

Main challenges for the Hydro-Meteorological Services in adequate information provision

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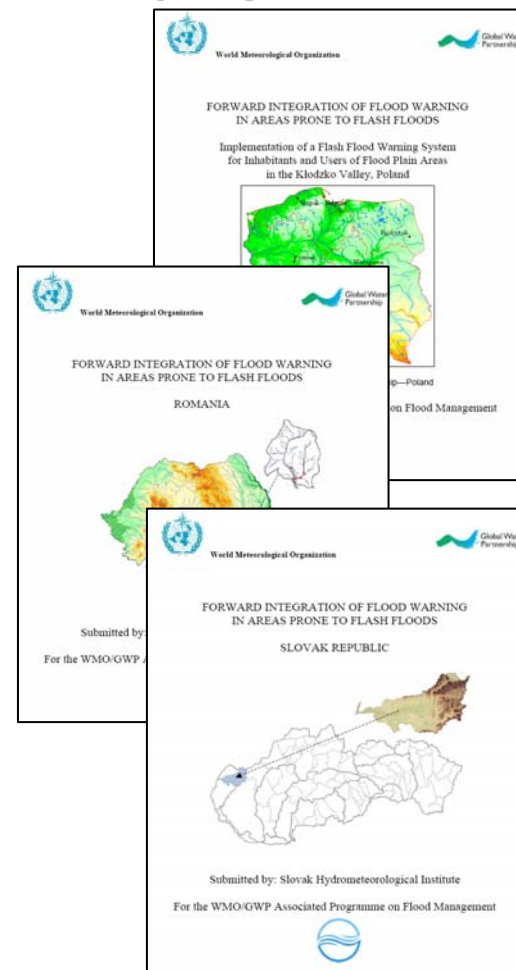
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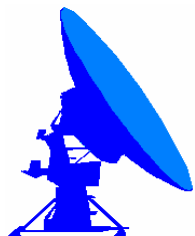
Background

- Experiences of countries involved in the APFM project (*especially II phase*)
- Questionnaire for workshop participants (*responses of the NMHS*)
- Event nature (*local, fast, deadly*)



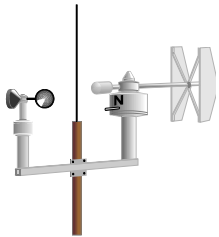
Monitoring

Questionnaire results

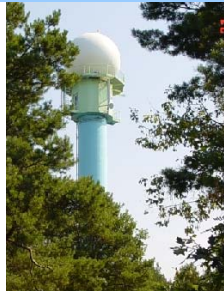


Country	Automatization of the national measurement network	Local measurement networks
Bulgaria	-	-
Czech Republic	yes	yes
Moldova	<i>partially?</i>	-
Poland	yes	yes
Romania	yes	-
Slovakia	yes	<i>initial stage</i>
Slovenia	?	-
Ukraine	-	-

Monitoring - challenges



Real time access to the information about weather and hydrological situation



- National ground measurement and teledetection data collection network automatization (*technical/financial problems*)
- Support for local crisis services
 - Access to the NMHS data (*technical, organizational/legal aspects*)
 - Local monitoring networks (*consulting, support, standardization aspects*)

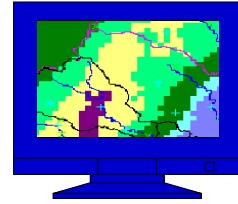
Close collaboration with local administration / crisis managers

Flash flood forecasting and warning

Questionnaire results

Country	Flash flood forecasting and warning	Level of Administration directly warned by NMHS
Bulgaria	-	?
Czech Republic	-	provincial
Moldova	-	national
Poland	<i>under development</i>	provincial <i>local for pilot area</i>
Romania	<i>under development</i>	provincial <i>local for pilot area</i>
Slovakia	<i>under development</i>	provincial <i>local for pilot area</i>
Slovenia	-	national
Ukraine	-	provincial

Flash flood forecasting and warning - challenges



- Forecasting/nowcasting tools e.g. FFG
(*introduction to daily routines activity, uncertainty assessment, products individualization?*)
- Forecasts/warnings dissemination (*fast reliable delivery*)
- Forecasts/warnings perception (*uncertainty communication*)

Local character of forecasts/warnings
Substantially increased number of recipients

Information, education and training

- Training courses for local crisis managers and decision makers
 - general knowledge about flash floods and NMHS offer (*flash flood events nature, forecaster's kitchen, uncertainty*)
 - local flood warning systems (*needs assessment, principle of building...*)
- Information and education of the public
 - Direct actions/activities (*web pages, events, leaflets...*)
 - Materials supporting schools, local administration etc.

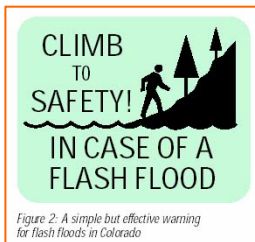
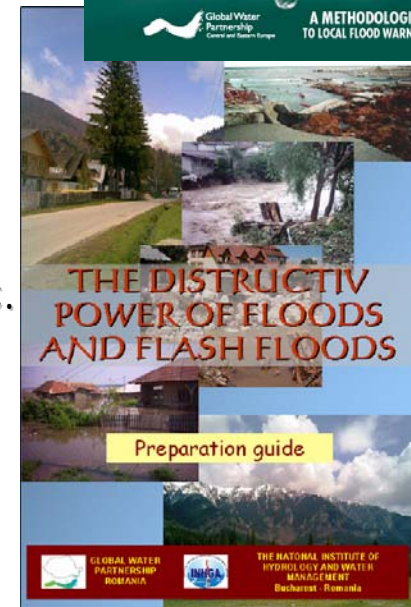
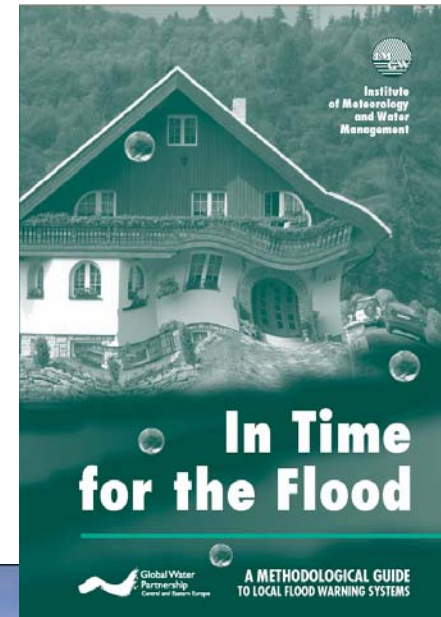


Figure 2: A simple but effective warning for flash floods in Colorado



Main challenges for NMHS - summary

- Flash flood forecasting and warning introduction to daily routines activity
- Close collaboration with local administration / crisis managers – support for local flood warning systems (training, consulting, market creation, standardization)
- Public awareness raising (informational and educational activity)
- *Activity related to the planning of the flash flood management (identification and classification of hazard areas – flood directive)*
- *Commercialization aspects*