



Integrated Drought Management Programme in Central and Eastern Europe

*Sabina Bokal, GWP CEE
IDMP ACMC meeting; 24 August 2019*

- Improve drought monitoring / early warning system
- Unification of drought risk and impact assessments
- **Built capacities** to monitor, forecast, evaluate and respond, use/communicate
- Integrate **drought resilience** into decision-making processes

DriDanube - Drought Risk in the Danube Region

22 partners from 10 Danube countries

January 2017 – September 2019

More information on: www.interreg-danube.eu/dridanube



FramWat - Framework for improving water balance and nutrient mitigation by applying small water retention measures

11 partners from 6 CEE countries

July 2017 – July 2020

More information on: www.interreg-central.eu/FramWat



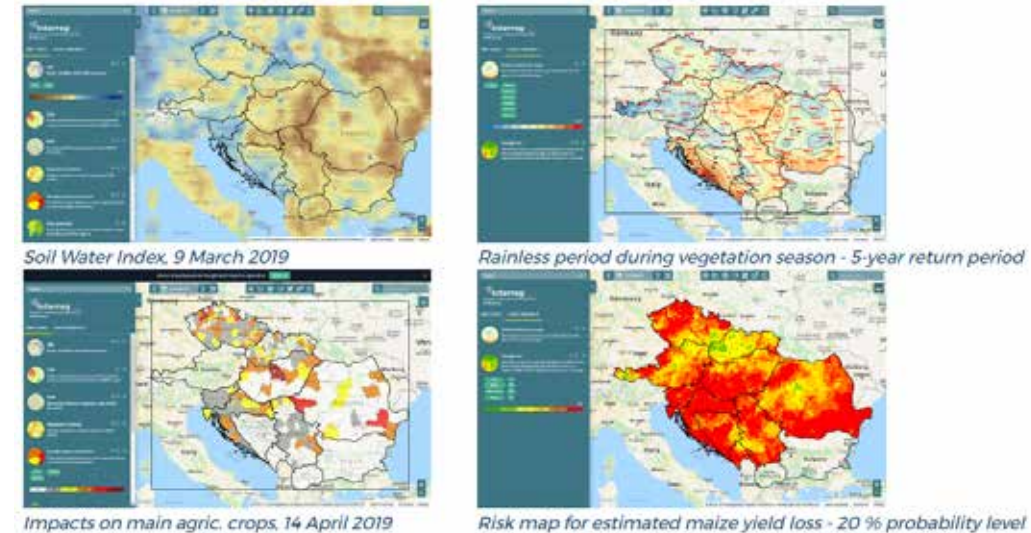
www.droughtwatch.eu

- Online tool for more accurate and efficient drought monitoring and early warning for the Danube region
- A set of Earth Observation data, processed into ready-to-use drought information available to general public online



[Drought Watch – What is?](#)

[Online tutorial](#)

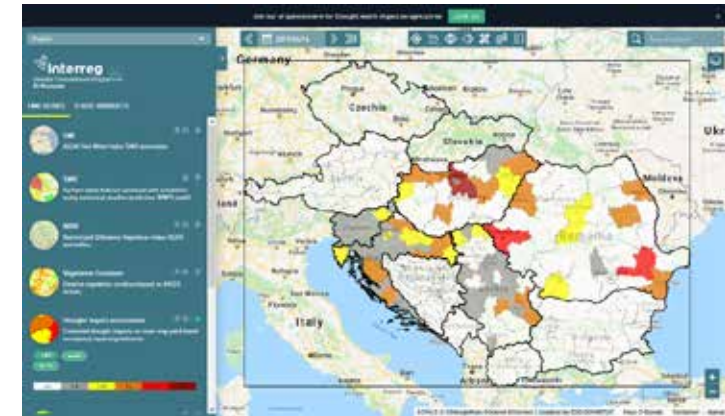


PLANS:

- Further development (integration of national monitoring; include other countries,)
- Sustainability (DriDanube project finish in September 2019; DMCSEE)

National Reporting Networks for agriculture sector

- more than 1000 reporters (farmers, agriculture and forestry experts) across 10 Danube countries reporting impacts on weekly basis
- drought impact maps are a weekly operational product in Drought Watch



Future focus: How to enlarge the network and make it sustainable?

