



Integrated Drought



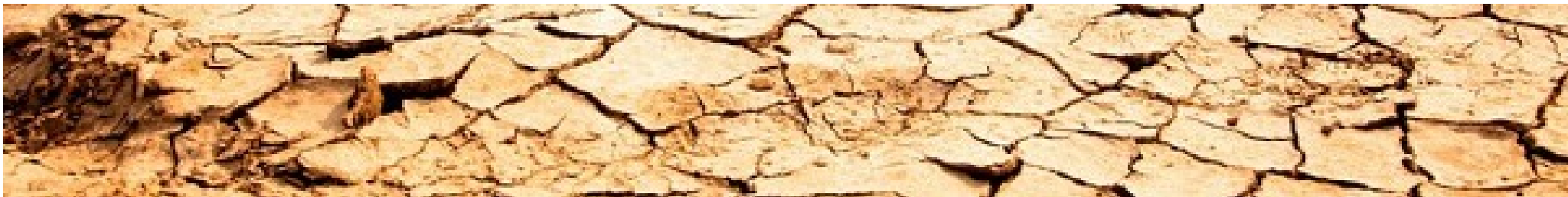
Management Programme

Drought Management measures in Central and Eastern Europe

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*3rd meeting of the global network of basins working on climate
change adaptation
Geneva, 6-7 April 2016*

- GWP/WMO Integrated drought management Programme (IDMP) IN Central and Eastern Europe (IDMP CEE)
- Drought guidelines
- Natural Small Water Retention Measures
- Transboundary cooperation in drought management – Moldova & Ukraine



Integrated Drought Management Programme



World
Meteorological
Organization
Weather • Climate • Water



Global Water
Partnership

Increase the capacity of the CEE region to adapt to climatic variability by enhancing resilience to drought.

- ✓ variability and change in precipitation
- ✓ increased frequency of extreme weather events in the future
- ✓ well developed meteorological and hydrological monitoring but not as a support for decision makers
- ✓ limited sharing of information among countries
- ✓ lack of political will to solve the problem – drought was not considered a relevant issue



Cooperation with national governments

Main challenges:

Lack of political will to solve the problem
– drought was not considered as a relevant issue.



Solutions:

cooperation with national governments to help them to incorporate drought management issues into their national programs, policies and plans

Gaps in the implementation of the EU Water Framework Directive (WFD).

