

# Important Developments Since the Climate and Health Workshop

The Challenge Dialogue System™



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## Maintaining the Momentum Following an African Challenge Dialogue

The world never stands still. In this *work-in-progress* document we provide a quick summary of recent developments in this growing area of interdisciplinary research and practice at the interface of climate, human health, animal health, ecosystem health and infectious diseases and their vectors. Please use these resources to help you and your organization identify and develop opportunities to move forward the action-recommendations from the Exploratory Dialogue. For further information on this Exploratory Dialogue, please visit <http://www.ilri.org/InnovationWorks>

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## 1. **Once World, One Health Strategy (October 14, 2008) – Excerpts**

*Contributing to One World, One Health - A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal-Human-Ecosystems Interface*; a consultation document produced by FAO, Oie, WHO, UN System Influenza Coordination, Unicef and the World Bank. The detailed in a 68-page strategy report focuses on reducing the risk and global impact of disease outbreaks by improving livestock and wildlife intelligence, surveillance, and emergency response through stronger public and animal health systems. It is acknowledged that this will require broad cooperation among disciplines and sectors. It places a high priority on “hot spots” for emerging infectious diseases. Copies of the report are available at: <ftp://ftp.fao.org/docrep/fao/011/aj137e/aj137e00.pdf>.

The overarching objective of the proposed Strategic Framework is to diminish the threat and minimize the global impact of diseases of animal origin, including zoonoses and those with pandemic potential. This will be achieved by consolidating the current effort of strengthening public and animal health systems at the country level and enhancing their collaboration in areas of common interest (focusing on current and future ‘compatible’ functions in disease intelligence, surveillance, early detection, diagnosis, rapid response, education and research), supported by the regional and international levels and in compliance with international regulations (IHR and OIE standards).

Regarding climate change the report states: “*Climate change, particularly global warming, has changed the ecosystems in many regions and has subsequently extended the distribution of several vectors that transmit diseases such as RVF, WNF, bluetongue, dengue and malaria.*”

Regarding research, one of the 5 strategic elements is to develop “rational and targeted disease control programmes through the conduct of strategic research.” In the area of wildlife this would include better collaboration in the wildlife sector to improve the understanding of the factors that contribute to inter-species pathogen transmission among all species (i.e. the ‘species barrier’). One of six specific objectives identified for possible priority emphasis by national authorities is “to conduct strategic research.” One of the key principles is to “establishment of broad-based partnerships across sectors and along the research-to-delivery continuum.”

## 2. **One World, One Health Workshop October 24-26, 2008 in Sharm el-Sheikh, Egypt**

The meeting took place Oct 24 – 26 and was attended by 530 participants from over 120 countries and involved 26 regional and international organizations. The participants endorsed the *One World, One Health Strategy* (October 14, 2008; see item 1 above) as a starting point for future action and called for further elaboration of the concept and clear indications of the roles of all stakeholders in the process.

### 3. Stakeholders Workshop on Climate and Health Challenges in Nairobi, Kenya December 8-9, 2008

The IGAD Climate Prediction and Applications Centre (ICPAC), Kenya Meteorological Department, Ministry of Public Health and Sanitation, International Livestock Research Institute, World Meteorological Organization (WHO), International Research Institute and partners conducted a two day stakeholders' workshop on climate and health challenges in Kenya. The objective was to bring together key stakeholders in climate and health institutions to discuss the challenges of climate change and variability in health and to strengthen the network of amongst the stakeholders. The workshop was organized within the framework used by the *Linking Climate and Health Research to Reduce Africa's Infectious Disease Burden – Exploratory Challenge Dialogue*.

The workshop was attended by more than 50 participants from various Government of Kenya Ministries and Departments, NGO's and international organizations. Participants had a wide range of technical expertise and experiences including the areas of climate, human health, animal health, communications and policy. With the initial priority diseases being on Malaria, RVF and diarrhea causing infections such as cholera, a *Kenya Climate and Health Working Group (KCHWG) Steering Committee* was formed with the following membership. The Working Group will be based in the Ministry of Public Health and Sanitation

- Ministry of Public Health and sanitation- Division of Malaria Control
- Kenya Meteorological Department
- IGAD Centre for Climate Prediction and Application
- Kenya Medical Research Institute
- World Health Organization (K) –Advisory role
- World Meteorological Organization(K)
- International Livestock Research Institute (ILRI)
- International Centre for Insect Physiology and ecology (ICIPE)
- Media Council of Kenya
- University of Nairobi

Interestingly, the proposed *Terms of Reference* discussion centered around the same five areas or roles that the Climate and Health Exploratory Dialogue concluded would be key for such a group, namely:

1. **Communications** – advocacy, publicity, dissemination (i.e. communication strategy)
2. **Data management / data sharing** – policies, approaches, strategy
3. **Research priorities and gaps** – opportunities for joint proposal development for action research
4. **Capacity** – building capacity including training priorities
5. **Coordination / networking /organizing meetings** – how the group will work together and link to others

The following actions were identified as the way forward :

**1. Mapping of stakeholders**

- Identification of key institutions and communities (via risk mapping of different diseases?)
- Identification of interested individuals
- Establishment of collaboration and partnership channels and for2.