Drought risk maps

- a unified drought risk assessment comparable among countries of the Danube region
- integrated into Drought Watch

Historical drought impacts collection (1981 – 2016) in Danube Region

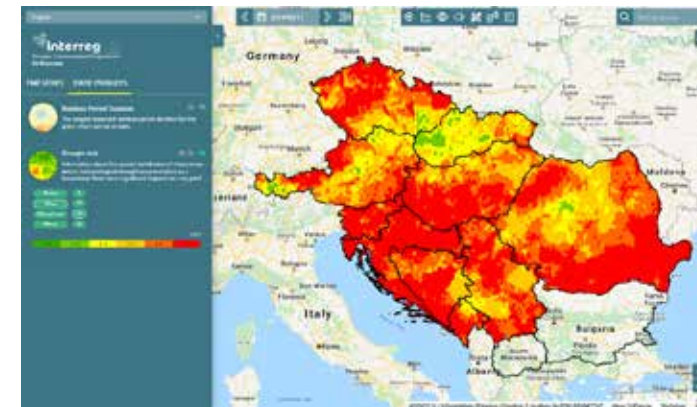
- repository of drought event impacts ([article](#)) across the Danube catchment countries between 1981 and 2016



European Drought
Impact Inventory



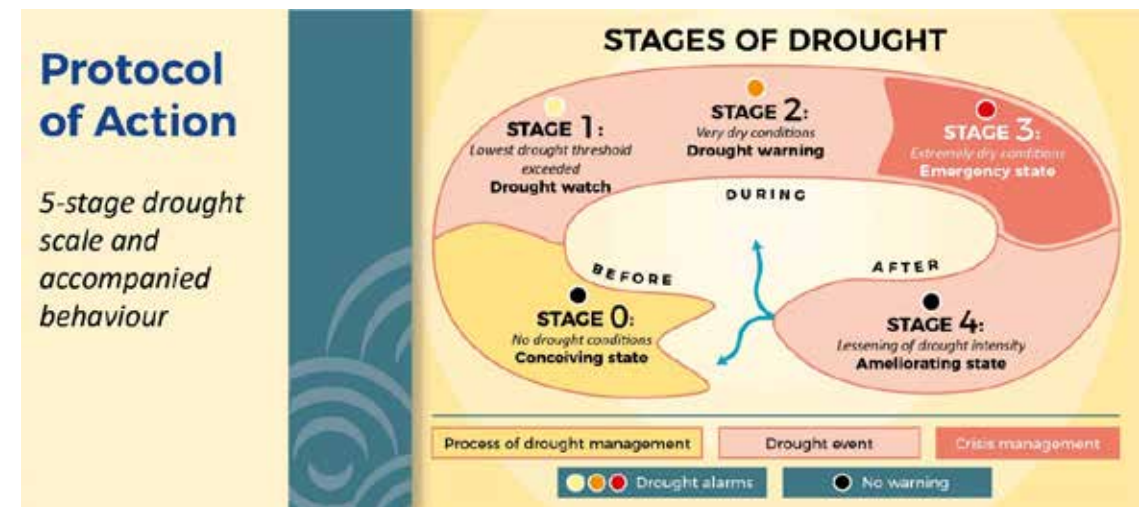
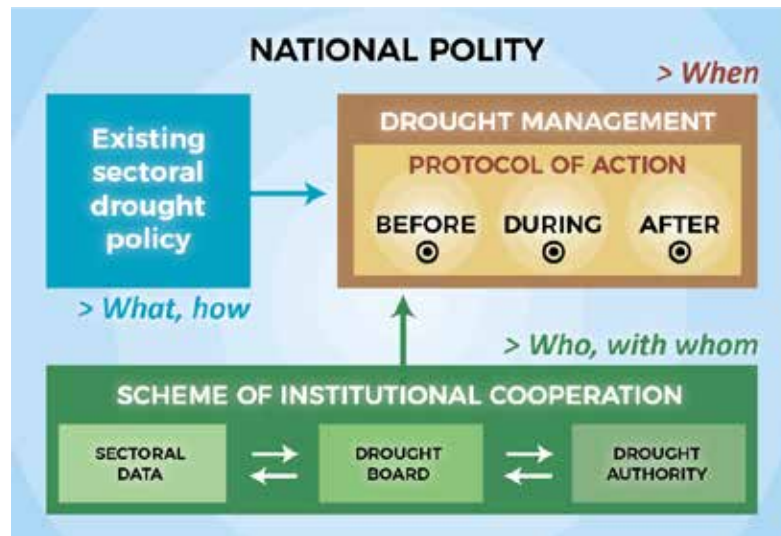
Drought Risk - climatology
Expected length of longest rainless period during vegetation season having a 5 year return period.



