



# QWeCI

## Quantifying Weather and Climate Impacts on Health in Developing Countries

Newsletter

February 2011, No. 2

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#### EDITORIAL

Dear Reader,

Welcome to the second six-monthly newsletter of the QWeCI Project!

Many of you were able to attend the recent QWeCI Annual Meeting, held in Dakar, Senegal. The meeting was a great success, with nearly all partners represented. A great deal of information was shared, and it was a great opportunity for various partners to meet and discuss specific issues.

Special thanks to Jacques-André Ndione and all of our colleagues at CSE who worked so hard to organise the event.

We thank all those working on and associated with QWeCI and look forward to our ongoing productive collaboration!

*-The QWeCI management board.*

#### Coordinator’s report

As we are successfully through our first year it is time to both reflect over the first year of events and also to look forward. Well we finally kicked off in Liverpool in July, after our first attempt was interrupted by the ash cloud from that Icelandic volcano! It was good to see so many partners in Liverpool and we hope to see many of you on short and extended visits in the future, when hopefully you can get to see some more of the city and its surroundings.

I got to visit the field areas in both Senegal and Malawi (with ICTP) in October and November. It was great to see some more of Senegal and for the first time, for me, Malawi. I am very grateful to the hospitality and time given by the partners in region for making the visits a big success. In Senegal, I

had time to visit the two project subcontractors i.e. the national malaria programme and national livestock programme; and in Malawi we made useful local visits to District Hospitals and Clinics as well as to the Ministry of Health. The field programmes are running successfully in Ghana, Senegal and Malawi, as we saw through reports and presentations at the annual meeting in Dakar last month.

European partners have been busy too especially in the construction and populating of databases, the analysis of existing climate model runs and the development of new climate model runs for the project. I am hoping we will see in Year 2 many partner to partner visits, and not only Africa to Europe but also within Europe and within Africa. Please make sure you report all the visits and meetings you have undertaken for QWeCI to Claudio Piani at ICTP.

The website [www.liv.ac.uk/qweci](http://www.liv.ac.uk/qweci) is just about complete and we will link to your own QWeCI project web site, so please send us any links. We are currently working on the best way to link documents to the site which will allow easy access to reports and forms and talks etc. The establishment of the project office with Tara Wambugu heading it up has certainly helped the progress of the project.

I am looking forward to a successful second year, whilst continuing our own core work we must try hard to integrate the parts. This will work best if we can maintain regular communication and focused discussion groups via Skype or teleconference.

With best wishes,  
Andy

## QWeCI Annual Meeting



The QWeCI Annual Meeting was held in Dakar, Senegal from 28 – 30 January, 2011. Presentations were made for each work package, which helped WP partners to better understand the overall progress of their integrated work. A series of specific science presentations were also made, giving a chance to various partners, PhDs and post-docs to share their work.

The Annual Meeting was also a useful opportunity for partners to meet in person, network, and discuss progress and / or issues within work packages or work package clusters.

## Partner Profiles

We would like to highlight one or two of our QWeCI partners in each newsletter. In this issue, we will highlight Dr Jacques-André Ndione from CSE.

### Dr Jacques-André Ndione



Dr Jacques-André Ndione (MSc in Geography 1995 and PhD in Climatology 1998) is a senior scientist in climatology and the Head of Research-Development Programme at Centre de Suivi Ecologique (Dakar, Senegal). His main areas of expertise are physical geography, climatology and environment-health.

He has long experience working as PI in multidisciplinary research, in national and international teams.

