

Human Impacts, Vulnerability and Risk Task Team (HIVR-TT)

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http://www.wmo.int/pages/prog/arep/wwrp/new/high_impact_weather_project.html



HIVR-TT Description (IP)

Research will be led by social scientists, with a focus on the interface between the physical hazard and the human impact. It will cover modeling of the role of the built environment in hazards, and of the exposure and vulnerability of individuals, businesses and communities. Workshops are planned to draw the physical and social science communities together through ***agreed definitions of key words and concepts, which will be documented in a white paper***. Research will initially focus on ***building a community of interested scientists*** across NHMSs, academia and the private sector to review recent experience and current capabilities, to ***document the requirement and state-of-the-art*** in meeting it, and to identify and ***prioritise gaps in hazard prediction inputs, impact models and evaluation capability***. This will inform ***subsequent activities in impact monitoring and in the construction, evaluation and deployment of impact models***. Identifying and sharing best practice will be a recurrent activity for this theme, while ***Demonstration Projects*** will provide opportunities for evaluating new capability.

HIVR-TT Members

Michael Kunz *Karlsruhe Institute of Technology (KIT)*

Jeff Lazo *National Center for Atmospheric Research (NCAR)*

Brian Mills *Environment and Climate Change Canada (ECCC)*

Joanne Robbins *Met Office*

Isabelle Ruin *National Center for Scientific Research (CNRS)*

Progress

- Initial task team formed and two teleconference meetings convened
- Draft HIWeather Implementation Plan reviewed, especially sections covering HIVR challenges and activities
- Recently completed, on-going, or planned research and application activities relevant to the HIVR/other TTs identified
- Examples of papers/publications that capture recent member work related to the HIVR theme identified
- Identification of other experts/practitioners (groups/institutes), especially from East Asia, Africa, and South America that might be important to contact and involve either as a HIVR TT member or part of a broader network that could be included in particular activities (workshops, proposals, training sessions, etc.)
- Preparation for HIWeather workshop (attendance, presentations/posters)
- *Development and prioritization of activities (begins with this workshop...)*

Possible early activities

- Inventory of ‘impact modelling’ undertaken by National Meteorological and Hydrological Services and/or partners
- Review paper that defines key terms/language (e.g., models, risk, vulnerability, resilience), assesses state of impact monitoring/modelling and available guidance, discusses data-related issues
- Development of TT/cross-cutting activity based on current member research
- Priority activities identified through April 2016 workshop



WMO 2015. ***WMO Guidelines on Multi-hazard Impact-based Forecasting and Warning Services***. WMO-No. 1150. World Meteorological Organization, Geneva.

Risk

Example Definitions of Risk	Source
...the probability of some future event.	Short (1984:711)
...probability of an adverse event multiplied by the consequences of that event.	Rosa (2003)
...the chance of injury or loss as defined as a measure of the probability and severity of an adverse effect to health, property, the environment, or other things of value.	Bruce et al. (2006:39)
Risks are measures of the likelihood of specific 'hazardous events' leading to certain adverse consequences.	Kates and Kasperson (1983:7029)
...possibility that human actions or events lead to consequences that affect aspects of what humans value.	(Renn 1998:51)
...a situation or event in which something of human value (including humans themselves) has been put at stake and where the outcome is uncertain.	(Rosa 1998:28)

Risk = probability of an event * consequences

Vulnerability | Exposure
Sensitivity
Resilience

Integrating Concepts – Value Chain

