



Establishing effective links between early warnings and early action: general criteria for floods

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The development and implementation of an effective Early Warnings to Early Actions system (EW-EAS) represent a complex system that integrates scientific insights with practical preventive measures on the ground. This complexity is enhanced by the involvement of diverse actors from various sectors and territorial levels, making the system vulnerable to potential breakdowns arising from factors such as unclear messages, unmet user needs, and implementation gaps.

Recognizing this complexity and the necessity of merging scientific knowledge with operational field expertise, a set of general criteria for establishing “effective links between EW and EA” as related to floods was formulated in the framework of the IPA Floods and Fires program for the Western Balkans and Türkiye. They resulted from a collaborative capacity development process conducted by experts from the CIMA Research Foundation and the Italian Civil Protection Department in collaboration with Disaster Risk Management Authorities and hydrometeorological services of the IPA countries.

Specifically designed for technicians and operators of the National Hydro-Meteorological and civil protection agencies, the general criteria serve as valuable resource of knowledge, experience and guidance for practitioners of national and local institutions which have the mandate to protect people, assets and the environment, by reducing the impacts of a flood and preventing the occurrence of emergency situations.

The General Criteria address several areas of the EWS with the ultimate purpose of enhancing a timely response to warnings before a flood occurs, in a progressive way and through early actions that are coordinated among all actors and integrated into plans and procedures. More specifically, the general criteria explore four key areas:

- Early Warning. As an example, providing clear, consistent, and informative early warning messages (stating who produces the warning, to whom it is addressed, what the expected hazard scenario is, where it is likely to occur, when it is expected, and why it is significant) permits a correct and informed activation of the system.
- Early Actions and the integration of an EW-EA link within emergency response plans. For instance, defining activation phases of the civil protection system linked to specific alerts

enables a systematic and incremental mobilization of resources as flood severity escalates. This key area also offers guidance for constructing a set of early actions, ensuring early actions align with forecasted alert levels and risk information codified within the early warning system.

- Communication flows for the dissemination of EWs and exchange of information among operational centres and institutions before, during and after the emergency and consequently an effective response. Central to this is the coordination and collaboration across actors in EW-EA, optimizing scarce resources for effective delivery.
- Simulation exercises. Testing through simulation exercises enables continuous improvements and corrections of gaps to further refine the system.

The general criteria offer a framework for practitioners and institutions for improving the link from EW to EA, transforming risk information into actions on the field that can reduce the impacts of floods to communities.