After working on climate variability and its impacts in Eastern Senegal, he concentrated all his efforts during his post-doc activities on environment and health issues. He began working on this issue as part of the Medias-France in EMERCASE project. At that time, he was working at LPAOSF (Laboratoire de Physique de l'Atmosphère et de l'Océan Siméon Fongang). Since his recruitment at CSE in 2003, he has continued working on environment and health issues and contributes to building a strong partnership between CSE, LPAO-SF, IPD (Institut Pasteur de Dakar), Medias-France, CNES (Centre National d'Etudes Spatiales) and University of Liverpool. He is a member also of COPEH-West and Central Africa, AMMA-Africa scientific community and GEO Health and Environment Community of Practice. Since 2001, he is working with CNES, LPAOSF and IPD on environment / health issues in Senegal, mainly on vector and water borne disease

(Rift Valley Fever, Dengue and Malaria) emergence and risk.

## News from the Field

### Field exchange visits

Exchange visits between partners are a central part of the synergy and capacity building efforts within QWeCI. A minimum of nine exchange visits were planned to occur throughout the entire length of the project, with the first ones occurring by Month 9 of the project. In fact, a greater number of visits have occurred and are being planned for the following year.

UNIMA to ICTP April 2010. For a week in April 2010, Harry Gombachika, from the University of Malawi, visited the Earth System Physics group in ICTP. The purpose of the visit was to exchange preliminary station climate data, identify a preliminary community of end-users and external collaborators for the Malawi pilot project. Also logistics and priorities regarding the following visit of UNILIV and ICTP to Malawi were discussed.

ICTP and ECMWF to UNILIV April 2010. A group of mostly UK-based QWeCI scientists, and others joining via teleconference, discussed uses of atmospheric model output, bias correction and downscaling techniques. A particular focus was made on the seamless aspects of the QWeCI systems to be developed. Administration aspects of the project were also covered, including the details of the consortium agreement, the ethical clearance procedures, and the workpackage leaders were allocated.

UoC to KNUST April 2010. In April 2010 scientists from the University of Cologne arrived in Ghana to service existing stations, installed in 2008, and install new ones in the surroundings of Kumasi. Training was also provided on use and maintenance

of the new stations and the extraction and processing of data.



UoC to KNUST July 2010 and January 2011. In July, a new pressure sensor was added to the AWS and maintenance work was performed on it and other three pluviostations. In January, with non QWeCI funds, provision was made for three complete used pluviostations and a laptop to KNUST and further development and maintenance of the field equipment was carried out. Also discussion of work in WP5.1 and WP5.2 and about entering the meteorological data into the QWeCI database with Sylvester Danour and Leonard Amekudzi proved useful.

ILRI to Senegal . Morris Agaba from ILRI visited Senegal and Gambia and sampled approximately 500 sheep and cattle. This was partly funded by QWeCI but animal samples were supplied by a collaborating project (PROGEBE). This is a potentially important collaboration. These will be tested for RVFV when assays for variants are refined. All samples have associated meta-data including lat, long, date, time.

UNILIV to Dakar October 2010. Andy Morse, from UNILIV, traveled to Dakar in Senegal to visit UCAD, CSE, IPD and field sites relevant to the Senegal pilot project.

UNILIV & ICTP to UNIMA November 2010. In November 2010 a team of scientists from the ICTP Aeronomy and Radio Propagation Laboratory visited various sites in and around the cities of Mangochi, Zomba and Blantyre to install WiFi equipment (see photo). Also scientists from the Earth System Physics group at ICTP and UNILIV visited with various potential end users and conducted a one day workshop with the Malawi Meteorological Service (MMS) to establish data exchange and general collaboration agreements.



## UP becomes IPCC leader in climate change and human health



*Dr Jane Olwoch (left) from the UP Department of Geography, Geoinformatics and Meteorology (GGM) with Dr Rajendra Pachuari (right), Chair of the IPCC and co-recipient of the 2007 Nobel Peace Prize.*

Dr. Jane Olwoch (UP) was asked to serve as Lead Author of the chapter on Human Health in the forthcoming Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

Between 11 and 14 January 2011 Dr Olwoch attended the first Lead Author's meeting of Working Group II of the IPCC's Fifth Assessment Report in Tsukuba, Japan. The objective of this Working Group is to assess the scientific, technical, environmental, economic and social aspects of vulnerability, sensitivity and adaptability of ecological systems, socio-economic sectors and human health to climate change.

