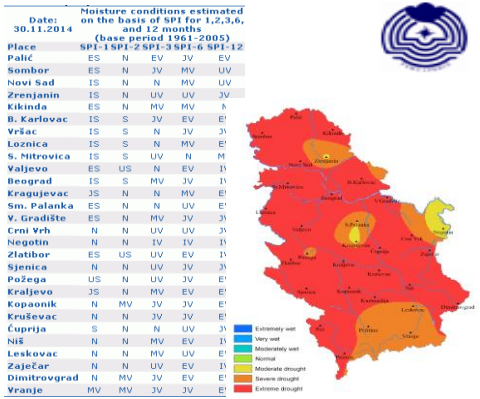
Republic of Serbia
Republic Hydrometeorological Service of Serbia

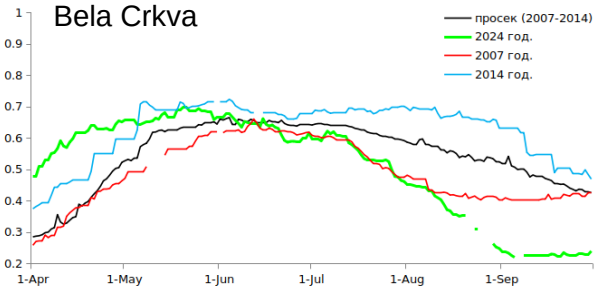
Current status of drought monitoring and forecasting system in Serbia

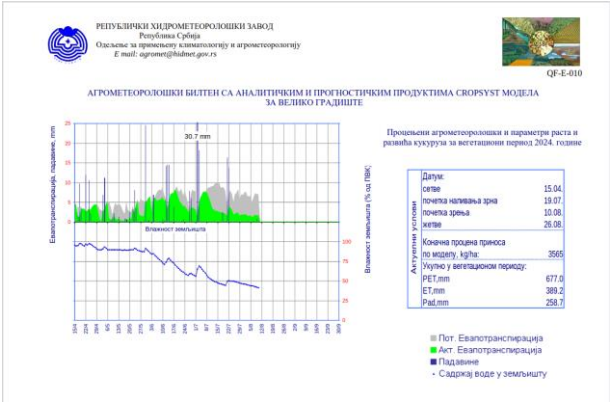
DMCSEE Expert meeting
13-14 November 2024

Operative tasks

- Operational production and analysis of a number of **indices**:
  - **SPI** and **SPEI** 1 to 12 months and above, once a month
  - **SPI** for the periods of 30, 60 and 90 days with 1-day time step
  - Palmer Drought Stress Index (**PDSI**) and Palmer Z Index
- Operational analysis of **FVC**:
  - 6 locations covered mainly with vineyards
  - during vegetation season
  - data source: EUMETSAT LSA SAF
- Operational use of products from agrometeorological model **CROPSYST** (Cropping Systems Simulation Model):
  - simulation of growth, development and forecast of maize yield
  - daily from April to October for 14 selected locations
  - 10 day bulletin
- **ET_0**:
  - current (previous 5 days) and forecast (next 10 days) daily values
  - for locations of main meteorological stations
  - Hargreaves method

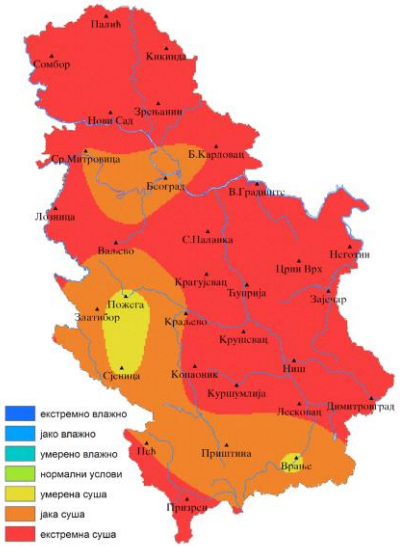




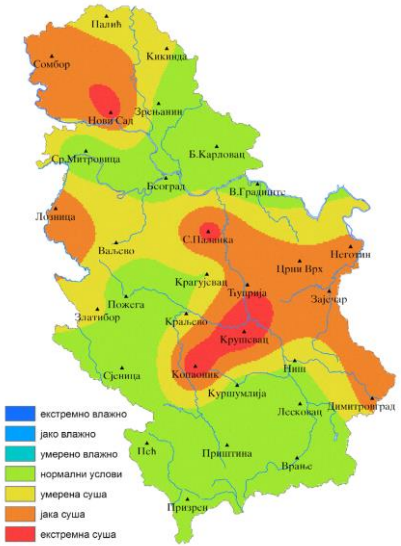


Improvement of drought monitoring

- Comparisons between SPI and SPEI
- **SPEI** for the periods of 30, 60 and 90 days with 1-day time step



