Cooperation on drought management at regional level – the DMCSEE example

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Outline

1. Slovenia hosting Drought Management Center (DMCSEE)
2. DMCSEE products
3. Building operational products through projects (DriDanube)
4. Way forward
Drought as a challenge

Agriculture
Navigation
Water supply (drinking water)
Energy (Hydropower)
Industry (cooling water)
Water quality
Ecology (Biodiversity)
Recreation
Others

Drought is becoming one of the major challenges in water management in the Danube region.

www.dmcsee.org

- Established in 2006 (WMO, UNCCD)
- hosted by Slovenian Environment Agency
- 13 countries

Mission:
- development & application of drought risk-management tools and policies in SEE
- improve drought preparedness to reduce drought impacts

Monthly & seasonal bulletins

Joint activities & cooperation with WMO, IDMP

WMO ET Drought IDMP programme partner
UNCCD annex IV and V partner
Operational products development – bulletins, web-based tools

- Hot spot - short summary, short insight of possible drought circumstances at the time of issue.
- Additional and auxiliary information (methodology used, detailed info on surface water balance, temperature and SPI situation)
- FVC development Mar-Dec at 13 locations across SEE
- Report on drought impacts
- Water balance outlook

Drought Risk in Danube Region
DriDanube

- Interreg project (85% financed by European fund for regional development)
- Lead partner: ARSO; Project budget: 1.974.750,00€
- Duration of project: 33 months (January 2017 – September 2019)
- 15 partners + 8 strategic partners from 10 countries
Main outputs

**Drought User Service**
An innovative tool integrating all available data, including large volume of remote sensing products and serving the authorities to monitor, forecast and respond during drought development faster and with higher precision.

**Methodologies for drought impact and risk assessment**
Unification and cross-border coherence of drought Risk and Impact assessments. Establishment of network of reporters as additional source of information for drought impacts in agriculture.

**DriDanube Strategy**
A clear guidance for overcoming the gaps in the drought decision-making processes and improvement of drought emergency response in the Danube region.
Drought User Service - DroughtWatch

www.droughtwatch.eu

- An open **online tool** for **drought monitoring** through different **drought indices**:
  - **Interactive**
    - Multiple functionalities to view and examine data
  - **Meteorological & agricultural drought**
    - Potential to cover hydrological aspect
  - **Near-real-time information**
    - Indices refreshed daily, weekly or every 10 days

- Integrates 3 different types of info on drought:
  - A) Remote-sensed and modelled data -- from satellite & reanalysis
  - B) Drought risk maps -- from the assessment of past meteo & yield loss events.
  - C) On-field drought impacts observations -- from national reporting networks,

- Wider view on state of soil and vegetation (changes over time, Danube basin as a whole)
Drought User Service - DroughtWatch

www.droughtwatch.eu

Soil moisture: SWI, mid-August 2022
User manual, incl. video tutorial
Danube Drought Strategy: connect monitoring & response

- Proposed framework for improved drought management
- Core: **Optimal Drought Management Model** for proactive institutional approach
- Connects drought monitoring with measures/actions (also during no-drought conditions)
- Can be a practical national document (**who, what, when**)
- Applicable to any country

Good practice of drought management integrated into national legislation in Danube Basin country: **Slovak National Action Plan to Combat Drought**
Recent developments: Alps and national level

Drought Watch (12.8.2022)

ADO platform (Alps – hydrological component)

Sušomer – ARSO weekly drought monitoring bulletin


www.droughtwatch.eu

https://ado.eurac.edu/
Legislation of drought management?

Global: WMO, UNCCD, GWP

Regional: ICPDR

Credit: Michael Brüntrup (2020)
Thank you

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