**2. Identification of research priorities**

- Mechanisms for information sharing for action
- Mitigation and adaptation approaches in health and animal sectors
- Policy options in health and related sectors

**3. Identify priority projects**

- Advocacy and publicity
- Training and manpower development
- Mitigation and adaptation

**4. Develop Plan of Action**

- Identify strategic sets of goals and objectives
- Formulation of strategic implementation framework
- Institutional framework/arrangements
- Capacity development – technical, institutional, manpower
- Collaboration and partnership
- Time and logframe

**5. Resources mobilization**

**6. Tasks and responsibilities**

**4. Young Voices in Research for Health 2008 Climate change and health: research challenges for vulnerable populations**

For the third time, the Global Forum for Health Research and The Lancet have jointly invited young professionals (under 30) working on or interested in the broad spectrum of research for health to participate in the Young Voices essay competition. This year, young professionals were asked to share their concerns about climate change and health and to invigorate the research for health community with fresh perspectives and idealistic visions regarding research challenges for vulnerable populations.

There is irrefutable proof of climate change as a result of human activity, most notably caused by the release of greenhouse gases from fossil fuel use. Although this primary cause of climate change comes largely from developed countries, developing countries will also add to climate change as their economies grow. Moreover, it will be poor populations

on whom climate change will exact the greatest toll the same populations that already bear the heaviest burdens of infectious and chronic diseases.

It is therefore imperative to integrate climate change research into relevant areas of health and social sector research to ensure that progress made in these areas is not then offset by the effects of climate change. Available online at:

[http://www.globalforumhealth.org/filesupld/Young%20Voices/08/GFHR\\_YoungVoices2008-full.pdf](http://www.globalforumhealth.org/filesupld/Young%20Voices/08/GFHR_YoungVoices2008-full.pdf)

##### **5. A new 'One Health' Project: An Integrated Response System for Emerging Infectious Diseases in East Africa: Changing the rules on Rift Valley Fever**

Google.org has given a new \$5 million grant to a consortium of 7 organizations, 4 of which were involved in the Climate and Health Challenge Dialogue (icipe, ILRI, Kenya Wildlife Service, Ministry of Health, Ministry of Agriculture, Kenya Agricultural Research Institute, Google.org). This project will be implementing a 'one health' approach in the field, with the goal of improving response to disease Rift Valley Fever disease. The Challenge Dialogue brought many of these organizations together and has provided helpful background and concept frameworks pertinent to this new project, as well as highlighting the importance of the 'one health' principles that will be tested in this project, and are now becoming widely recognized as key to improving response to infectious diseases globally (with little implementation experience, however).

Arboviruses (Arthropod Borne Viruses) are important causes of human disease. As well as having a direct effect on people and their livestock, outbreaks often severely disrupt local economies. This project initially focuses on Rift Valley Fever Virus, an arbovirus which causes periodic disease outbreaks in East Africa. Outbreaks are linked to periods of heavy rain which trigger explosions in vector populations and this in turn triggers an explosion in virus levels. But we don't yet fully understand what and where the reservoir and vectors are and how this varies between regions. Present control systems must therefore wait until the explosion has begun before responding; that is like waiting for the trigger to be pulled before trying to stop a gun from firing.

This project aims to find out where the Rift Valley Fever virus is between outbreaks and what it is doing. This should allow the authorities to manage the threat more rationally and intervene before the situation becomes critical. It takes advantages of new DNA/RNA-based technologies which allow us to screen large numbers of samples quickly, and also detect variants so that we can track virus lineages in the wild. Using these generic tools should also mean that the results and methods can be applied to other kinds of pathogens. It is a challenging project which brings together key players in the study of human health, livestock, wildlife, climate modeling and vectors. If we can succeed with Rift Valley Fever and its relatives, then we should be able to apply the same methods to a range of other diseases.