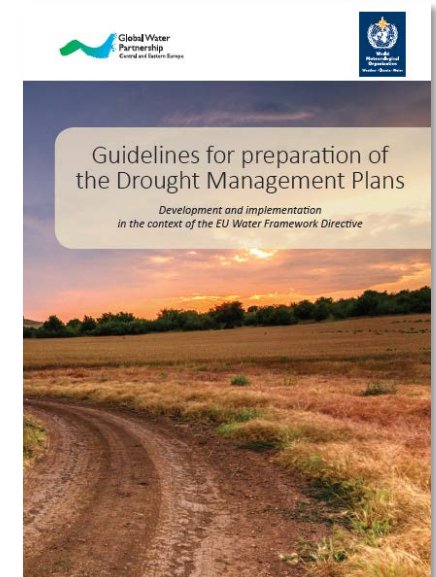


Preparation of the guidance document



National Consultation Dialogues –
acceptance at the policy level

Guidelines for preparation of the Drought Management Plans within RBMP



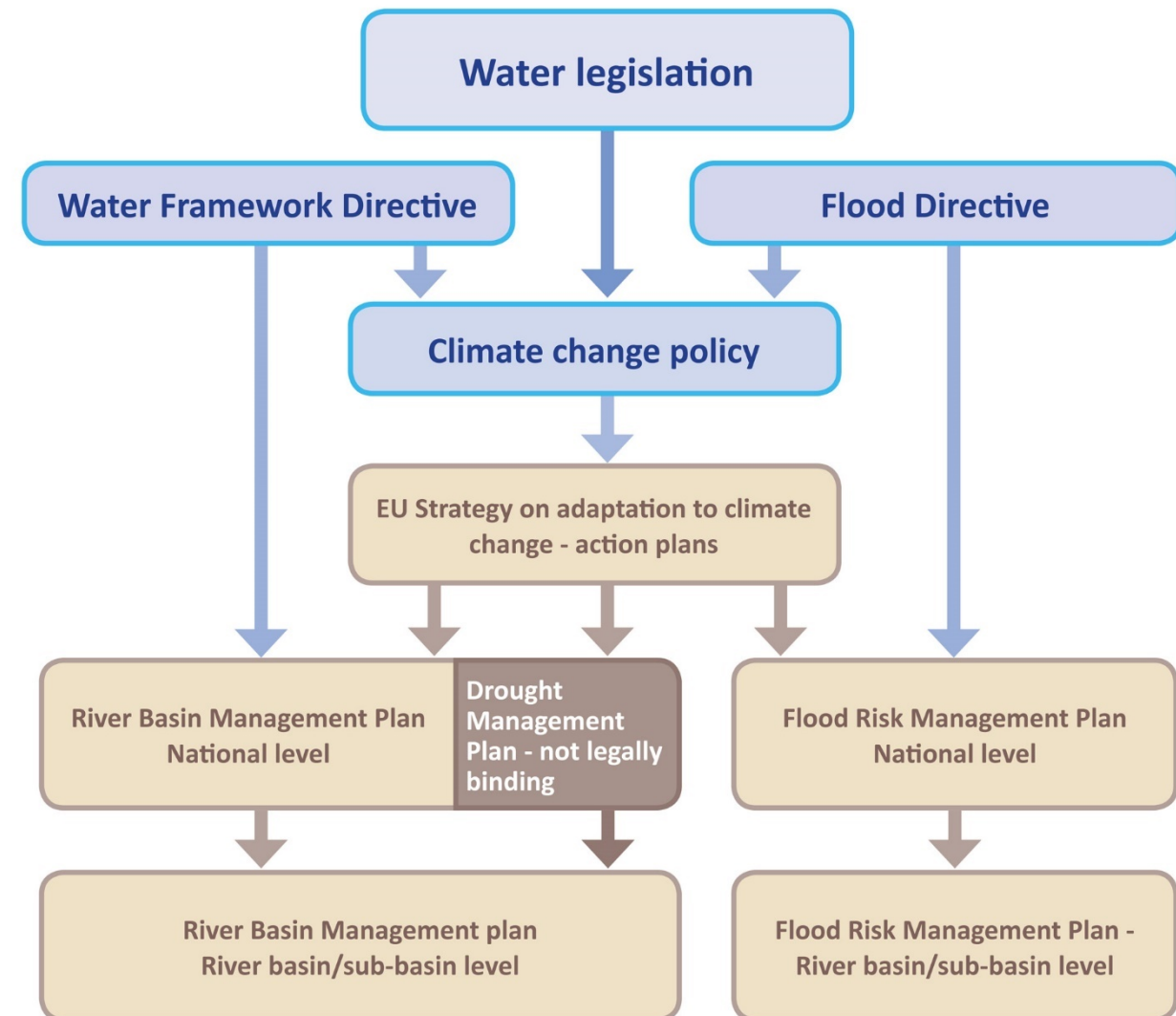
Process of preparation of the Guidelines

Existing documents,
guidelines, ...

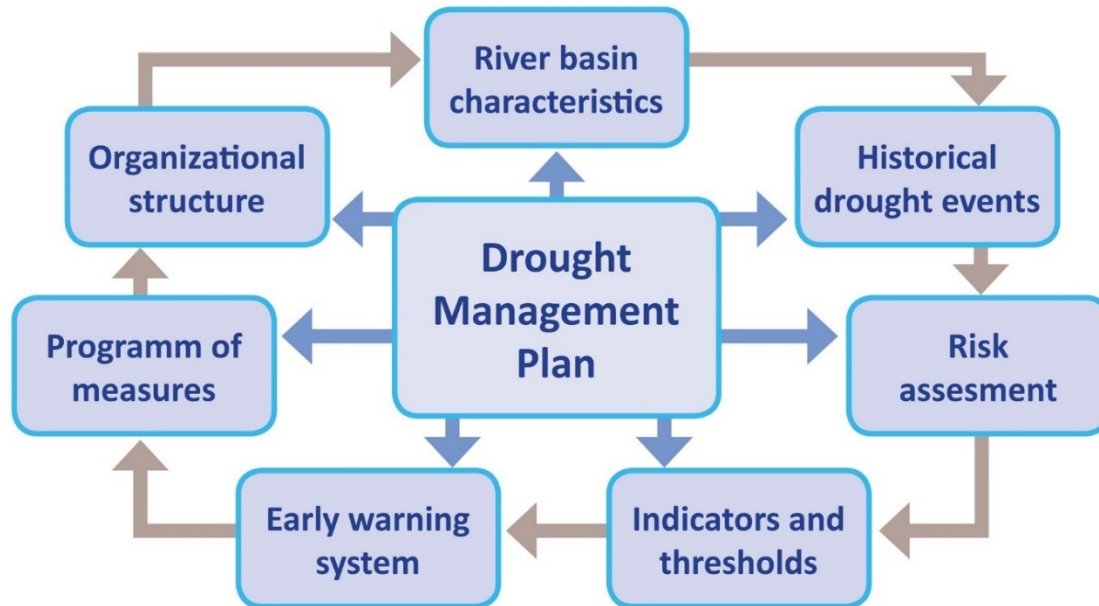
Policy Framework

Common Strategy for Implementation of WFD (CIS)

