Geophysical Research Abstracts
Vol. 12, EGU2010-11845-1, 2010
EGU General Assembly 2010

Overview of main challenges for Early Warning Systems for Food Security in West Africa

Lorenzo Genesio (1), Maurizio Bacci (1), Christian Baron (2), Birama Diarra (3), Andrea Di Vecchia (1), Seydou Traoré (4), Idrissa Hassane (5), Mamadou Ndiaye (6), Nathalie Philippon (7), and Vieri Tarchiani (1)

(1) National Research Council - CNR, Institute of Biometeorology - IBIMET, Florence, Italy (l.genesio@ibimet.cnr.it), (2) CIRAD, UPR AIVA, Montpellier, France, (3) Direction de la Météorologie Nationale du Mali (DMN Mali), Bamako, Mali, (4) AGRHYMET Regional Center, Niamey, Niger, (5) Direction de la Météorologie Nationale du Niger (DMN Niger), Niamey, Niger, (6) Agence Nationale de la Météorologie du Sénégal (ANAMS), Dakar, Senegal, (7) Centre de Recherches de Climatologie CNRS / Université de Bourgogne, Dijon, France

In West Africa Early Warning Systems (EWSs) for food security have been widely recognized to have contributed in the last twenty years to better face famine emergencies. The improved understanding of the environmental and socio-economic dynamics of the region, a change in the causes for food insecurity and the evolution of Information and Communication Technologies (ICT) have favored the introduction of new approaches and the involvement of a network of stakeholders.
In recent years the improvement of EWS has been concentrated in the adaptation and the transfer of existing tools rather than the development of the overall design of EWS in function of users needs, at the same time key scientific areas to be improved to provide major operational advancements needs to be better identified. This partially due to a difficulty of the research community to be in direct connection with operational processes and on the other side by an evident limit in following a demand driven approach due to the difficulties in modelling bio and social phenomena in a unique environment.
In this context AMMA project had the ambitious objective of bridging the gap between state of the art research in the domains of geo-science and human related disciplines, and the operational EWS. The work carried out in AMMA, while improving the understanding of monsoon system, allowed to better orient research challenges in order to provide EWS with improved products effectively meeting the needs of end-users at different levels. In this work, advancements in providing appropriate information for the identification of agricultural risk zones by using short to long time forecasts are illustrated highlighting critical aspects still demanding scientific improvements.