This project takes advantage of advances in genomics technology to simultaneously look at variation in virus, human, reservoir and vector species. In some cases we can look at all of these in a single sample. This will allow us to understand interaction and dynamics in a very

complex system with much higher resolution. For example, we can ask if the virus population in different vector species is relatively isolated or freely mixing. Or we can ask if particular sub-species of vector are more likely to carry virus.

For ILRI, the project will bring a 'state of the art' high throughput sequencer with staff to run it and bioinformatics support (probably 4 new positions), which will transform ILRI's ability to do this kind of high throughput biology. For more information on this project, go to:

<http://sites.google.com/site/arbovirusdynamicsprojectsite/>

## **6. Exploring linkages with Google.com and Google.org to share ILRI's spatial agricultural, ecosystems and poverty data and analyses and tap into Google's '1 billion people' reach**

A new dialogue and some immediate data-sharing are underway with Mark deBlois of Google.com in Kenya. ILRI and partners are making available spatial data layers from their book 'Ecosystems Services and Well-being in Kenya'. These examples of spatial analyses/maps will form a kind of demonstration or pilot and the basis for further discussions within both Google.com and with Google.org regarding potential projects that will build upon this small start. These include, for example, exploring the possibilities for utilizing Google Earth Enterprise to do further overlays with existing Google Earth layers; how best to make this information widely available to the world and easy to find (potentially taking advantage of Google's 'featured data' function; advertising it on their site; and adding it to their KML index so searches within Google Earth locate ILRI layers); and exploring what further tools may be needed.

We also discussed, from the research angle, some of the interesting questions that we can potentially explore in partnership with Google. For example, analyses of who is accessing what livestock-related information and how often to better understand what information is of the most use, and to whom. We can also begin to explore ways in which to link to agricultural extension services, NGO's and other local partners to add their information, WIKI-style to existing layers (e.g. through the use of cell phones).

## **7. Practical Management Strategies (Workshop 2) for Avian Influenza and Emerging Infectious Diseases — 'The Implementation Toolkit' held in Hanoi, Vietnam, 10-11 September 2008**

The second workshop which focused on and "Implementation Toolkit" was held in Hanoi, Vietnam from 10-11 September 2008. It was convened by the Australian Government Department of Agriculture, Fisheries and Forestry, in conjunction with the Asia Pacific Economic Cooperation Agricultural Technical Cooperation Working Group(APEC ATCWG). The aims of the Workshop were to obtain feedback on the draft "Implementation Toolkit", consider progress on its development, share information on successful initiatives of member economies that will be featured in the toolkit, and further identify specific needs and materials and experiences that member economies want included in the toolkit. The workshop also further identified information gaps and areas for future work.

The participants identified the specific materials and examples to be incorporated in the toolkit. It was agreed that the value of the toolkit site would be enhanced with the inclusion of a forum that allows for users to actively share information, discuss topics of interest, and

interact with others through the website. It was acknowledged that ongoing work was needed and should be commissioned to continue the process of capturing and documenting country experiences, and developing country case studies for inclusion in the website. The documentation of country experiences was considered to be one of the most valuable activities for the sharing of information and lessons learned, as very little of this information has to date been documented and shared. The participants noted the importance of their involvement in contributing ideas and specific materials, and promoting use of the toolkit, to ensure the toolkit is a relevant and useful resource.

This Knowledge Product, among others, represents one of five resources that have been prepared as a suite of information and communication products stemming from an ***Exploratory Challenge Dialogue*** that examined ***Linking Climate and Health Research to Reduce Africa's Infectious Disease Burden***. The other resources are:

- an *Overview Summary* which provides a high level introduction to the Dialogue, its outputs and their potential implications to others working in this interdisciplinary field of endeavour
- a *Synopsis* which provides a summary of the main outcomes from the dialogue in five areas: 1) the context for the dialogue listing the key assumptions and the working proposition that drove and focused the conversations; 2) the key features that made this exchange of ideas and learning distinct from more conventional approaches; 3) a synthesis of the key highlights and lessons from the dialogue; 4) summary of the five main action-recommendations identified at the workshop along with reflections on the dialogue overall; and, 5) a draft *Logic Model* which integrates the various elements
- *The Nature of the Workshop*, which serves as a summary reference to the online Dialogue, how the workshop was organized and implemented, a description of the 26 sessions with samples of the material provided or created and a description of the main workshop outputs and potential follow-up actions
- *Climate and Health Research Knowledge Products* on specific Dialogue-related products; and,
- the *Innovation Works (ILRI) website* and the *Climate and Health blogspot* – <http://www.ilri.org/InnovationWorks> and [www.climatehealthdialogue.blogspot.com](http://www.climatehealthdialogue.blogspot.com) respectively