



DMCSEE

EXPERT MEETING

Short conclusions and action points

13-14 November 2024





1. Introduction, concept, objectives

The technical meeting of the Drought Management Centre for Southeastern Europe (DMCSEE) took place on 13-14 November 2024 in Ljubljana, Slovenia, with the aim of revitalizing the organization and strengthening regional collaboration in drought risk management. The meeting focused on evaluating the effectiveness of existing tools and products, such as the DMCSEE monthly bulletin, and identifying areas for improvement. Participants shared knowledge and best practices with other regional drought monitoring systems, explored opportunities for new collaborative initiatives, and discussed future priorities for DMCSEE network. This meeting laid the groundwork for further engagement and planning in preparation for a high-level meeting of environmental ministers and directors of National Meteorological and Hydrological Services in 4-7 February 2025 in Ljubljana, Slovenia.

2. Drought monitoring tools - National needs & collaborative opportunities (joint session with Clim4Cast consortium)

Related presentations:

- *1_ Overview of the Clim4Cast project_Mirek Trnka ([link](#))*
- *2_DMCSEE_ Overview_ Existing and potential synergies_Gregor Gregoric ([link](#))*

Joint summary of breakout groups discussion:

Usefulness and practicality of the presented drought monitoring products

- **Alignment with national systems:**
 - The presented tools and products were viewed as complementary to existing national drought monitoring systems rather than replacements. They add new data (e.g., satellite-based remote sensing, heatwave indices) and forecasting capabilities, which enhance existing national platforms.
 - Countries like Slovakia, Croatia, and Austria have integrated or plan to integrate the tools for specific purposes such as improving heatwave alerts and drought forecasting. North Macedonia expressed interest in using them for agricultural drought monitoring.
 - Some countries do not have established national drought monitoring systems and found these tools helpful at the regional level to fill gaps.
- **Enhancement of national monitoring:**
 - The primary enhancement offered by these tools is their forecasting capacity, integrating rich information and tool features all in one place, and validation of national impact data.
 - The tools provide broader regional perspectives, helping to visualize larger-scale drought impacts beyond national borders, which is especially useful for countries like North Macedonia and Slovenia.
 - The integration of new types of data (such as forest fire and heatwave indices) strengthens national alert systems and decision-making capabilities.
- **Challenges and concerns:**
 - Integrating diverse datasets from different sources into national systems seem to be challenging, with some countries, like Serbia, facing data sharing restrictions.
 - There is concern about the overlap of similar tools and indices, which can overwhelm users, especially if data sources and methodologies are not well explained.
 - The long-term sustainability of these tools after project funding ends is uncertain, raising concerns about how they will continue to be maintained and supported.



Operational use of regional drought monitoring products:

- **Integration into national practices:**
 - Many countries, such as Slovakia, Greece, and Albania, are exploring ways to integrate the tools into their national operational systems. This often involves adding the tools to national hydrometeorological service websites, making them more accessible and relevant to the public.
 - Some countries are already incorporating these tools for specific applications such as agrometeorological forecasting (e.g., Albania using tools for monthly drought bulletins).
- **Suggested improvements:**
 - The tools were seen as technically complex, requiring simplification for broader public use. Many suggested offering simplified versions or providing more explanatory materials like factsheets, tutorials, and screen recordings to improve understanding.
 - Clear communication and outreach strategies are needed to raise awareness about the tools' availability and to guide users on how to interpret the data effectively.
- **Institutional and national benefits:**
 - The integration of these tools would help national institutions by providing accurate forecasting and data for more informed decision-making. For example, Greece and Albania highlighted their focus on using the tools for forecasting and impact evaluation.

Contribution to regional drought monitoring products

- **Role of countries in regional collaboration:**
 - Many countries expressed a strong interest in using the regional tools to validate national products. This is particularly important in countries with limited or fragmented national monitoring systems like Greece, Albania, and North Macedonia.
 - Data sharing and collaboration were identified as critical for strengthening regional monitoring. Countries are willing to contribute by providing local meteorological data and sharing findings from national drought events.
- **Enhancement of regional monitoring:**
 - Regional tools help standardize approaches and fill gaps in national systems by providing a broader context for drought impacts, ensuring more consistent monitoring across countries. The integration of these tools into the regional framework of organizations like DMCSEE could help improve data accuracy and forecasting abilities.
- **Sustainability and Maintenance:**
 - Countries discussed the importance of sustaining these tools beyond the initial project phase. Many suggested that regional networks should take responsibility for maintaining and updating the tools, ensuring their long-term functionality and relevance for drought monitoring.

Conclusion: The regional drought monitoring tools presented are widely regarded as complementary to existing national systems, offering improvements in forecasting, data integration, and regional analysis. However, challenges related to data harmonization, complexity for public users, and long-term sustainability remain. Countries are eager to integrate these tools into their operational practices, and they recognize the importance of contributing to regional collaboration through data sharing and supporting tool maintenance.



