Risk issue in the Hungarian National Water Strategy and the DriDanube DTP project

Sandor Szalai
Szent Istvan University
Szalai.sandor@mkk.szie.hu
Content

• Flood risk management
  • at The International Commission for the Protection of the Danube River (ICPDR)
  • In Hungary

• DriDanube - Drought Risk in the Danube Region – a DTP project

• Questionnaire on risk estimation methods
Flood Directive

• In 2010, the ICPDR agreed to develop an international Danube Flood Risk Management Plan (DFRMP) – synergised with the EU Water Framework Directive and the Danube River Basin Management Plan (DRBMP).
• 178/2010 regulation of the Hungarian Government
ICPDR flood hazard

• The ICPDR agreed that two scenarios are relevant for the flood hazard map at the level of the international river basin district – flood hazard areas with medium and with low probabilities. The medium probability floods are almost unanimously based on a 100-year recurrence period while the recurrence period of floods with low probability varies mostly from 300 to 1000 years. Overall, the low probability hazard area covers 51,146 km² in the basin.
ICPDR flood risk

• At the end of 2014 the DFRMP became available for public consultation on the ICPDR website and adopted in December 2015.

• The DFRMP includes a number of flood risk maps, showing the population numbers affected by floods, the share of inundated areas by class of economic activity and the potential that the EU Integrated Pollution Prevention and Control Directive and Seveso installations (containing polluting substances) or the protected areas in the basin will be affected by floods.
Danube watershed
Hungary

• First version of Hungarian risk maps 2013
• July-August 2015: 12 regional meeting with stakeholders and 2 with the wide public
• 25 March 2016: Hungarian Government accepted the Flood Risk Management Plan
The status of the Hungarian flood situations

**Area protected from flood**

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<th>Country</th>
<th>Tisza valley</th>
<th>Netherland</th>
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**Length of dams**

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• Flood risk management plans (FRMP) are part of the integrated river basin management plans, therefore they have to interact with them and have to pay attention on the requirements of effective water resources management.

• The FRMPs have to have close connection to other policies, like nature and environment protection, rural development and disaster protection.

• All data and information used during the project development are collected in the Flood Risk Management Information system. Further application of this system supports other flood connected applications as well.
General and Specific Project Objectives of Dridanube project

• Project aims to increase the capacity of the Danube region to adapt to climatic variability, to manage drought related risks by enhancing resilience to drought with recently developed tools and data sets (the objective has been identified as answer to issues related to deficiencies both in drought monitoring process and drought management systems);
• New drought monitoring services will be developed and prepared for operational use;
• Unified drought risk protocol based on the Civil Protection Mechanism will be prepared;
• Improved drought emergency response in the Danube region (DriDanube aims to change mainly ad-hoc drought response to pro-active response based on risk management procedures).
Target Groups

Project will target primarily partners and stakeholders from Danube Basin.

- National Hydrometeorological Services
- Emergency response authorities
- Non-governmental organizations
- Water and Farmer communities/chambers
- Industries
Work Packages and Activity Presentation

WP1: Project management
WP2: Communication activities
WP3: Drought user service
WP4: Drought impacts assessment
WP5: Drought risk assessment
WP6: Drought response

Presented at the end of the document
WP4: Drought impacts assessment Activities and Outputs

WP Leader: CzechGlobe

Activity 4.1: Preparation of common methodology for near real-time drought impact assessment

Activity leader: CzechGlobe
End date (Act.): Jan. 2017 – Apr. 2018

Tasks:
- review of existing operational drought impact assessment procedures in participating countries
- steps to improve existing systems will be proposed
- algorithm for drought impact assessment will be developed and included into Drought User Service
- National reporting networks will be established

Deliverable:
D 4.1.1 Algorithm for detection of near real-time drought impact assessment

D 4.1.2 Manual for drought impacts assessment (first version)

D 4.1.3 National reporting networks (10) (Dec. 2017)
Activity 4.2: *Preparation of common methodology for near real-time drought impact forecast*

Activity leader: CzechGlobe
End date (Act.): Mar. 2017 – Dec. 2018

Deliverable:
- D 4.2.1 Database of impact assessment containing historical records and building on existing information (projects DMCSEE and Dought-R&SPI) (Jun. 2018)
- D 4.2.2. Algorithm for forecasting drought impacts (included in Drought User Service) (Jun. 2018)
- D 4.2.3 Manual for drought impacts forecasting (Dec. 2018)

Project Output Act. 4.1 – 4.2:

