

SHED

Science in Humanitarian Emergencies and Disasters

Colin Armstrong

Goals: *To improve the use of science advice across UK government in predicting, planning for and responding to international, natural hazard based humanitarian disasters*

Objectives

- 1. To establish a Risk and Horizon Scanning Expert Group (RHEG) to provide forecasts of emerging natural hazard risks*
- 2. To develop a mechanism to provide scientific advice to UK government departments in the event of an international humanitarian emergency*

Customers

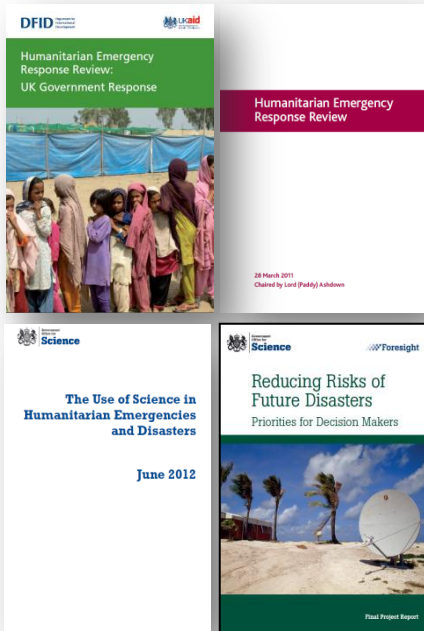


Partners

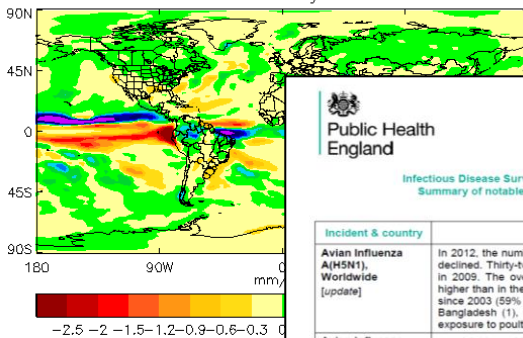


Major achievements

- Relatively new process but rapid implementation
- Risk and Horizon Scanning Expert Group (RHEG), chaired by the UK Government Chief Scientific Adviser established
- Initial system of horizon scanning, drawing on existing cross-government information, to identify emerging international natural hazard risks developed
- Scientific advice on international natural hazard risk now incorporated into government risk assessments