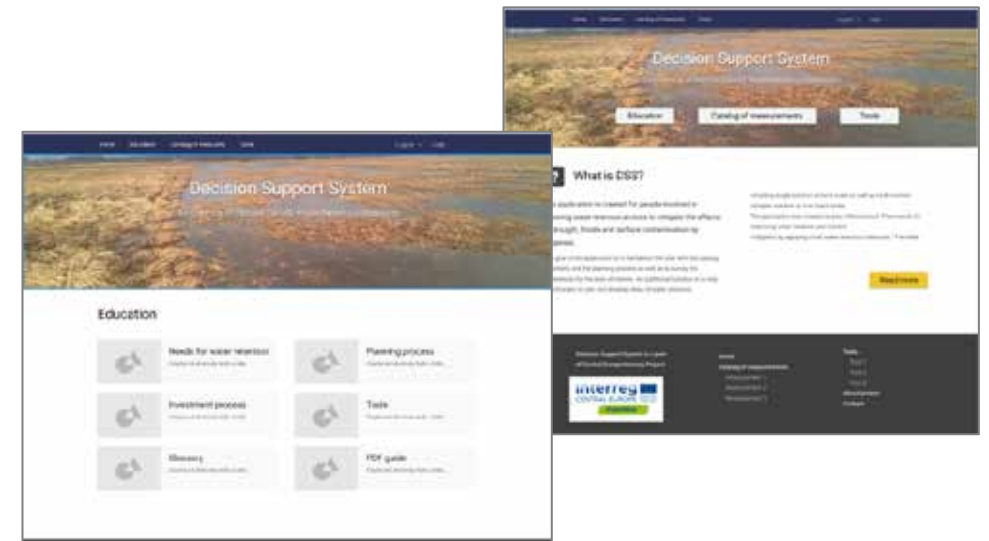
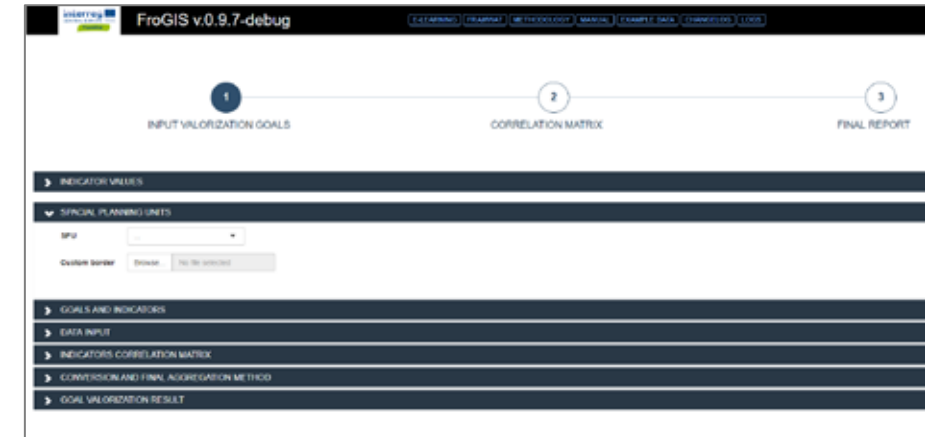
Drought Risk - yield loss
Colour-code drought risk map for estimated maize yield loss upon 20 % drought probability level.