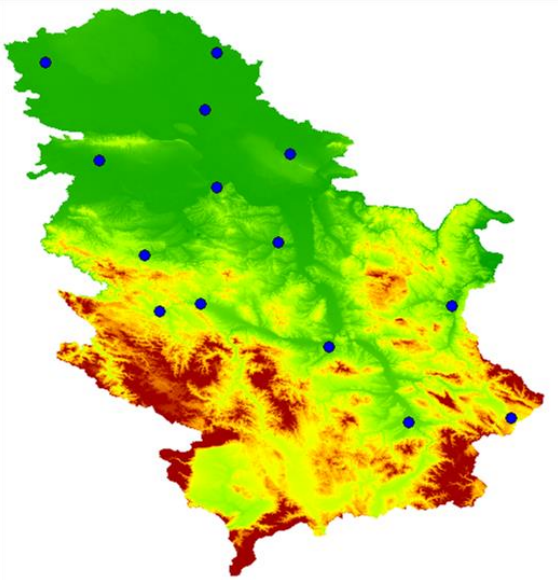
SPEI2



SPI2

Jul-Aug 2024

- Expanding the soil moisture measurement network
  - 14 automatic stations for soil moisture



Drought monitoring and early warning

Operational **Drought Monitoring and Forecasting System** based on:

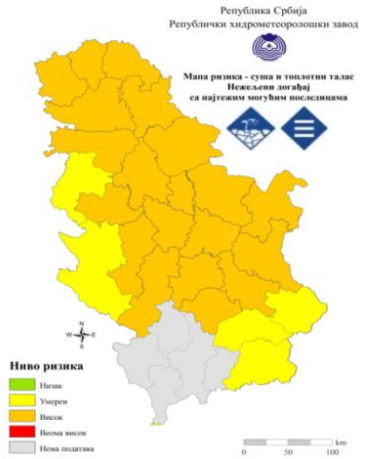
- the actual and forecasted values of meteorological parameters from the short- and medium-range ECMWF/RHMSS forecast
- constant monitoring of soil moisture
- analyses, forecasts and alerts about the occurrence and intensity of drought in certain regions of Serbia

Climate Watch System (CWS)

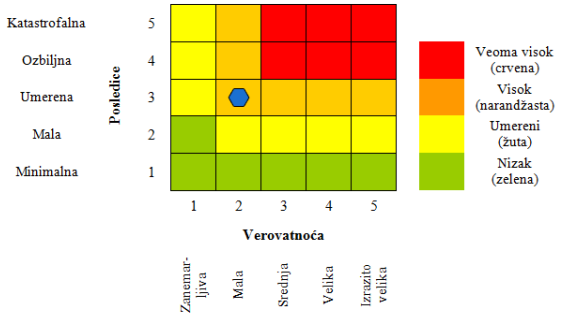
- early warning system for climate warnings at the regional (SEE) and national level
- support the EWS by providing overviews of climate monitoring and long-range weather forecasts
- focus on extreme climate events, such as heat waves, cold waves, large precipitation, etc.
- inform users (one/two weeks, month ahead of time) about the probability and severity levels of climate hazards (monthly/seasonal temperature, precipitation and SPI forecasts)
- bulletin on extreme climate events and anomalies, issued once a week: each Friday for the national level and each Monday for the SEE

Drought monitoring and forecast only on national level

Drought risk



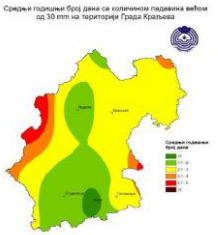
Ukupan rizik za neželjeni događaj sa najtežim mogućim posledicama – suša i toplotni talas

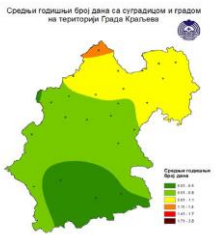


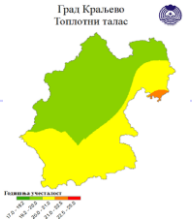
- Disaster risk assessment in the Republic of Serbia adopted in March 2019
- Drought is one of 12 identified hazards
- The overall risk level and risk maps for the most unwanted event and the adverse event with the most serious consequences