3. DMCSEE – Past, present and future

Related presentation: 3_DMCSEE_Past, present, future_Andreja Susnik ([link](#))

Summary of the presentation:

The session on **DMCSEE – Past, Present, and Future** provided an overview of the centre's mission to enhance regional drought monitoring and early warning systems in Southeast Europe. It covered the initial cooperation structure, the evolution of projects over the past 20 years, and the role of international collaborations with organizations like the WMO and the JRC. The presentation also highlighted DMCSEE's future plans, focusing on optimizing regional operations, contributing to technological innovations and research, and promoting knowledge sharing and awareness-raising to strengthen drought resilience across the region.

4. »Country voices« on DMCSEE operations

This section focuses on the updates shared by countries regarding their involvement in DMCSEE operations. Each country provided a **5-minute summary** on their current activities, products, and recent projects related to drought monitoring.

For a detailed overview, please find the links to the individual country presentations below:

- *Bosnia and Herzegovina ([link](#))*
- *Croatia ([link](#))*
- *Greece ([link](#))*
- *Hungary ([link](#))*
- *Montenegro ([link](#))*
- *North Macedonia ([link](#))*
- *Serbia ([link](#))*
- *Slovenia ([link](#))*

5. Drought risk & impacts assessment through European Drought Observatory for Resilience and Adaptation (EDORA) project

Related presentation: 4_Drought risk & impacts assessment through EDORA project ([link TBA](#))

Summary of the presentation and discussion:

The EDORA project focuses on assessing drought risks and impacts through a comprehensive approach, aiming to enhance water resilience across Europe. The project emphasizes the creation of new working groups and strategies to support proactive drought management, aligned with the European Commission's goals for water resilience. A key initiative is the development of an open, accessible impact data catalogue, with an event planned for early 2025 to engage experts in its ongoing maintenance and updates. The project also seeks to raise awareness about drought risks, advocating for proactive management and the implementation of national drought plans throughout Europe.



6. Cooperation on DMCSEE operational work

Related presentation: 5_DMCSEE_Operational work (Year-round activities & open questions)_Andreja Moderc ([link](#))

Summary of the discussion:

- Remote sensing product “Fraction of vegetation cover” (FVC) for selected locations was found to be useful drought monitoring product and should be continued. Some partners are planning to add locations (i.a. Croatia, Albania, Hungary) and/or are considering revision of existing locations.
- Drought monitoring maps are now based on ERA5-Land and are available on 8th day of the following month. Possibilities will be explored on allowing wider range of regional drought products to be available on DMCSEE webpage at least through simple map browser (currently, only a selection of products is available via PDF - monthly drought monitoring bulletins).
- Unfortunately, at the moment there are no web-GIS capabilities available. Web-GIS platform would be preferred. It would be a great support to national drought monitoring for quick “grab&use” and for looking at also transboundary extent of drought when preparing national reports.
- Reports on drought impacts (published in monthly bulletins) were found to be useful. Some partners (i.e. North Macedonia) are considering increasing their contributions. However, impact data would be more useful if published also in map form (not only as text). Up for possible consideration was also to collect them via existing practices or initiatives, such as JRC, National Reporting Networks or other means).
- Drought bulletin should be prepared as early as possible after drought monitoring maps are available. Bullet-style text (instead of paragraphs) would be more readable; it is a preferred option. A desire was expressed to strengthen the forecasting part of the drought bulletin – e.g. gridded forecast products instead of subjective SEECOF forecast.
- Some additional content to the web page was proposed, including links to NHMSs’ websites and a new “Library” section where useful documents in line with DMCSEE mission would be shared, with careful selection not to overpopulate.

7. Collaboration opportunities and support for strengthening DMCSEE

Summary of the discussion:

Support of UNCCD & WMO:

- DMCSEE could serve as a knowledge hub for the region to consolidate and share knowledge and support implementation of COP decisions.
- WMO can designate the DMCSEE as the WMO regional centre.

Funding:

- Initiating a regional drought strategy is critical to identifying priority areas for action.
- To gain visibility with funding agencies, DMCSEE could join the IDRA initiative.
- The Global Drought Resilience Programme (funded by Saudi Arabia) could become a funding source once the regional strategy is in place; it will be launched at COP16.
- The GEF can provide funding for the implementation of COP decisions, but requires strong proposals tied to COP outcomes (e.g., a drought plan).



- The Adaptation Fund (currently UNCCD preparing proposal to support South Asia's strategy)
- The availability of funds is limited due to the varying stages of economic development across SEE countries.
- While ARSO handles basic operational tasks, there is a need to expand the core budget to support new opportunities.

Cooperation:

- Initiate annual meetings of the network to foster continuous collaboration between WMO and UNCCD
- Revisit the „triangle setting“: go „beyond meteorological services, to involve other ministries and sectors (health, tourism, etc.)
- Leverage already established Community of practices for knowledge exchange and capacity building (UNCCD CLP - DMCSEE as a bridge between Annexes 4 and 5)
- Strengthen cooperation between focal points for the 3 conventions / between focal points and NHMS through national drought dialogue

8. Country perspectives on Drought Team cooperation and improvement

Short conclusions from discussion:

The discussion focused on the current state and functionality of "drought teams" across DMCSEE countries, focusing on collaboration between the UNCCD focal points, drought experts, and National Hydrometeorological Services (NHMS). The conversation explored how these teams are currently performing, identifying the main challenges they face and the resources or support required to improve their cooperation and effectiveness.