The IPCC is regarded as the leading international body tasked to assess climate change. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential

environmental and socio-economic impacts. During May 2010 Dr Jane Olwoch was selected from more than 1,000 nominations to become a Lead Author of the Chapter on Human Health. Over the next three years she will be one of only eight prominent international scientists in the world who will assess the vulnerability of human health under conditions of global warming for the IPCC.

## QWeCI Project Field Site in Kumasi, Ghana



The QWeCI-Ghana pilot project aimed at providing meteorology data and relevant malaria data for malaria prevalence studies in urban, peri-urban and rural communities in the Ashanti region of Ghana. In order to achieve this goal, the QWeCI project partners in Kwame Nkrumah University of Science and Technology (henceforth KNUST) in Ghana and University of Cologne, Cologne, Germany have set up four meteorological field sites (see photo).

The field sites are strategically set up close to a hospital or within the hospital vicinity. Three of these project sites are provided with Otto 250 mm pluviometric rain gauges. This type of rain gauge has the advantage of measuring both rainfall and evaporation. The Otto 250 mm pluviometric rain gauges are sited at KNUST Agromet station, the Kumasi

airport and Emena Hospital. Kumasi airport and KNUST Agromet have an existing Ghana Meteorological Agency (GMet) station, which provide daily measurements with time resolution of 3 hours of other meteorological parameters such as wind speed, sunshine hours, evaporation, rainfall, surface temperature, relative humidity, and soil temperature. The Emena hospital QWeCI field site provides rainfall and evaporation data only. Other meteorological parameters such as surface temperature, relative humidity and sunshine hour data needed for Emena hospital malaria prevalence studies will be provided by the KNUST Agromet station due to its proximity to Emena Hospital, as variability in these parameters for such distance (4 Km) in the tropics are not expected.

The fourth QWeCI project site in Kumasi, Ghana is located in Owabi. This location has a forest reserve as well as a dam which is one of the main water sources for the Kumasi metropolis. In this QWeCI project site, an automatic weather station has been installed. The parameters measured in Owabi project field site therefore include soil heat flux, relative humidity, upward and downward shortwave and long wave solar radiation, surface temperature, rainfall, surface pressure, and wind speed. This station is unique because it provides important meteorological information for a rural malaria prevalence study over Nkawie in addition to hydro- and agro-meteorology studies.

### Recent events

- Nov 2010: Extended visit, pilot kick off meeting and one week training workshop by six members of ICTP, in addition to the project coordinator to Malawi to conduct site visits, install equipment, conduct training, and conduct exchanges with end-users including government health and communication ministries and health planners at the regional and local scale

- Dec 2010: UNILIV participation in Canada-China International Conference on the Dynamics of Climate Impact and Infectious Diseases
- Jan 2010: QWeCI Annual Meeting – Dakar, Senegal

### Future events

- The first QWeCI symposium will be hosted by ICTP from September 12th to 16th 2011.
- Regional workshop in Senegal planned for November 2011.

### Project Office

The QWeCI Project Office:

- Tara Wambugu, project manager ([t.wambugu@liv.ac.uk](mailto:t.wambugu@liv.ac.uk))
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The QWeCI Project Office is open Tuesdays, Wednesdays and Thursdays. You can reach any member of the project office by phone at +44 (0)151 794 3031.

### Contacts

QWeCI is coordinated by Andy Morse at the University of Liverpool ([A.P.Morse@liverpool.ac.uk](mailto:A.P.Morse@liverpool.ac.uk)) with Adrian Tompkins acting as deputy Co-ordinator at the International Centre for Theoretical Physics, Trieste ([tompkins@ictp.it](mailto:tompkins@ictp.it)).

Please visit the QWeCI website for project details, partner information, and regular updates:

<http://www.liv.ac.uk/qweci>