Drought risk in the Danube Region

DriDanube

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Project co-funded by European Union funds (ERDF, IPA)

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- DriDanube activities
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General information

Drought Risk in the Danube Region – DriDanube

Reference No: DTP1-182-2.4 - DriDanube

Programme: **Danube Transnational Programme (DTP)**

Priority Area 2: PA2. Environment and culture responsible Danube region

Specific Objective: SO2.4 Improve preparedness for environmental risk management

Duration: January 2017 – June 2019 (**30 months**)

Project budget: **1.974.750,00 EUR**

DriDanube Partnership

Interreg
Danube Transnational Programme
DriDanube

Lead Partner: Slovenian Environment Agency
(Drought Management Centre for Southeastern Europe)

7 EU countries
3 Non-EU countries
15 partners
8 ASP partners

Slovenia 2
Austria 2
Czech Republic 1
Slovakia 2
Hungary 2
Romania 1
Croatia 1
Serbia 2
Montenegro 1
Bosnia and Herzegovina 1

DHMZ
MZOIE – Ministry of Environment and Energy

ERDF & IPA partners

Associated Strategic Partners - ASP

DriDanube Partners

Interreg
Danube Transnational Programme
DriDanube

Austria

Vienna University of Technology,**TU Wien**
EODC Earth Observation Data Centre for Water Resources Monitoring GmbH, **EODC**
(ASP) **-** Environment Agency Austria, **EAA**
(ASP) **-** Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management, **BMLFUW**
(ASP) **-** International Commission for the Protection of the Danube River, **ICPDR**

Slovenia

Slovenian Environment Agency, **ARSO**
Centre of Excellence for Space Sciences and Technologies, **SPACE-SI**
(ASP) **-** Administration of the RS for Civil Protection and Disaster Relief, **URSZR**

Croatia

Meteorological and Hydrological Service, **DHMZ**
(ASP) **-** Ministry of Environment and Energy, Water management directorate, **MZOIE**

Czech Republic

Global Change Research Centre AS CR, v.v.i., **CzechGlobe**
(***ASP***) - The State Land Office, **SLO**

Slovakia

Global Water Partnership Central and Eastern Europe, **GWP CEE**
Slovak Hydrometeorological Institute, **SHMU**

Hungary

Hungarian Meteorological Service, **OMSZ**
Szent Istvan University, **SZIU**,
(ASP), Hungary, Ministry of Agriculture, **FM**

Romania

National Meteorological Administration, **NMA**

Serbia

(IPA) Faculty of Agriculture, University of Novi Sad, **FAUNS**
(IPA) Republic Hydrometeorological Service of Serbia, **RHMSS**
(ASP) **-** Agricultural Station/Forecasting and Warning Service of Serbia in plant protection, **PIS**

Bosnia and Herzegovina

(IPA) Republic Hydrometeorological Service of Republic of Srpska, **RHMZ RS**

Montenegro

(IPA) Institute of Hydrometeorology and Seismology, **IHMS**

DriDanube Objectives

General objective

- increase the capacity of the Danube region to adapt to climate variability by **enhancing resilience to drought** with recently developed tools and data sets

Specific objectives

- New drought monitoring service will be developed and prepared for operational use
- Unified drought risk protocol based on the Civil Protection Mechanism will be prepared
- Improve drought emergency response in the Danube region (Strategy)

DriDanube Work Packages and Activities

Interreg
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WP3 – EODC
Drought User Service

WP4 – CzechGlobe
Drought impacts assessment

WP5 – OMSZ
Drought risk assessment

WP6 – ARSO
Drought response

Preparation of operational drought user service

Methodology for drought impact assessment and forecast

Methodology for drought risk assessment

Strategy to improve drought response

WP1 – ARSO
Project management

WP2 – GWP CEE
Communication activities

Deliverables: Manuals, Reports, Surveys, Algorithm, Software, Events

DriDanube Target groups

National Hydrometeorological Services

Emergency response authorities

Non-governmental organizations

Water and Farmer communities/chambers

Industries

Stakeholder involvement already from the beginning of the project!

Stakeholders feedbacks!

DriDanube Activities

- developing a web-based user service for drought monitoring (DUS), for targeted users – based on users' requirements (surveys)
- in DUS, common methodologies for drought *risk* (WP6) and drought *impact* and forecasting of impacts (WP4) will be implemented
- *WP4:* the retospective analysis of relationship between past drought intensities and reported impacts will be used
- *WP4*: the national networks of impact reporters are built – training of DUS tools will be organized – provide assessment of impacts during ongoing drought epizode

