

GLOWA VOLTA PROJECT (GPV)

Report on the Training Workshop of
**“GLOWA-Volta Project Hydro-
meteorological decision support for
the Volta Basin”**

ORGANIZED BY:

UNITED NATION UNIVERSITY- Institute for Natural Resources in
Africa (UNU-INRA)

Centre for Development Research (ZEF)

At

**Direction Générale des Ressources en Eau (DGRE),
Ouagadougou
22.01.-25.01.2008**



1. Introduction/ Objectives (What was the workshop?)

The training will cover the following topics

(a) **Model based water balance estimations**

- Training in water balance simulation model WaSiM
- Climate change scenario studies

(b) **Predicting the Onset of the Rainy Season**

- Training in specific statistical approaches Linear discriminant analysis and Linear Regression Analysis

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2. Where workshop was held? Period of workshop

The training workshop was held at the Direction Générale des Ressources en Eau (DGRE), Ouagadougou from 22.01.-25.01.2008

3. Attendance

The invited institutes, which are listed below are mainly from research and data gathering institutes but some institutions from water management and regulating bodies were also invited.

	Invited Institutions
1	Direction Générale des Ressources en Eau (DGRE)
2	La Direction de la Météorologie Burkina Faso.(DM METEO)
3	Institut National de l'Environnement et de Recherche Agricole (L'INERA)
4	Union Mondiale pour la Nature/Bureau d'Afrique de l'Ouest (IUCN)
5	Institut International d'Ingénierie de l'Eau et de L'Environnement (2iE)
6	Institut Géographique du Burkina Faso (IGB)
7	ESPACE GEOMATIQUE
8	SIGET-A
9	Centre d'Etude, de Recherche et de Production en Information pour l'Environnement et de Développement Durable (CERPINEDD)
10	GREENHANDS
11	VOLTA-HYCOS
12	Direction des Etudes et de l'Information sur l'Eau (DEIE)



About 27 persons attended this training workshop.

4. Opening

The training workshop was opened at 9:00 am with a welcome and an introductory speech by the Director of Direction des Etudes et de l'Information sur l'Eau, Madame Jacqueline Zoungrana

After she thanked GVP for organizing such type of training which could help in the rational utilization of water resources by giving information about different components of the hydrologic cycle of the basin. She elaborated also the importance of estimating onset of the rainy season especially for arid and semi-arid part of Burkina Faso.

Finally she wished all participants a good and successful training workshop

The workshop was chaired by Dr. Barry Boubacar and by Sven Wagner and Patrick Laux (Institute for Meteorology and Climatology, IMK-IFU).

5. Workshop sessions

The training workshop was held in two main sessions over the four days. The first session dealt with the following points:

- Introduction and overall objective of the training course
- Theoretical introduction to a) definition of the onset of the rainy season (ORS), b) regionalization c) Linear Discriminant Analysis LDA
- Practical exercises with the programming environment MATLAB
- Application of the LDA for predicting the ORS
- Introduction to Linear Regression Analysis LRA
- Application of LRA for predicting the ORS using MATLAB

In the second session the following three topics were handled

- o Introduction to model based water balance estimations and to hydrological model WaSiM
- o Setup and first exercise with WaSiM
- o Using different meteorological input data sources for WaSiM: a) MM5 results b) TRMM data, c) station data
- o WaSiM simulations with MM5, TRMM and station data

6. Closing

Dr. Barry thanked all the participants and the presenters and the workshop was 3:00 Pm officially closed

7 List of Participants and Contact Information during WASIM and Onset of rainy season training

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8) GLOWA-Volta workshop: Ouagadougou 22.01.-25.01.2008

Hydrometeorological decision support for the Volta Basin

Venue: DGRE, Ouaga2000, Chairman: Dr. Barry Boubacar

DAY 1		DAY 2		DAY 3		DAY 4	
8:30-9:00	Registration	9:00-10:00	Introduction to Linear Regression Analysis LRA	9:00-10:00	Introduction to model based water balance estimations and to hydrological model WaSiM	9:00-10:00	Using different meteorological input data sources for WaSiM: a) MM5 results b) TRMM data, c) station data
9:00-9:30	Formal Opening of the Training by Dr.Francis Bougiere (The General Director of DGRE)						
9:30-10:00	Coffee Break and Group Photo & Set up of Participants Laptops						
10:00 - 12:00	- Introduction and overall objective of the training course - Theoretical introduction to a) definition of the onset of the rainy season (ORS), b) regionalization c) Linear Discriminant Analysis LDA	10:00-10:30	Coffee Break	10:00-10:30	Coffee Break	10:00-10:30	Coffee Break
		10:30-12:00	Introduction to Linear Regression Analysis LRA	10:30-12:00	Introduction to model based water balance estimations and to hydrological model WaSiM	10:30-12:00	Using different meteorological input data sources for WaSiM: a) MM5 results b) TRMM data, c) station data
12:00-1300	Lunch	12:00-1300	Lunch	12:00-1300	Lunch	12:00-1300	Lunch
13:00 - 15:00	- Practical exercises with the programming environment MATLAB - Application of the LDA for predicting the ORS	13:00-15:00	Application of LRA for predicting the ORS using MATLAB	13:00-15:00	Setup and first exercise with WaSiM	13:00-15:00	WaSiM simulations with MM5, TRMM and station data
15:00-15:30	Coffee Break	15:00-15:30	Coffee Break	15:00-15:30	Coffee Break	15:00-15:30	Coffee Break
15:30-17:00	Discussion and Practical exercises	15:30-17:00	Discussion and Practical exercises	15:30-17:00	- Discussion of: (a) consequences of climate change scenarios for water management in Ghana and Burkina Faso; (b) framework for current estimations of water availability and distribution - Final Discussion		