Contribution to the Risk assessment of the local self-government units:

- Climate characteristics
- Hazard identification (occurrence and frequency)
- Hazard impacts
- Ability to generate other hazards
- Risk mitigation







Climate Change Adaptation Programme for the period from 2023 to 2030

- Adopted in December 2023
- Contains:
  - analysis of observed changes and future climate change scenarios
  - analysis of the impact of climate change on 7 sectors at the national level
  - identified adaptation measures
  - the **Action Plan** for its implementation:
    - covers the period from 2024 to 2026
    - contains 25 measures
    - financial, institutional and time frame for their implementation and monitoring.
- **Drought** is recognized in the group of “Lack of water/moisture” climate hazards
- Key activities for enhancing **drought EWS** and agrometeorological services:
  - further development of the observational network and increase in the number of stations
  - development of an integrated database for agrometeorological & phenological observations
  - development of new agrometeorological products
  - training and education for agricultural advisors
  - development of methodologies for drought monitoring and announcement (criteria and procedures) at the national and local level, including monitoring drought impacts

ASPECT project

Facilitating climate adaptation using seamless predictions

ASPECT is a four-year Horizon Europe project that aims to improve and produce seamless climate predictions covering the next 30 years and embed these into societally important climate change adaptation decisions.

CONNECT

hello.aspect@bsc.es

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ASPECT

User-centred approach

Climate information is co-produced by working closely with stakeholders from societally important sectors, to address their needs, and produce useful and actionable information

- Super Users
- User Forums
- Case studies
- Uptake / upscaling

Climateurope2

Standardising

Climateurope2 will identify the support and standardisation needs of climate services, provide certification and labelling recommendations, and user-driven criteria needed to support climate action.

This information will help suggest community-based good practices and guidelines, and propose strategies for maturing standards.

Supporting

Using approaches from social sciences and humanities, as well as extensive technical expertise, an equitable community of practice will be built for this standardisation through the Climateurope2 platform and networking events and activities carried out by the project.

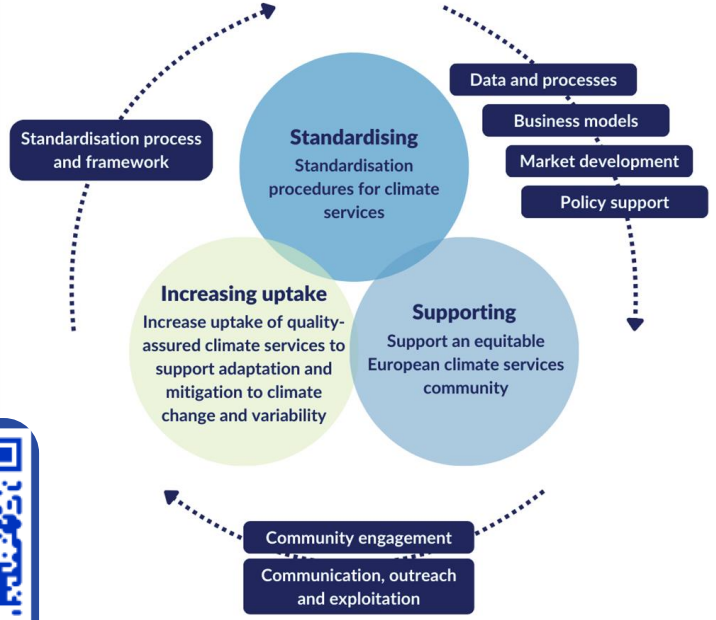
Increasing uptake

Climateurope2 strives to enhance the uptake of quality-assured climate services, with the production of trustworthy, user-relevant knowledge.

Join the network

Climateurope2 is developing an equitable network across Europe and beyond, involving all the actors in the climate services value chain to improve the connection, engagement and promotion of European climate service activities.

bit.ly_CE2_join_us



Climateurope2 platform

A platform where you can interact with the climate services community, explore the library of climate services resources, co-produce knowledge and engage in the standardisation of climate services.

Check out the beta version of the platform and leave your feedback, which will be key to improve the final version.

ce2-platform-beta.maris.nl

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