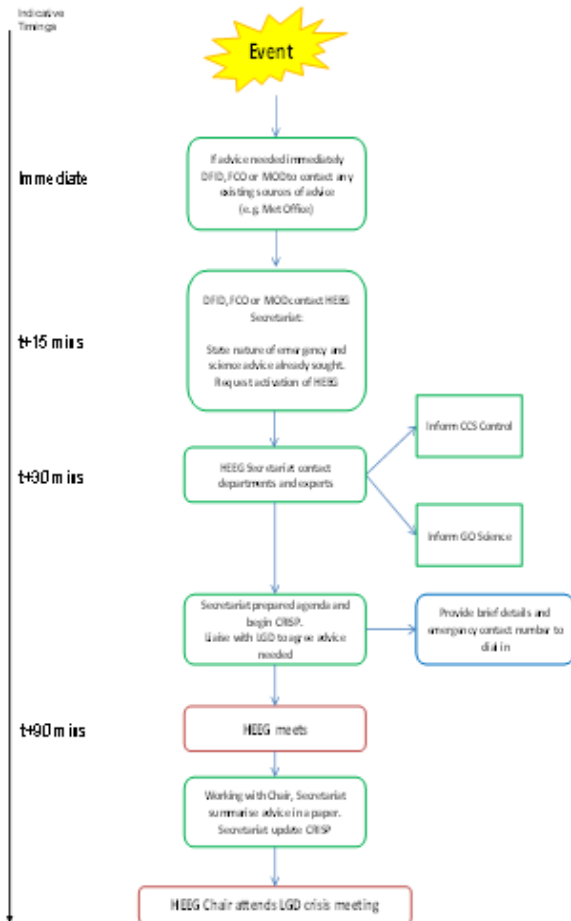


Ensemble mean anomaly : precipitation : Mar/Apr/May
Issued January 2013



Incident & country	Details/Summary
Avian influenza A(H5N1), Worldwide [update]	In 2012, the number of laboratory confirmed human cases of avian influenza A(H5N1) virus infection declined. Thirty-two human cases were reported to WHO, down from 52 in 2011, 48 in 2010 and 73 in 2009. The overall proportion of fatal cases among those reported was 62.5% (20/32), slightly higher than in the previous 3 years (44-55%) but similar to the average of all cases reported to WHO since 2003 (59% [360/610]) [VH0a]. So far in 2013, sporadic human cases have been reported from Bangladesh (1), Cambodia (10), China (2), Egypt (3) and Vietnam (2) [VH0b]. The majority had exposure to poultry.
Avian influenza A(H7N9), China [update]	As of 2 May, 128 human cases of influenza A(H7N9) including 26 deaths have been reported from ten provinces and cities in eastern China: Anhui (4 cases, 1 death); Beijing (1 case); Fujian (3 cases, no deaths); Henan (4 cases, no deaths); Hunan (3 cases, no deaths); Jiangsu (27 cases, 6 deaths);

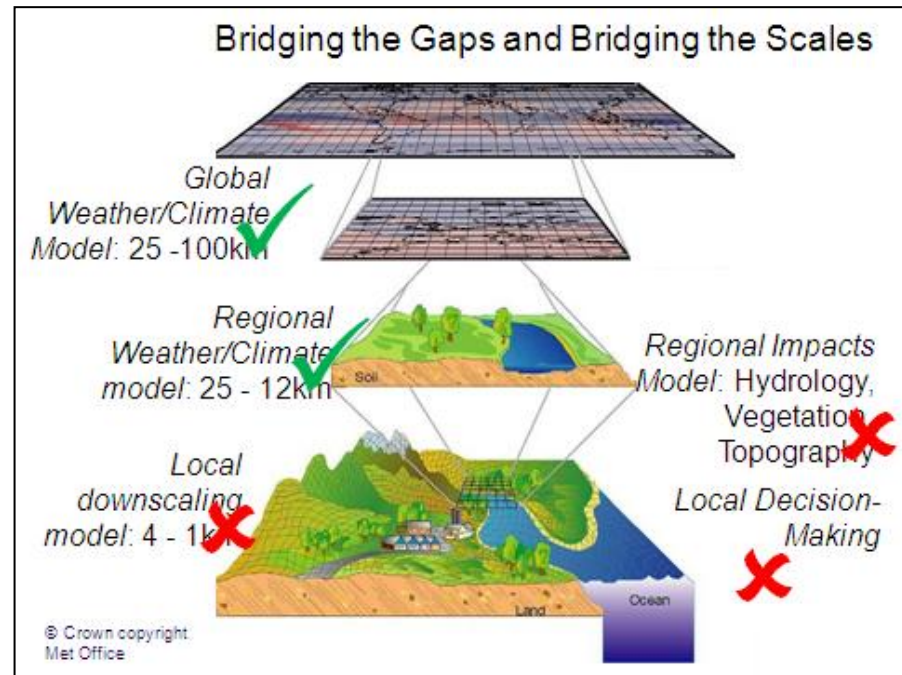
Major achievements



- Procedures for a Humanitarian Emergency Expert Group (HEEG) developed
- HEEG aims to ensure that coordinated, timely S&T advice is made available to decision makers to support UK response
- Mechanism resulted in rapid advice being provided following an earthquake in Iran's Bushehr province
- Transparency – outputs from RHEG and HEEG published online.

Future goals and contribution to post-HFA 2015

- Continue to develop our ability to identify, assess and monitor disaster risk and enhance early warning
- Multi-disciplinary and multi-hazard approach – learning from the UK's Natural Hazard Partnership
- How to access other regional/local information and models?