- Drought Management Plan Report Including Agricultural, Drought Indicators and Climate Change (Report 2007)
- Communication from the Commission - Addressing the challenge of water scarcity and droughts in the EU (July 2007)
- Blueprint (November 2012)



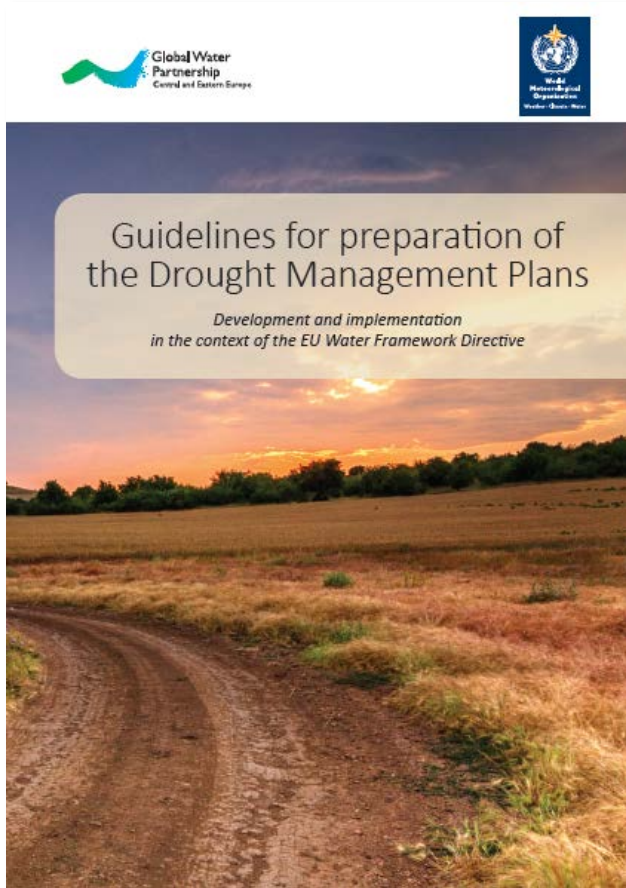
Parts of the Drought Management Plan



National Consultation Dialogues

- **1st round – setting the stage**
review of the current status
- **2nd round – how to overcome gaps** in the current drought management; developing Guidelines; national experiences and examples
- **3rd round – action plan/update** for preparation of the Drought Management Plan

Step-by-step guidance towards Drought Management Plan



From crisis management to drought risk reduction

Step 1 Develop a drought policy and establish a Drought management Committee

Step 2 Define the objectives of a drought risk-based management policy

Step 3 Inventory of data needed for Drought Management Plan development

Step 4 Produce/update the Drought Management Plan

Step 5 Publicize the DMP to the public for comments and active involvement

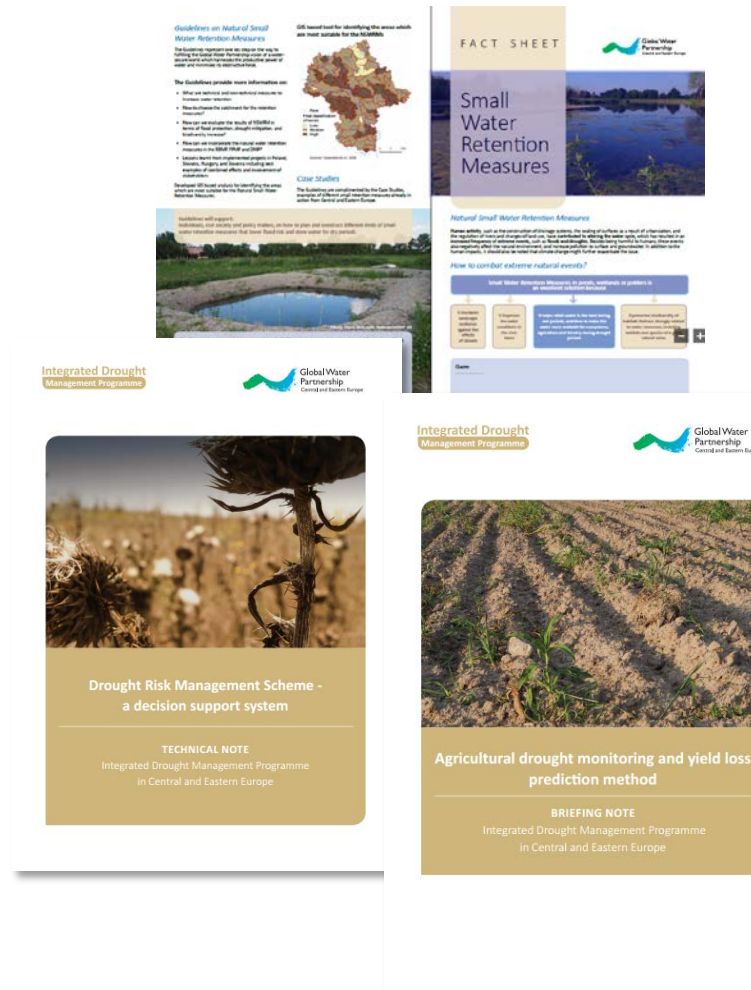
Step 6 Develop a research and science programme

