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June 2007

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Global approach to address flash floods

Flash floods kill more people worldwide than any other natural disaster (over 5 000 deaths every year) and cause millions of dollars in property damage.

WMO has formulated a Strategy and Action Plan for the Enhancement of Cooperation between National Meteorological and Hydrological Services (NMHSs) for Improved Flood Forecasting, an important component of which is the International Flash Flood Guiding System with Global Coverage (GFFG).



For many developing and Least Developed Countries, access to technology which can accurately predict flash floods is currently not available. To remedy that situation, WMO has been working closely with the Hydrologic Research Center in San Diego (HRC) which developed the System concept and realized the Central America Flash Flood Guidance System (CAFFG).

CAFFG is a diagnostic tool to analyse weather-related events that can trigger flash floods such as heavy rainfall, and then produce a rapid evaluation of the potential for a flash flood at any given location.

Forecasters can also assimilate their experience with local conditions and incorporate other data and information into the System such as last minute local weather developments.

GFFG is based on satellite estimates of rainfall and sophisticated modelling, including high-definitions of basin topography and data on regional soil types. These are then rapidly assessed to determine potential flash flood guidance and threats. Threats are evaluated on hourly to six-hourly time scales for basins between 100 km² and 300 km².

WMO and HRC now plan to extend the CAFFG model to other areas, adapting it to regional conditions in close cooperation with local partners including NMHSs and disaster-risk management agencies.

The Strategy and Action Plan for the Enhancement of Cooperation between NMHSs for Improved Flood Forecasting emerged from the WMO's Flood Forecasting Initiative which has been assessing the state of hydrological forecasting services and applied knowledge in the field of flood forecasting with the overall aim of improving warning lead-times and adaptation measures.

See www.wmo.int/pages/prog/hwrf/index_en.html

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