

## **ALKHALIL ADOUM**

### ***Current Occupation & Address***

FEWS NET Regional Scientist for the Sahel/West Africa, AGRHYMET, BP 11011 Niamey, NIGER  
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***Marital Status:*** Married and father of six children

### ***Education***

**Ph.D.** – August 1994; Iowa State University, Ames, Iowa; Major: Agricultural Meteorology; Minor: Statistics

**M. Sc.** – December 1990; Iowa State University, Ames, Iowa; Major: Meteorology (USAID-AFGRAD III fellowship)

**Diplôme d'Ingénieur d'Application de la Météorologie** – June 1984

Institut Hydrométéorologique de Formation et de Recherches (IHFR), Oran, Algeria

Major : Meteorology (WMO Scholarship)

### ***Professional Experience***

#### **USGS/FEWS NET Regional Scientist based at AGRHYMET (July 2000 to present)**

This position has been the result of FEWS (The USAID Famine Early Warning System) strategy to put more emphasis, starting in 2000, on collaboration and networking with regional institutions following the same objectives. Consequently the 'NET' (for network) was added to the name to become FEWS NET. The intention is to avoid duplication, create synergy for improved performance.

My scope of work has consisted of two parts that are intricate in nature. The first has been my involvement in all CILSS activities pertinent to the region cash and food crop production and its impact on food security. This includes the definition, elaboration and development of useful and pertinent indicators to monitor the growing season and assess its outcome as well as reporting on anomalies detected and issuing early warning when necessary.

Second I'm a liaison officer between the USGS/EROS scientists, UCSB (University of California at Santa Barbara) climate group and the AGRHYMET Regional Center. My liaising responsibility aims at promoting and facilitating collaboration between FEWS NET science group (EROS and UCSB) and CILSS for easier access to FEWS NET Science Group (USGS-EROS and UCSB) technical resources (remote sensing techniques, products and tools) for all users in the region.

More explicitly my activities consist of:

- translating the climate outlook results, using appropriately FEWS NET developed tool, in terms that are easier to understand in order to increase their applications in identifying areas where flood or dryness are likely to occur and how this could impact crop production;
- developing and validating methods and applications, sometimes in collaboration with AGRHYMET, to improve efficiency in carrying out our mandate. Estimate of cropped area to improve the quality and reduce the cost of agricultural surveys and the growing season characterization based on temporal profiles of MODIS NDVI and WRSI are examples of such activity;
- Supporting the USGS/EROS & UCSB tool development effort through regional workshops, field validation and feedback;
- Supporting the extension of remote sensing and GIS in agrometeorological applications and early warning in the region;
- Participated in an effort led by AGRHYMET consisting in a series of field visits to collect information on end user needs in order to optimize support to farmers.

#### **FEWS Field Representative (FFR) in Chad (April 1995 to July 2000)**

As a Country FEWS Field Representative (CFFR), my experience in food security and vulnerability analysis evolved to a level of true expertise. Under my leadership FEWS became a reference in food security in the country. A fruitful collaboration with CASAGC (Comité d'Action pour la Sécurité Alimentaire et la Gestion des Catastrophes) and other national institutions, international and non-governmental organizations resulted into achievements such as: quick rural appraisals when necessary, consensual annual vulnerability analyses, and the development a methodology to build an index used for pre-harvest and vulnerability assessments that was subject of a publication.

## **Research Assistant at Iowa State University, Ames, Iowa January 1991 – August 1994**

- Studied shelterbelt aerodynamics by data analysis and numerical modelling.
- Simulated moisture in a 1-D finite-element soil/atmosphere model.

## **Chief of Climate Service at the Water Resources and Meteorology Directorate in Chad**

Direction des Ressources en Eau et de la Météorologie (DREM) – Ministry of Agriculture, Sep. 1984 – Jan. 1987.

My activities consisted of playing a leading role in monitoring the growing season with the multi-disciplinary working group; quality controlling, analyzing and publishing when necessary meteorological data and agrometeorological advisory, reconstructing archive data lost during the unrest years (1979 – 1980) and rehabilitating vandalized meteorological stations with the support of WMO.

## **Contacts**

### **Laouali Mahamadou Ibrahim**

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### **Bonaventure Some**

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## **Publications**

Alkhalil, A. 1990. Simulation of moisture in a one-dimensional finite-element soil/atmosphere model.  
M.S. thesis, Iowa State University, Iowa.

Alkhalil, A. 1994. Flow past an Agricultural Shelterbelt : Observation and model results.  
Ph.D. Dissertation, Iowa State University, Ames, Iowa.

Alkhalil, A., I. V. Litvina, R. A. Schmidt, J. R. Brandle, and E. S. Takle, 1995: Determination of shelterbelt porosity parameters from measurements and a model. Ninth Symposium on Meteorological Observations and Instrumentation, Charlotte. Amer. Meteor. Soc.

J.Rowland, J.Verdin, A. Alkhalil, G.Senay, 2005.

Drought Monitoring Techniques for Famine Early Warning Systems in Africa, In Monitoring and Predicting Agricultural Drought: A Global Study; edited by V. K. Boken (USA), A. P. Cracknell (UK), and R. L. Heathcote (Australia), Oxford University Press, New York, 2005.

Alkhalil, A., 2004: Enquête de validation du 'SOS' de FEWS NET – Tchad 2003, In Rapport Scientifique et Technique, AGRHYMET Regional Centre, March 2006.

Alkhalil, A., and I. Kadaoure, 2005. Remote Sensing of Cropped Area in Senegal for the 1999 Growing season, In Rapport Scientifique et Technique, AGRHYMET Regional Centre, March 2006, pp 35-41.

Alkhalil, A., 2006. A practical Use of the Seasonal Climate Outlook: Anticipation of WRSI (Water Requirement Satisfaction Index) at the end of the growing season in West Africa. In Rapport Scientifique et Technique, AGRHYMET Regional Center, March 2006, pp 25-34.

Alkhalil, A., 2008 : Estimate of the area cultivated in and Production of recessional Sorghum in Southeastern Chad using Landsat images, the dot-grid method and a field survey, In Rapport Scientifique et Technique, AGRHYMET Regional Center, March 2008, pp 48-57.