

Risk KAN Early Warnings Working Group (EW WG)

Working Group Lead and Co-Lead:

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Rationale

Early Warnings enable hazard impacts to be avoided or reduced by taking action before the hazard occurs at a particular location. To be effective, the EW has to be based on a prediction that future risk is both significantly above the normal, accepted level, and that the cost of taking action is less than the expected benefit of avoiding the hazard, given the level of uncertainty. Early Warnings are generated through a chain of actions, involving monitoring, prediction, impact assessment, warning formulation and communication. They need to be focused on the action or decision that the recipient will make. A key component in the process of generating early warnings is the assessment of impact. This may be relatively straightforward where there is a single decision in a business with a simple exposure to risk. However, in most real situations, particularly those involving the public, a range of exposures and vulnerabilities are present, and impacts are both direct and indirect.

Aims

The aim of WMOs HIWeather project is **“To promote cooperative international research to achieve a dramatic increase in resilience to high impact weather, worldwide, through improving forecasts for timescales of minutes to two weeks and enhancing their communication and utility in social, economic and environmental applications”**. In this context, high impact weather and improved forecasts include all weather-related hazards, but with a particular focus on extreme local wind, winter weather hazards, wildfires, urban floods (and related phenomena such as landslides), extreme urban heat and air pollution. The Risk KAN EW WG will have the same aim, but with a special focus on indirect impacts, and in warnings associated with complex and systemic risk. It will seek to achieve this aim by bringing together people working in the same areas, facilitating joint bids for research funding, promoting topics for funding calls. The WG will expand by participating in broader HIWeather conferences and workshops and by organising its own workshops on specific topics. Where agreed, projects will be endorsed by either or both of HIWeather and Risk KAN.

Structure and Linkages

The Sendai Framework is built on a substantial body of science. Within the Early Warning area, there has been considerable effort both in improving the predictions on which warnings are based, and in creating the social structures that enable people to respond effectively. The World Meteorological Organisation's World Weather Research Programme runs a 10-year research project on High Impact Weather, which is focused on early warnings for weather-related hazards up to two weeks ahead. It has five task teams: processes and predictability, multi-scale hazard forecasting, human impacts vulnerability & risk, communication, and evaluation. Like the Risk-KAN, HIWeather is a network, facilitating progress by identifying research activities that are jointly undertaken by members of the teams, by promoting the importance of research gaps, and through funded workshops, reviews and summer schools. The Risk KAN EW WG will work in partnership with HIWeather. Where a WG member wishes to collaborate in pursuing research within the scope of a HIWeather task team, they will be invited to join that team. Where there are new areas of interest that cannot be accommodated within HIWeather, they will be pursued directly under the EW WG umbrella, exchanging information with both HIWeather and the other Risk-KAN WGs as appropriate.