



“Back to the Future” Innovation in Forward Looking Hazard Modelling

Technical Session
– Concept Note –

2014 Understanding Risk Forum, 30 June – 4 July, 2014, London, UK

Date: 2 July 2014
Location: ExCeL London, ICC Capital Suite, East Wing, level 3 (room: A)
Time: 11:00 am – 12:30 pm
Session Lead: Abdoulaye Harou, Chief of Data Processing and Forecasting Systems (DPFS), World Meteorological Organization (WMO)

Session Panellists		
Name	Title and Institutional Affiliation	Topic
Mr Paul Davies	Chief Meteorologist Met Office United Kingdom of Great Britain and Northern Ireland Member of the WMO Commission for Basic Systems (CBS)	Latest Progress in Forward Looking Hazard Modelling
Dr Yuri Simanov	Senior Scientist Hydrometcentre of Russia Russian Federation Member of the WMO Commission for Hydrology (CHy)	Latest Tools and Methodologies for Flood Modelling
Dr Andrew Burton	Chief Tropical Cyclone Forecasting, Severe Weather Section Australian Government – Bureau of Meteorology Australia Member of the WMO Tropical Cyclone Programme (TCP)	Tropical Cyclones: Innovation in Analysis and Forecasting
Dr Roger Pulwarty	Director of the National Integrated Drought Information System and Senior Advisor Climate Research and Services National Oceanic and Atmospheric Administration (NOAA) United States of America Member of the WMO Commission for Climatology (CCI)	The National Integrated Drought Information System
Prof Kevin Horsburgh	Head of the Marine Physics and Ocean Climate (MPOC) Research Group National Oceanography Centre – Natural Environment Research Council United Kingdom of Great Britain and Northern Ireland Member of the Joint WMO/IOC ¹ Technical Commission for Oceanography and Marine Meteorology (JCOMM)	Improving Global Coastal Inundation Forecasting

Session Abstract:

Hydro-meteorological related disasters comprise about 88 per cent of all disaster events, causing 72 per cent of all economic losses and 36 per cent of fatalities. The IPCC Fifth Assessment Report projects that the severity, intensity and frequency of hydro-meteorological hazards such as droughts, floods, and tropical cyclones are increasing due to human-induced climate change. Changing characteristics of these hazards are posing challenges in emergency preparedness, risk management, as well as with longer-term strategic planning and investments in critical infrastructure and economic sectors.

A fundamental requirement for risk analysis is quantification of hazard characteristics. Traditionally, statistical analyses of hazard characteristics have been used. However, with consideration for the changing patterns of hydro-meteorological hazards, statistical analysis based on historical data should be supplemented with forward-looking modelling tools that enable us to measure changes in the characteristics of hazards at various time scales. During this session, leading international experts will describe and discuss latest technologies in hazard modelling, WMO activities in establishing international guidelines and standards as well as issues related to accessibility and availability of hazard information.

¹ Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization (UNESCO) – <http://ioc-unesco.org>