Future goals and contribution to post-HFA 2015

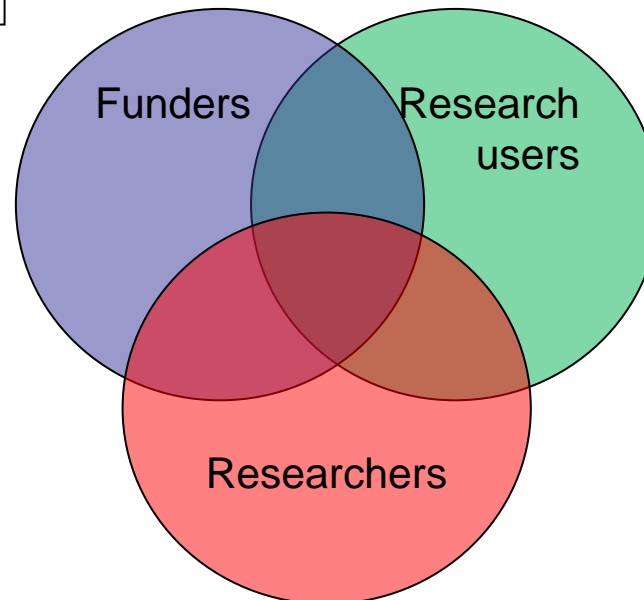
RHEG 2013: Issue 1

**Summary of key emerging rapid onset natural hazard risks
January 2013 – April 2013**

This section outlines the key emerging rapid onset natural hazard risks that have been identified by the RHEG. It should be noted however that the prediction of geo-physical risks is in its infancy and that there are large uncertainties in the outcomes particularly at the seasonal time scale.

Hazard	Details/Summary
Flood & Tropical storms	<p>The latest seasonal forecast for the next 6 months indicates a return to weak La Niña conditions. That being the case, higher than normal rainfall is likely to continue across the tropical West Pacific and across North-East Brazil (Nordeste), with drier than normal conditions across the southern US. The recent flooding in southern Africa is consistent with continuing La Niña conditions.</p> <p>Philippines Heavy rain has continued to cause flooding in the Philippines following Typhoon Bopha in December 2012. The UK Met Office seasonal forecast indicates that there is a continuing risk of heavy rain in the Philippines. There is therefore an increased risk of further flooding and landslips.</p> <p>Indonesia Latest information indicates that the summer monsoon will happen earlier than usual. As with the Philippines, the UK Met Office seasonal forecast indicates that there is a continuing risk of heavy rain in Indonesia. There is therefore an increased risk of further flooding.</p> <p>The area has already been subject to heavy rain during January and over 20,000 people were forced to abandon their homes after Jakarta was flooded following days of heavy rain in mid-January 2013.</p>

- Improvements in the way information on hazard and risk is communicated to decision makers and others
- Establish a more effective engagement between researchers, research users and research funders within the UK and internationally



Synergies / Collaboration

- Better intelligence of future risks of extreme events / verification of these hazards through the sharing of information with other networks and local science partners
- Access to global, regional and local expertise
- Shared information on research gaps and priorities
- Requirement for a coherent understanding of a complex landscape

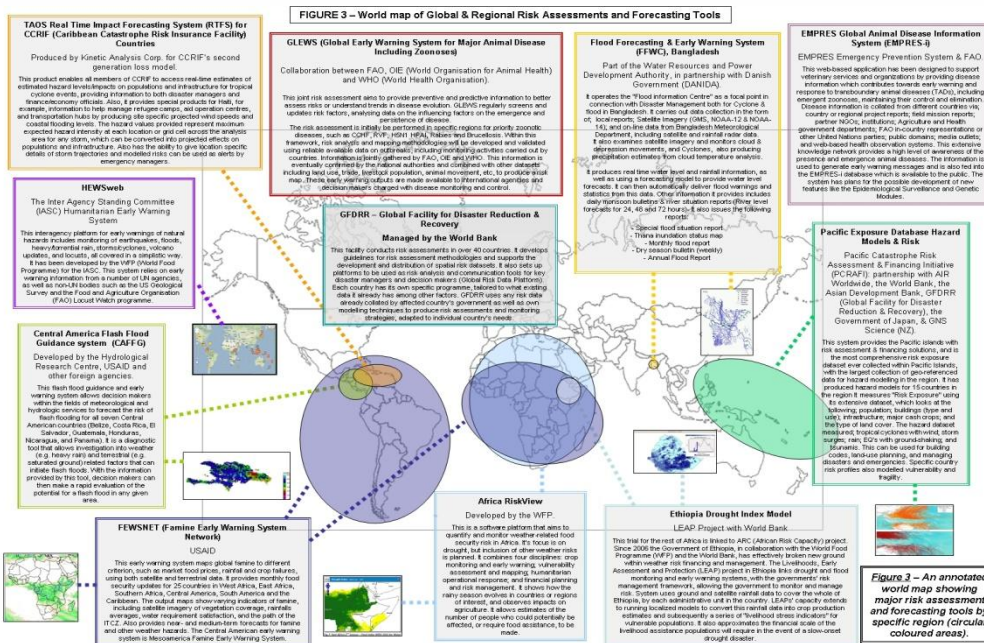


Figure 3 – An annotated world map showing major risk assessment and forecasting tools by specific region (circular coloured areas)



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