Drought Strategy for Danube Region

- a framework for improved drought management in the Danube region
- Optimal Drought Management Model organizes already existing legislation and institutions in an optimal way of cooperating and reacting at different stages of drought development
- compiled together with stakeholders at 30 national seminars and trainings and 2 international conferences



- **FroGIS** ([LINK](#)) – Online tool for identifying most precise **location** of Natural (Small) Water Retention Measures (technical and non-technical) in a river basin
- Developing methodology for assessment of the **effectiveness** of the system of the measures in the river basin
- Guidelines for connection with implementation of the 2nd **RBMP** and planning of the 3rd RBMP
- **Decision-Support System** for N(S)WRM Planning
- National consultations, trainings, 2 regional round tables with policy level on NWRM

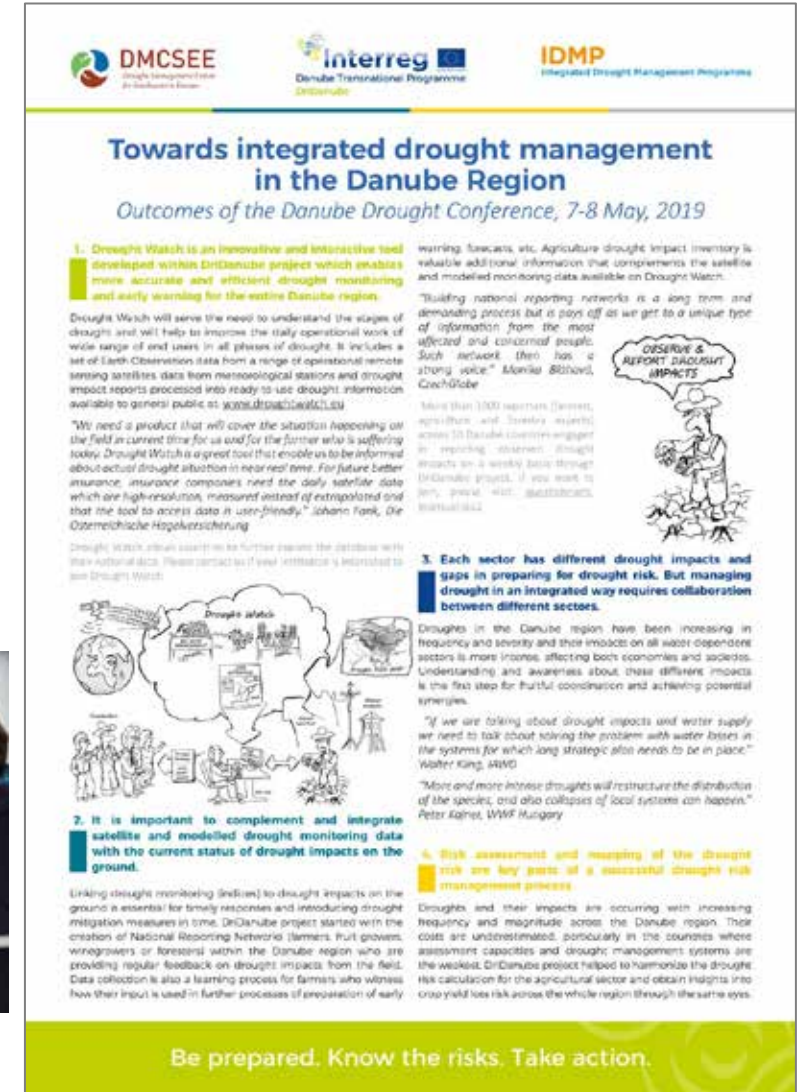


DANUBE DROUGHT CONFERENCE;

7-8 May 2019 in Vienna, Austria

Outcomes

- Jointly IDMP CEE, DMCSEE, DriDanube partners
- 93 participants from 49 organizations
- Discussed the work of the partners in the last couple of years and charting the way forward for the region