Step 7 Develop an educational programme

Testing and describing new approaches towards proactive drought management

focusing on agricultural sector as one of the most vulnerable ones in the region

- **Natural Small Water Retention Measures**
- Increasing soil water holding capacity
- Drought impact on forest ecosystems
- Remote sensing agricultural drought monitoring methods
- **Updating agricultural drought monitoring and forecasting in Ukraine & Moldova**



Guidelines on Natural Small Water Retention Measures

FACT SHEET
Small Water Retention Measures

Integrated Drought Management Programme

Drought Risk Management Scheme - a decision support system

TECHNICAL NOTE
Integrated Drought Management Programme
in Central and Eastern Europe

Integrated Drought Management Programme

Agricultural drought monitoring and yield loss prediction method

BRIEFING NOTE
Integrated Drought Management Programme
in Central and Eastern Europe



Natural Small Water Retention Measures

adaptive measure which serves to adjust to extreme
climate variability

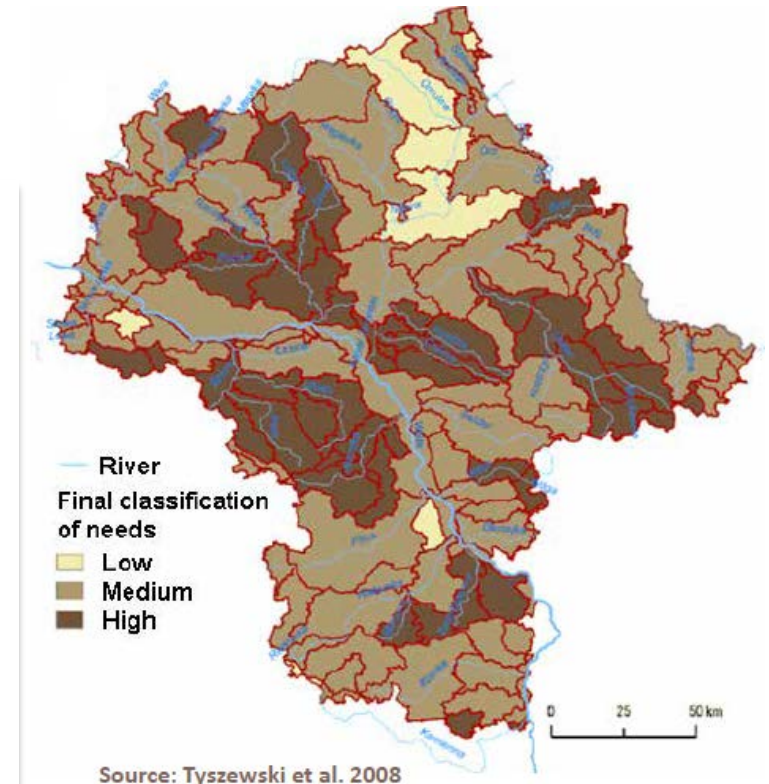
it helps retain water in the land during wet periods **and
make this water more available for ecosystems,
agriculture and forestry during drought periods**
&

