

Regional Workshop on
Community preparedness and public participation
for Flash Flood Management in Europe
29-30 October, 2007, Krakow, Poland

RECOMMENDATIONS

Taking note of the high losses of human life from flash floods across Europe, the likeliness of climate change to result in an increase in intense short-duration precipitation in most of Europe and human alterations of the landscape to further increase flash flood risk,

Being aware of the experiences gained during pilot projects undertaken in the Central and Eastern European region with the aim of reducing the vulnerability of flash flood prone areas within the Framework of the Associated Programme on Flood Management (APFM),

The participants of the workshop “Community Preparedness and Public Participation in Flash Flood Management in Europe” are presenting the following conclusions and recommendations to decision makers in the national administrations, researchers and operational managers in the National Meteorological and Hydrological Services, mayors and local decision makers in order to reduce the devastating impacts of flash floods:

1. Flash floods due to their special characteristics, causes of occurrence, and need for improved understanding require a multi-disciplinary and multi-sectoral approach in managing and mitigating their adverse impacts.
2. Due to their local characteristics and sudden nature of occurrence, flash floods are best managed by the local authorities with active and effective involvement of the people at risk. However, there is need for a National strategy to deal with the flash floods within the overall Integrated Flood Management policies duly recognising the subsidiarity principle.
3. Flash floods should be especially and specifically addressed while implementing the national or regional (e.g., EU Flood Directive) flood management policies, IWRM and basin flood management plans or disaster/ crisis management plans.
4. The National Strategy to manage flash floods should be focussed on providing the necessary technical, financial and legal framework for the competent authorities to play their legitimate role. The extent of responsibilities that have to be shared by the National agencies with the local authorities would follow the proportionality principle and depend on the physical and economic capacities of the local authorities. Some of these areas are listed below:
 - i. The meteorological backup for providing global/regional meteorological data and required flash flood guidance products, watch and monitoring of flash floods, particularly based on Numerical Weather Prediction (NWP) and nowcasting procedures;
 - ii. Support the establishment and maintenance of local flash flood monitoring, warning and alert systems;

- iii. Preparation of national flash flood inventories, based on historical information and post flood analysis, as required, as part of wider inventories on severe hydro-meteorological events;
 - iv. Identifying areas prone to significant risk of flash floods requiring the local authorities to conduct flood hazard assessment through hydrological and other technical backup provided by relevant technical agencies;
 - v. Building national enabling environment for public participation in flash flood management with particular reference to educational and public awareness plans for flash flood risks;
 - vi. Help and support the preparation of crisis preparedness and response plans on the local level (especially the municipal and district levels) including training of crisis management personnel;
5. There is a need to build an appropriate national time table for actions and provide necessary financial support, wherever applicable;
 6. The flash flood hazard assessment shall be carried out for all possible sources of flash floods (cloudbursts, lake outbursts, etc) within the overall flood risk assessment of the river basin, duly involving the multi-hazard approach, including those for landslides, mudflows and debris flows, avalanches etc., wherever appropriate.
 7. Appropriate legal provisions should be made to clearly define the roles and responsibilities of various institutions at different administrative levels (national, river basin, state, district or local) involved in flash flood management including the mechanism for flow of data, information, forecasts and warnings.
 8. Local authorities should be enabled through legal and technical means to undertake spatial planning that duly considers the flash floods hazards.
 9. Financial mechanisms to undertake mitigation measures against flash floods should be clearly defined. Appropriate instruments need to be established at various levels within the existing financial framework (insurance, calamity funds at various levels of the governmental hierarchy, etc.).
 10. There is need for a platform for sharing data and information among the National Meteorological and Hydrological Services (NMHSs), Local Authorities, civil protection authorities and educational and public awareness institutions on flash floods. There should be a mechanism to share the experiences in flash flood management within the countries and an ongoing international exchange on the topic.
 11. There is need for greater emphasis on research in atmospheric processes leading to flash floods, and in building capacities to monitor and provide better warnings on flash floods.
 12. There is a need for in depth studies in the causes of flash floods, especially with a view to the role of climatic changes and human alterations of the catchment.
 13. Safety regulations for hydro-technical works should include provisions to minimize the risk of generating flash floods through operational, maintenance and design aspects.
 14. There is need for developing risk-sharing mechanisms among various levels of government and individuals to strengthen the resilience of flood affected communities.

15. Policy makers should be aware that a reduction in the density of in-situ hydro-meteorological monitoring networks would also reduce the capacity to adequately monitor and forecast short-duration localized hydro-meteorological events such as flash floods.