Strengths:

- Effective drought plans and strategies (e.g., Hungary).
- Strong collaboration with ministries and regional organizations.
- Advancements in monitoring systems (e.g., meteorological stations, soil moisture networks in Greece).
- Public awareness and communication for community resilience.

Weaknesses:

- Lack of staff capacity and insufficient sector coordination (e.g., Croatia).
- Data gaps and challenges in data sharing, difficult cross-country comparisons.
- Weak inter-institutional collaboration (e.g., Hungary) and separation of meteorological and hydrological responsibilities.
- Limited cooperation with UNCCD focal points and other conventions.

Challenges:

- Establishing integrated hydrological and meteorological drought early warning systems (EWS).
- Increasing inter-institutional cooperation for drought preparedness and response.
- Raising drought awareness at higher governmental levels.
- Motivating younger staff and fostering international collaboration.

Opportunities for improvement:

- Strengthening inter-ministerial collaboration through knowledge exchange (e.g., Albania).
- Proactive projects (e.g., DriDanube, Clim4Cast) to enhance capacities and cooperation.
- International meetings to build capacities and reinforce commitments to UNCCD obligations.



ANNEX 1: AGENDA

Wednesday, 13 November

Joint session with Clim4Cast consortium		
Time	Agenda item	Speaker
8:30	<i>Registration and online participants joining</i>	
9:00	Welcome and opening remarks	Luka Honzak, Head of the Climate-Dependent Activities Support Division
9:10	Participant Introductions (Tour de Table)	Introduction by each institution
9:20	Overview of the Clim4Cast project; existing and potential synergies	Mirek Trnka, Global Change Research Institute, CAS
9:50	Overview of the DMCSEE; existing and potential synergies	Gregor Gregorič, Slovenian Environment Agency
10:30	<i>Coffee break</i>	
11:00	Drought monitoring tools - National needs & collaborative opportunities	Group discussions
12:00	<i>Lunch</i>	

DMCSEE Experts meeting		
Time	Agenda item	Speaker
13:00	Opening remarks Meeting overview, objectives, and expected outcomes	Andreja Sušnik, Slovenian Environment Agency
13:05	DMCSEE – Past, present and future	Andreja Sušnik, Slovenian Environment Agency
13:20	»Country voices« on DMCSEE operations: 5-Minute updates on activities, products and recent projects	Country presentations
14:20	Drought risk & impacts assessment through <i>European Drought Observatory for Resilience and Adaptation</i> (EDORA) project	Andrea Toreti, Joint Research Centre
14:50	<i>Coffee break</i>	
15:10	DMCSEE operational work	Andreja Moderc and Gregor Gregorič, Slovenian Environment Agency
15:30	Cooperation on DMCSEE operational work	Plenary discussion
16:30	Wrap-up	
16:35	<i>End of the meeting</i>	
19:00	<i>Dinner</i>	



Thursday, 14 November

DMCSEE Experts meeting		
Time	Expected topic	Details
8:30	<i>Registration and online participants joining</i>	
9:00	Day 1 summary and overview of today's discussion	Andreja Sušnik, Slovenian Environment Agency
9:15	Collaboration opportunities and support for strengthening DMCSEE	<i>Panel discussion</i> Robert Stefanski, World Meteorological Organization (WMO) Daniel Tsegai, United National Convention for Desertification and Drought (UNCCD)
10:00	<i>Coffee break</i>	
10:20	Country perspectives on Drought Team cooperation and improvement	Plenary discussion
11:15	Action planning and next steps	
12:00	Closing remarks	
12:15	<i>End of the meeting & Lunch</i>	

Annex 2: List of participants

- **Bosnia and Hercegovina (Federation of Bosnia and Herzegovina, Federal Hydrometeorological Institute)**
Sabina Hodžić (online)
- **Croatia (Croatian Meteorological and Hydrological Service, Department of Climatology)**
Ksenija Cindrić Kalin (in person)
- **Hungary (Hungarian Meteorological Service, HungaroMet)**
Zita Bihari (in person)
- **North Macedonia (Hydrometeorological Service of Republic of North Macedonia)**
Aleksandra Stevkov, Silvana Stevkova, Suzana Alcinova Monevska (in person)
- **Greece (Hellenic National Meteorological Service)**
Anastasia Papakrivou (online)
- **Serbia (Republic Hydrometeorological Institute of Serbia)**
Aleksandra Kržič (online)
- **Slovenia (Slovenian environment agency)**
Patricia Blažič, Sabina Bokal, Andreja Moderc, Andreja Sušnik, Gregor Gregorič, Marko Puškarič, Maja Žun, Luka Honzak (in person)
- **World Meteorological Organization (WMO)**
Robert Stefanski (in person)
- **United Nations Convention to Combat Desertification (UNCCD)**
Daniel Tsegai (online)
- **Joint Research Centre (JRC)**
Andrea Toreti (online)