slows down flood waves during flood periods

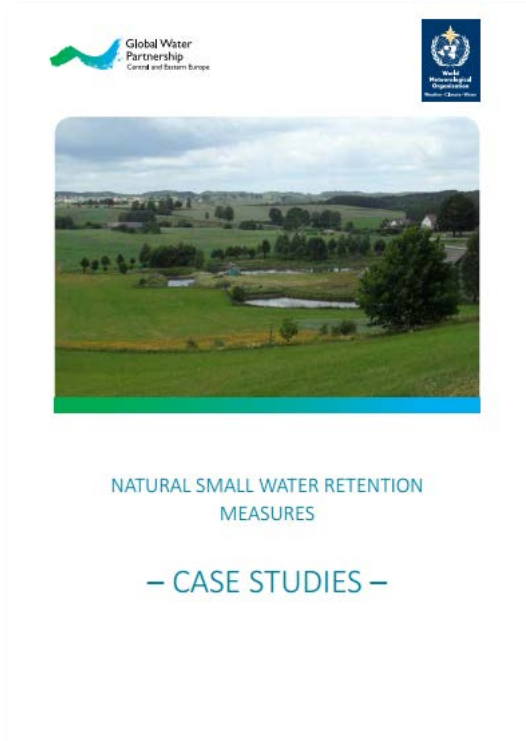
- improve the water conditions in the river basin
- increase landscape resilience against the effects of climate
- preserve biodiversity of habitats that are strongly related to water resources, including habitats and species of a great natural value



- What are **technical and non-technical** measures to increase water retention?
- How to **choose the catchment** for the retention measures?
- How can we **evaluate the results** of NSWRM in terms of flood protection, drought mitigation, and biodiversity increase?
- How can we **incorporate** the natural water retention measures in the RBMP, FPMP and DMP?



GIS based tool for identifying the areas which are most suitable for the NSWORMs



CASE STUDIES

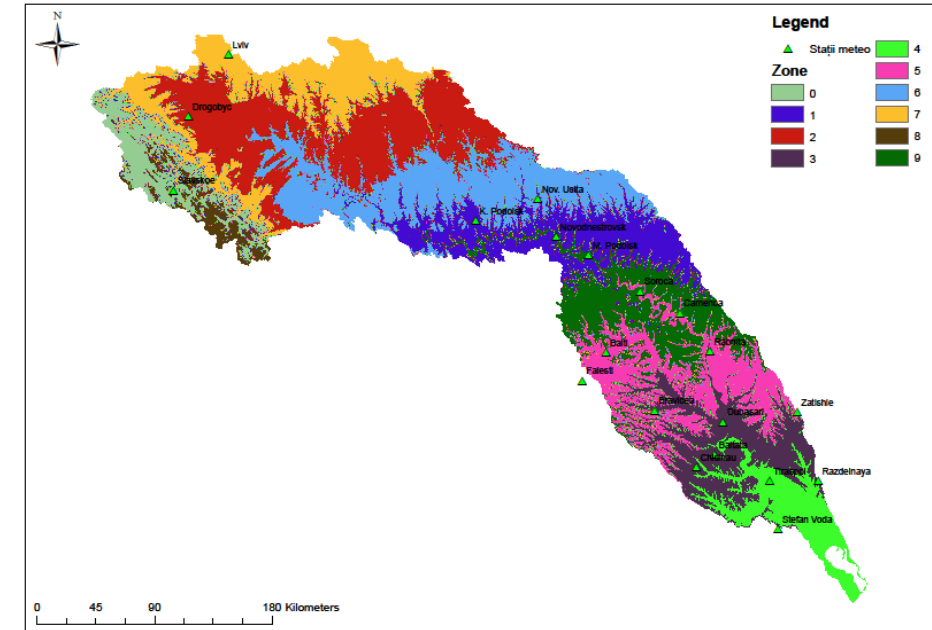
Lessons learnt from implemented projects in Poland, Slovakia, Hungary, and Slovenia including best examples of combined effects and involvement of stakeholders



Agricultural drought monitoring and forecasting in Ukraine and Moldova

Upgrade data assessment and forecasting tools to support drought management and monitoring

- Upgraded climate-zoning of Ukraine territory and Dniester River Basin territory
- Drought risk maps for agro sector of Ukraine and Dniester river basin



Agroclimatic zoning for May- September (1961-2013) according to Selyaninov's hydrothermal coefficients

Agricultural drought monitoring and forecasting in Ukraine and Moldova

- Working with rural authorities, farmers, local stakeholders
- Upgrading of forecasting models for identification of crop yield losses caused by droughts
- Guide on best practices on soil conservation



Transboundary cooperation



Natural Small Water Retention Measures
(3rd phase of the RBMP)

Danube River Basin

Drought Risk in the Danube Region
Follow up project



Thank you for your attention

www.gwp.org/GWP-CEE/IDMPCEE

www.gwp.org/GWP-CEE

<http://www.droughtmanagement.info/>

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