Output 4.1: TOOL: Methodology for drought impact assessment *(December 2018)*
Activity 4.3: Preparation of common methodology for near real-time drought impact forecast

Activity leader: CzechGlobe
End date (Act.): Jan. 2018 – Dec. 2018

Tasks:
- Regional training (Apr. 2018, with 3. project meeting)

Deliverable:

Project Output Act. 4.3:

Output 4.2: LEARNING INTERACTION: Training on use of Drought User Service – impacts (regional & national trainings) (June 2018)
WP5: Drought risk assessment Activities and Outputs

WP Leader: OMSZ
End date (WP): January 2017 – December 2018

Activity 5.1: State-of–the-art analysis
Activity leader: SZIU
End date (Act.): Jan. 2017 – Jun. 20197

Tasks:
➢ Survey and evaluation of the existing methods

Deliverable:
• D 5.1.1 Questionnaire for preparation of the Review (Feb. 2017)
• D 5.1.2 Country review of drought risk assessment (10) (Jun. 2017)
• D 5.1.3 Regional review of drought risk assessment (Jun. 2017)
Activity 5.2: **Preparation of common methodology for drought risk assessment**

Activity leader: OMSZ
End date (Act.): Jan. 2017 – Sept. 2018

**Deliverables:**
- D 5.2.1 Algorithm of drought risk assessment (first version **Aug. 2017**, final **Jun. 2018**)
- D 5.2.2 Software of drought risk calculation (**Sept. 2018**)
- D 5.2.3 Manual for risk assessment (**Sept. 2018**)

>> WP5: Drought risk assessment Activities and Outputs
>> WP5: Drought risk assessment Activities and Outputs

**Activity 5.3: Mapping of risk**
Activity leader: FAUNS
End date (Act.): Jan. 2017 – Sept. 2018

Tasks:
- mapping of the results obtained from the risk analysis in Activity 5.2
- preparation of the methodology and instructions for mapping drought risk in the region
- preparation of the regional atlas of drought risk
- integration of the atlas into Drought User Service

Deliverable:
- D 5.3.2 Georeferenced digital maps compiled in common regional atlas (Sept. 2018)

Project Output Act. 5.2 – 5.3:

Output 5.1: TOOL: Methodology for drought risk assessment (June 2018)
>>WP5: Drought risk assessment Activities and Outputs

Activity 5.4: Regional capacity building
Activity leader: OMSZ
End date (Act.): Jan. 2018 – Dec. 2018

Tasks:
- Regional training (Apr. 2018, with 3. project meeting)

Deliverable:

Project Output Act. 5.4:
Output 5.2: LEARNING INTERACTION: Training on use of Drought User Service – risk (regional & national trainings) (December 2018)
WP6: Drought response Activities and Outputs

WP Leader: ARSO
End date (WP): January 2017 – June 2019

Activity 6.1: Review of current status of drought management

Activity leader: ARSO

Deliverable:

- D 6.1.1 Country reports on existing drought management status (10) (Aug. 2017)
- D 6.1.2 Common report on existing drought management status (as integral part of the Strategy) (Oct. 2017)
> WP6: Drought response Activities and Outputs

Activity 6.2: Pilot actions

Activity leader: NMA
End date (Act.): Jan. 2018 – Mar. 2019
Tasks:
- 1. PILOT ACTION - testing Drought User Service (Romania, Croatia, Czech Republic and Montenegro)
- 2. PILOT ACTION - testing of the decision-making model (Hungary, Serbia)
Deliverable:
- D 6.2.1 Pilot action report – implementation of the new developed tool (4) (Mar. 2019)
- D 6.2.2 Proposal for implementation of optimal drought management model (2) (Apr. 2018)
- D 6.2.3 Pilot action report – implementation of the management model (2) (Dec. 2018)

Project Output Act. 6.2:

Output 6.1: PILOT ACTION: Pilot implementation of Drought User Service (June 2019)
Activity 6.4: **Strategy to improve drought emergency response**

Activity leader: ARSO

Deliverable:
- D 6.4.1 Template document for institution mapping, techniques for identification of gaps in the drought management process and instructions on how to prepare proposal for optimal drought management plan *(Sept. 2017)*
- D 6.4.2 Weaknesses and gaps in existing management prepared by partners (10 reports) *(Jun. 2018)*

Project Output (Act. 6.4):
**Output 6.3:** STRATEGY: Strategy to improve drought emergency response *(June 2019)*
Questionnaire

• WP5: https://www.surveymonkey.com/r/26B6VPN
Thank you for your attention!