DMCSEE
Danube Meteorological Centre
BUDAPEST, HUNGARY

interreg
Danube Transnational Programme
DANUBE

IDMP
Integrated Drought Management Programme

Towards integrated drought management in the Danube Region

Outcomes of the Danube Drought Conference, 7-8 May, 2019

- Drought Watch is an innovative and interactive tool developed within DriDanube project which enables more accurate and efficient drought monitoring and early warning for the entire Danube region.**

Drought Watch will serve the need to understand the stages of drought and will help to improve the daily operational work of wide range of end users in all phases of drought. It includes a set of Earth Observation data from a range of operational remote sensing satellites, data from meteorological stations and drought impact reports processed into ready to use drought information available to general public at www.droughtwatch.eu.

"We need a product that will cover the situation happening on the field in current time for us and for the farmer who is suffering today. Drought Watch is a great tool that enable us to be informed about actual drought situation in near real time. For future better insurance, insurance companies need the daily satellite data which are high-resolution, measured instead of extrapolated and that the tool to access data is user-friendly." Johann Rank, Ök Österreichische Hopfenversicherung

Drought Watch should continue to further expand the database with new national data. Please contact us if your entrance is interested to use Drought Watch.
- It is important to complement and integrate satellite and modelled drought monitoring data with the current status of drought impacts on the ground.**

Linking drought monitoring (satellite) to drought impacts on the ground is essential for timely responses and introducing drought mitigation measures in time. DriDanube project started with the creation of National Reporting Network (farmers, rural govern, vinegrowers or foresters within the Danube region who are providing regular feedback on drought impacts from the field. Data collection is also a learning process for farmers who witness how their input is used in further processes of preparation of early warning forecasts, etc. Agriculture drought impact inventory is valuable additional information that complements the satellite and modelled monitoring data available on Drought Watch.

"Building national reporting networks is a long term and demanding process but it pays off as we get to a unique type of information from the most affected and concerned people. Such network then has strong value." Monika Billová, CzechGlobe

More than 1000 farmers (farmers, vine growers and forestry experts) across 10 Danube countries engaged in reporting observed drought impacts on a weekly basis through DriDanube project. If you want to join, please visit droughtwatch.eu.
- Each sector has different drought impacts and gaps in preparing for drought risk. But managing drought in an integrated way requires collaboration between different sectors.**

Droughts in the Danube region have been increasing in frequency and severity and their impacts on all water dependent sectors is more intense, affecting both economies and societies. Understanding and awareness about these different impacts is the first step for fruitful coordination and achieving potential synergies.

"If we are talking about drought impacts and water supply we need to talk about solving the problem with water losses in the systems for which long strategic also needs to be in place." Walter King, MWG

"More and more intense droughts will restructure the distribution of the species, and also collapses of local systems can happen." Peter Kalmay, WWF Hungary
- Risk assessment and mapping of the drought with are key parts of a successful drought risk management process.**

Droughts and their impacts are occurring with increasing frequency and magnitude across the Danube region. Their costs are underestimated, particularly in the countries where assessment capacities and drought management systems are the weakest. DriDanube project helped to harmonize the drought risk calculation for the agricultural sector and obtain insights into crop yield loss risk across the whole region through the same eyes.

Be prepared. Know the risks. Take action.



- Consultations on the Principles on Investments and Financing for Water-related Disaster Risk Reduction; 9 October 2018 in Bucharest, Romania
- Drought to become Significant Water Management Issues (SWMI) for the Danube River Basin
- Support to UNCCD Drought Initiative in Serbia and Moldova
- [EUSDR PA5](#) (Environmental Risks) and GWP CEE signed a Memorandum of Understanding
- Final video and leaflet of the DriDanube project

Water Scarcity and Droughts in the (D)RBMP(s) (2)

- Role of water scarcity and drought is **expected to become more relevant** and one of the **major challenges in river basin management**
- **Increased knowledge** base thanks to projects such as DriDanube: better access to information, guidelines and services on drought monitoring, prediction and early warning; drought impacts and links with the hazard; drought risk assessment, risk reduction and drought response; and policy and planning for drought preparedness and mitigation across sectors
- Ongoing discussion in the frame of **SWMI report 2019**
 - Cross-cutting and inter-sectoral SWMI? Does a basin-wide SWMI need to be a SWMI in all Danube countries?



