Nicole Fourquet, director of the programme.

The scientific committee associates French and African scientists: Ouetian Bognounou is an ethnobotanist (CNRST, Burkina Faso) dealing with both biodiversity and traditional pharmacopeia, Marc Bui (EPHE), Paul Bourguine (CREA), Michel Lamure (Université Lyon1), Michel Grundstein and Camille Rosenthal Sabroux (Université Paris Dauphine) are complex system specialists, working on data bases, modeling, cognitive sciences, NTIC and knowledge management. Philippe Chamard is a geographer (geomorphology), as is Marie-Françoise Courel (IGS, remote sensing), Alhassane Diallo is

head of the Burkinabè met services. Hélène Cachier is a chemist of the atmosphere specialized in dust and haze. Bernard Fontaine and Benjamin Sultan, both CNRS geographers too, are the representatives of the API AMMA section (impacts). Blaise Sondo is Director of IRSS, an epidemiologist and a physician. Anne Marie Moulin is a historian of medicine and a physician specialized in tropical diseases (CEDEJ, Cairo). Jean Michel Naiditch is a medicine sociologist, a physician and a mathematician (IRDESS). Nicole Fourquet is a physician and a geographer of medicine, health and diseases. Daniel Bley (Arles), is an ecology researcher, as is Catherine Bastien Ventura, CNRS EDD representative and a pharmacologist. Etienne le Roy is a law anthropologist in Université Paris 1 and a constitutionalist who works in writing new national constitutions that preserve the non written custom rights. Agathe Euzen is a n anthropologist. René Otayek, Director of Centre d'études d'Afrique noire(CEAN) in Sciences Po Bordeaux(INSP). Patrick Monfray is a physicist, representative of the INSU department. Amadou Sarambe is director of development programmes in Burkina Faso. Jean-Luc Redelsperger is head of AMMA International and AMMA France.

MOUSSON is backed by a strong pool of CSS specialists

The new science of complex systems (CSS) will be at the heart of the future of the worldwide knowledge society. It provides radical new ways of understanding the physical, biological, ecological and social universe. CS are ambiguously situated in turbulent, unstable and changing environments as are the phenomena we try to study at the best. Our thematic, as CSS do evolve and adapt through internal and external dynamic interactions. They are value-laden multi-level multi component systems of systems and they are not predictable in a conventional scientific sense. Science is the process of reconstructing theory from data but complex system such as the MOUSSON system have to be observed *in vivo*, requiring new multilevel data collection protocols, and new formalisms to reconstruct intra-level and inter-level dynamics, and their capacity to adapt changing environments.

The MOUSSON programme must provide possibility to bridge the gap between the individual and the collective.; from genes to microorganisms to ecosystems, from notebooks to the Internet, from citizens to society. It must cut cross of all disciplines. It is part of all disciplines. CSS creates new and shorter paths between scientists and accelerate the flow of scientific knowledge and reduce the gap between pure and applied science; it will help the MOUSSON programme design, control and manage its tools with unprecedented level of complexity, exceeding the capacity of current approaches.

Towards interdisciplinarity applied to man in season in Sahel

The first challenge in working in interdisciplinarity was to find and define an object that would be common share for all the scientists in the committee.

It was soon achieved thanks to the long time exchanges between Burkina faso and CNRS, and between Met services and physicians. It happened on a routine instrumentation mission for determination and measurements of air dusts in Ouagadougou, when the met services asked us to study whether it would be possible to build an early warning system for air pollution in the city.

This subject began the pilot project for our programme. Building it and initiating it was the task for the first year, when was also implemented a wiki site that provides information from specialists and from the citizens, and transforms it into knowledge. A model of the programme was also established.

The MOUSSON programme enrolled Ph.D students from Burkina Faso and Iran, one of them having a grant from the French government, and the other one by CNRS.

It also hired the services of a Burkinabe sociologist and a law researcher on Environment and Health rights.

It frequently invites scientists from related disciplines to enlighten the members on subjects related to our study. (J-M Alonso for molecular epidemiology for example...)

It held a meeting in Paris in June 2007, where a movie was presented. A proceedings book of the meeting will be published in the "Décision Santé" journal.

2008 will be the year for operating of the model.

Wiki website address: <http://www.mousson.csregistry.org>