

# Lessons learnt and proposals for the Danube Region Operative Flood Management and Cooperation Programme

DR Oper&Cooper



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# Tentative proposals for actions (visions)

- Improved exchange of data & methods
- Data exchange for flood forecasting
- Coordination of the operation of hydraulic structures
- Coordination of operative flood protection plans
- Interoperability and preparedness of operative flood protection methods and equipment
- Catalogue of equipment and operative flood protection units that can be deployed throughout the DRB

# Measure n°1: Improvement of flood forecasting

- **Implementation step I:**
  - Inventory on the available data,
  - information and exchange mechanism,
  - designation of data needs by the national flood forecasting institutions and transnational instruments.
- Possible solutions is to create and operate national, bilateral, multilateral data exchange platforms for the national forecasting services of the Danube Region to provide them with the necessary data/information to improve their flood forecasting capabilities, taking into account the existing mechanisms and systems.



# Measure n°1: Improvement of flood forecasting

- **Implementation step II: Launch a research programme to improve the flood forecasting models by**
  - *Comparing the efficiency, accuracy, lead time etc. of the existing national, regional and Danube basin wide models*
  - *Exchanging information on the national and trans-national Danube Basin forecasting models for better understanding of their outputs*
  - *Further developing the national models or developing international models (like the Dráva-Mura forecasting model or the European Flood Awareness System)*
  - *sharing models and/or methods*

# Measure n°2: Information exchange on the operation of hydraulic structures

- **Implementation steps:**
  - *Identify relevant structures (preferably through Measure Nr.1),*
  - *Make the real-time operational parameters available to forecasters (preferably through Measure Nr.1),*
  - *Make the operational rules (operational manuals) of the flow control structures available for flood forecasters and flood managers,*
  - *Establish procedures and ICT infrastructure to warn flood forecasters when the pre-emptying or filling up of the reservoirs start (e.g. changes in discharge),*
  - *Develop cooperation among the operators and flood managers to ensure that flood protection has got priority in the operation of flow control structures in peak periods (e.g. flood managers shall have the possibility to ask the operators to change the operational state if flood situation requires it),*
  - *Prepare a unilateral framework agreement based on previous steps for the Danube Basin.*

# Measure n°3: Coordination of operative flood management plans

- ***Implementation steps:***

- *Coordinate the operative flood management and*
- *civil protection plans (evacuation plans and procedures, safeguarding people, goods, emergency rescue plans, etc.)*

*considering the benefits of the civil protection mechanisms for the shared flood basins or stretches of common interest to better use the available resources.*

# Measure n°4: Development of elements of flood risk management plans for trans-boundary sub-units of common interest

- *Implementation steps:*
  - *Provide sub-units that need further support to meet the EUFD deadline on FRMP with resources and pilot projects developed under this Measure.*
  - *Support the monitoring of the implementation and the review of the plan with planning the next FRMP for the sub-basin*

# Measure n°5: Exchange of flood protection techniques, technologies and experiences

- **Implementation steps:**
  - *collect and exchange information of the new equipment both from design and operational point of view.*
  - *This can be done through a networking project by organising workshops and or seminars.*

# Measure n°6: Develop an education/training network

- Implementation steps:
  - *Develop an education/training network of universities/training centres to “train trainers” and*
  - *develop curricula for training of flood managers*

# Measure n°7: Enhance coordination of operative flood protection methods and equipment

- This activity is to be covered by the **Roadmap of Action 4** of the EUSDR PA5.

Thank you for your attention!