[Drought - Be prepared. Know the risks. Take action.](#)

Review of the policy instruments and their potential to contribute to EU droughts and water scarcity policies

- working together with EU Strategy for Danube Region (*PA5 – Environmental risks*)
- Final analysis ready by October 2019
- Discussions with EUSDR about the shape of the document and next steps

Strategy/policy	Supporting instruments/instrument	Criteria for justification how selected policy support drought management <i>(not mentioned) (1), generally addressed (0), support actions (1)</i>				
		Monitoring & early detection	Minimisation of water efficiency & water economy	Prevention of product and services loss due to drought, including drought preparedness and resilience	Overcoming/recovery to avoid or reduce drought and improve drought management, see in Annex 2/3/4/5/6/7	Prevention of secondary impacts/drought
Agriculture & Forestry						
Common Agricultural Policy (CAP)		+	+	+	+	+/-0
REGULATION (EU) No 1305/2013 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD)	Rural Development Programmes performed by MS	+	+	+	+	+
REGULATION (EU) No 1306/2013 on the marketing, management and monitoring of the common agricultural policy	MS are responsible for the implementation and primary control of payments to farmers	+	-	0	+	+
REGULATION (EU) No 1307/2013 establishing rules for direct payments to farmers under support schemes with the framework of the common agricultural policy	MS are responsible for the implementation and primary control of payments to farmers	-	-	+	+	+
REGULATION (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products	MS are responsible for the implementation and primary control of payments to farmers	-	-	-	-	0
Communication on the European Innovation Partnership Agriculture Productivity and Sustainability (IP)	Project based under IP3 programmes and Horizon 2020	0	0	0	0	0
EU Agriculture and climate change European Parliament resolution of 5 May 2013 on EU agriculture and climate change (2006/2027(INI))		-	-	+	+	+
Energy (including Hydropower generation)						
Renewable energy Directive 2009/28/EC (amended by 2014/2001/EU)	National Renewable Energy Action Plans	0	-	-	0	0
Energy Efficiency Directive 2012/27/EU (amended by 2018/2002/EU)	National Energy Efficiency Action Plans	-	-	-	0	-
Regulation (EU) 2018/2001 on the governance of the Energy Union and Climate Action	Integrated National Energy and Climate Plans	0	-	-	0	-
Industry						
Communication (EU) 2015/652 from the Commission on the Industrial Strategy	Industrial Strategy (including Annex)	+	+	+	0	-
Transport						
Regulation (EU) 2016/682 of the European Parliament and of the Council of 23 April 2016 amending		-	-	-	-	-

Media-Experts exchange: How to communicate drought?

- to bridge the communication gap between water professionals and media
- for journalists – to improve understanding of drought
- for water professionals – to improve communication skills



Training Workshop to bring together water and media (PR) professionals to improve ways of communicating drought to the public

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Ø Further development, Expansion, Sustainability of DroughtWatch

- Bulgaria, Moldova, Ukraine; North Macedonia, Greece; Armenia, Georgia; Baltic & Poland?)
- Integration of national monitoring systems
- to add Hydrological drought
- to achieve harmonization of stages of drought (based on different national indices); connection with EU MeteoAlarm
- link with potential UNCCD Drought initiative regional training on drought index and drought toolbox

Ø Continues cooperation with: DMCSEE, ICPDR, EUSDR, Sava Commission, etc.

Ø Continues support to countries in preparation of the drought management plans

Ø Connection with activities planned under IDMP (regional programmes) Commission for Agrometeorology (CAgM)



Thank you for your attention

www.gwp.org/GWP-CEE/IDMPCEE

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