Good practice example

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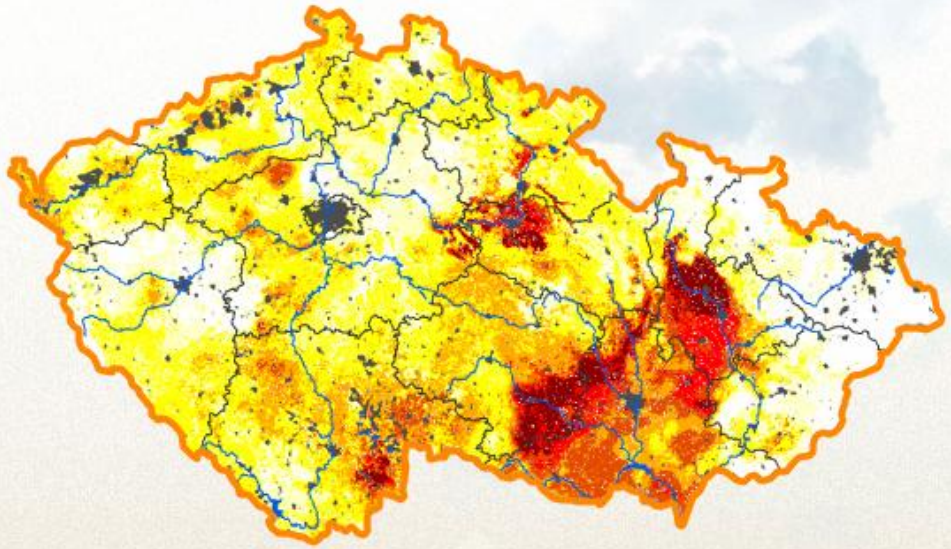
Drought intensity | Deficit | Relative soil saturation | Vegetation condition | Impacts on yield | Drought days



28. 5. 2017 | 20th week

Play animation:

last 4 weeks

week 18, 2017 - week 21, 2017

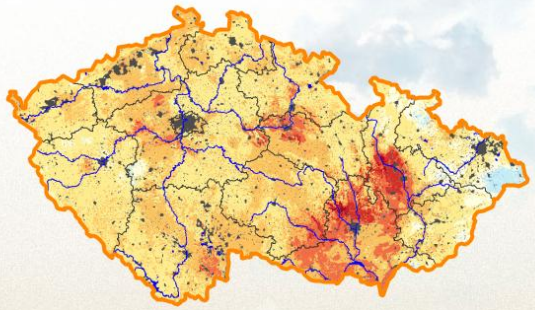
Download | Show maps

The soil saturation deviation of average condition in 1961-2010

no drought occurence | S0 lowered soil mositure stage | S1 starting drought | S2 moderate drought | S3 significant drought | S4 abnormal drought | S5 extreme drought

Expressed by drought stage for the depth soil 0-40cm and 0-100cm

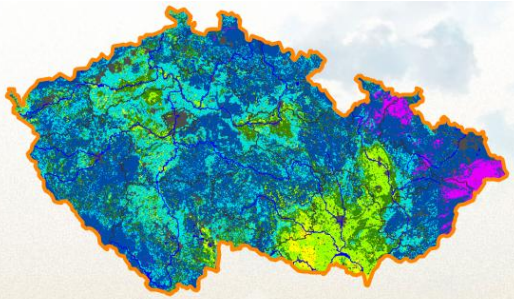
INTERSUCHO



Soil moisture deficit [mm]

-100 -80 -60 -40 -20 -5 5 20 40 60 80 100

Odchylka od obvyklé zásoby vody v půdě v daném období



Relative soil saturation

Moisture deficiency

0 10 20 30 40 50 60 70 90 100

0 = wilting point; 50 = point of decreased availability; 100 = field capacity

The soil saturation for soil depth 0-40 cm and 0-100 cm

Final remarks

- Droughts are hard to avoid, but their effects can be mitigated
- They demand a collective reponse and transnational integrated approach
- Comparable national risk assessments between all countries will harmonize drought detection thresholds, unify monitoring tools and consequently achieve cross-border coherence of drought response
- The first prototype of DUS will be prepared in June 2018
- DUS will represent a further development of work on existitng collaborative platforms (DMCSEE) – the avenue for implementing the *seasonal forecasts*

Thank you for your attention!

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Drought 2017 impact in Croatia

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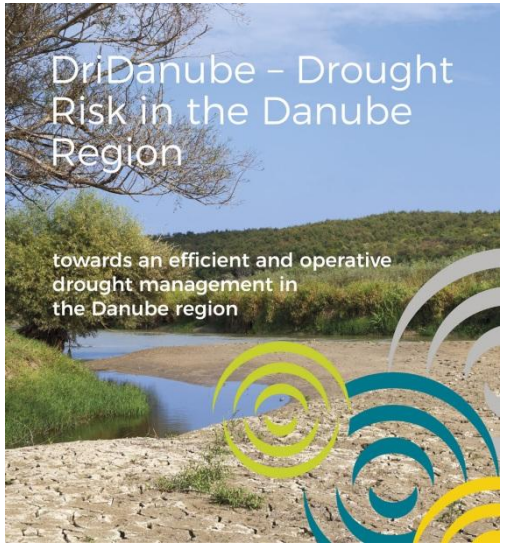
http://www.interreg-danube.eu/approved-projects/dridanube