Integrating Agriculture Experts in Participative National Drought Monitoring

Monika Bláhová

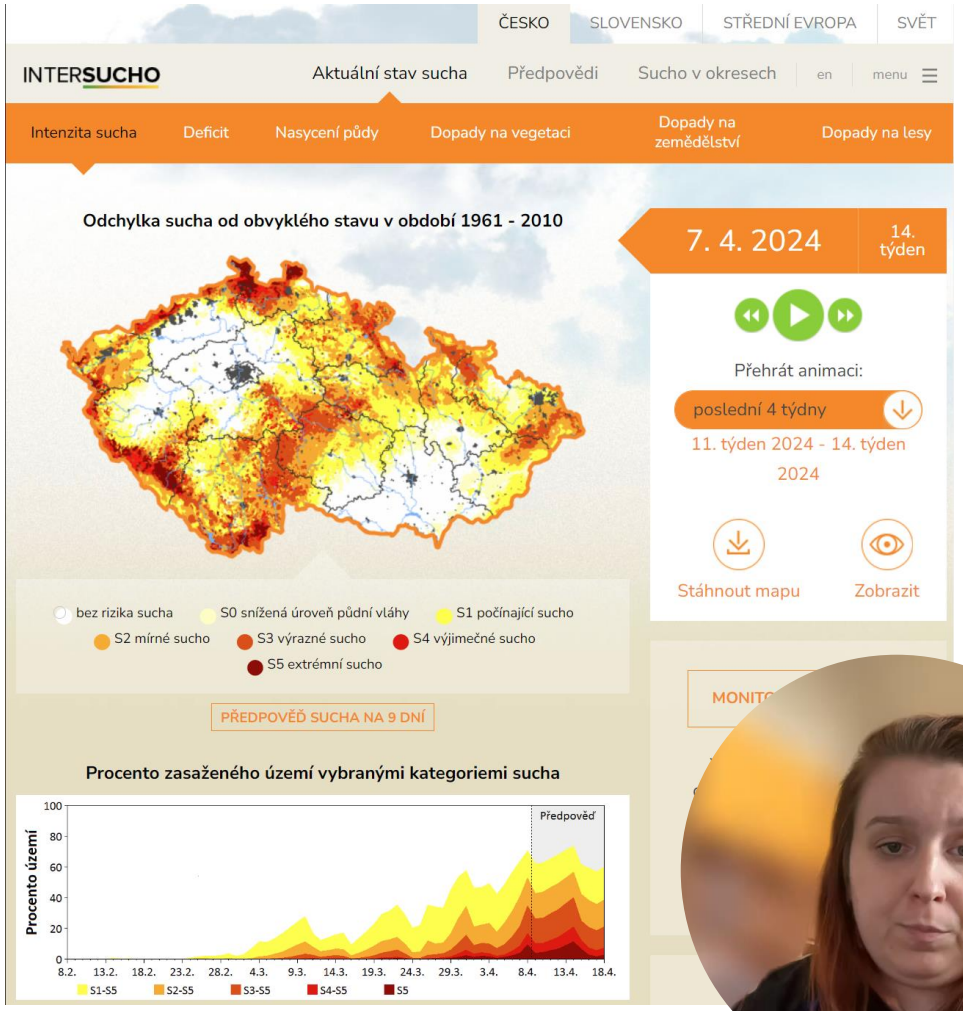
blahova.m@czechglobe.cz

Global Change Research Institute CAS, Brno, Czechia

IDMP Virtual Exchange | 11.04.2024

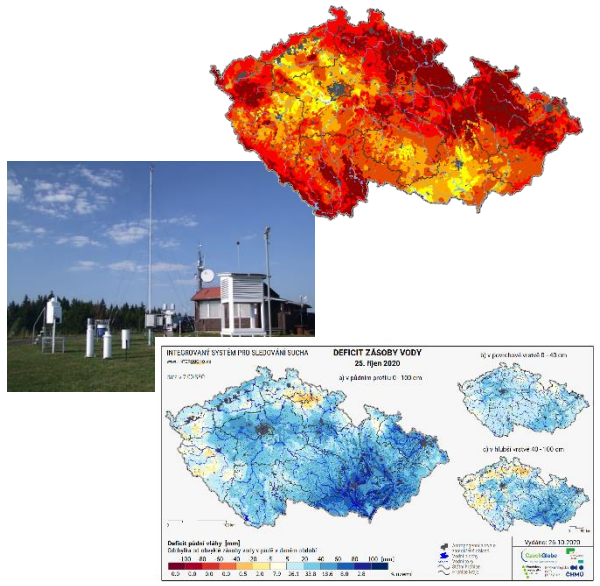
Czech National Drought Monitoring System

- www.intersucho.cz
- Monitoring and prediction of agricultural drought
- Czechia, Slovakia, Central Europe
- 2012
- Weekly and daily updates
- 500 X 500 m spatial resolution
- Comprehensive drought evaluation

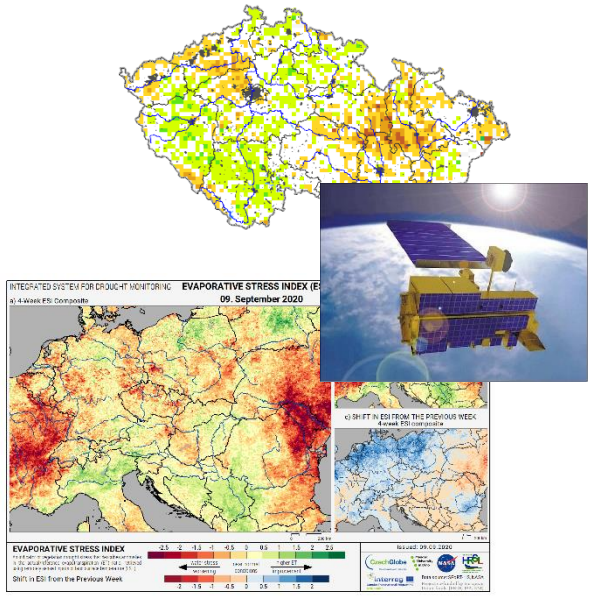


Czech National Drought Monitoring System

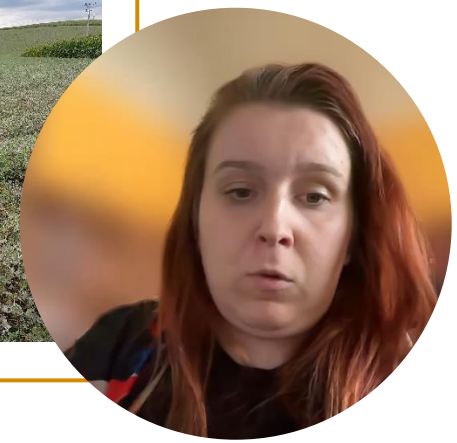
SoilClim water balance model



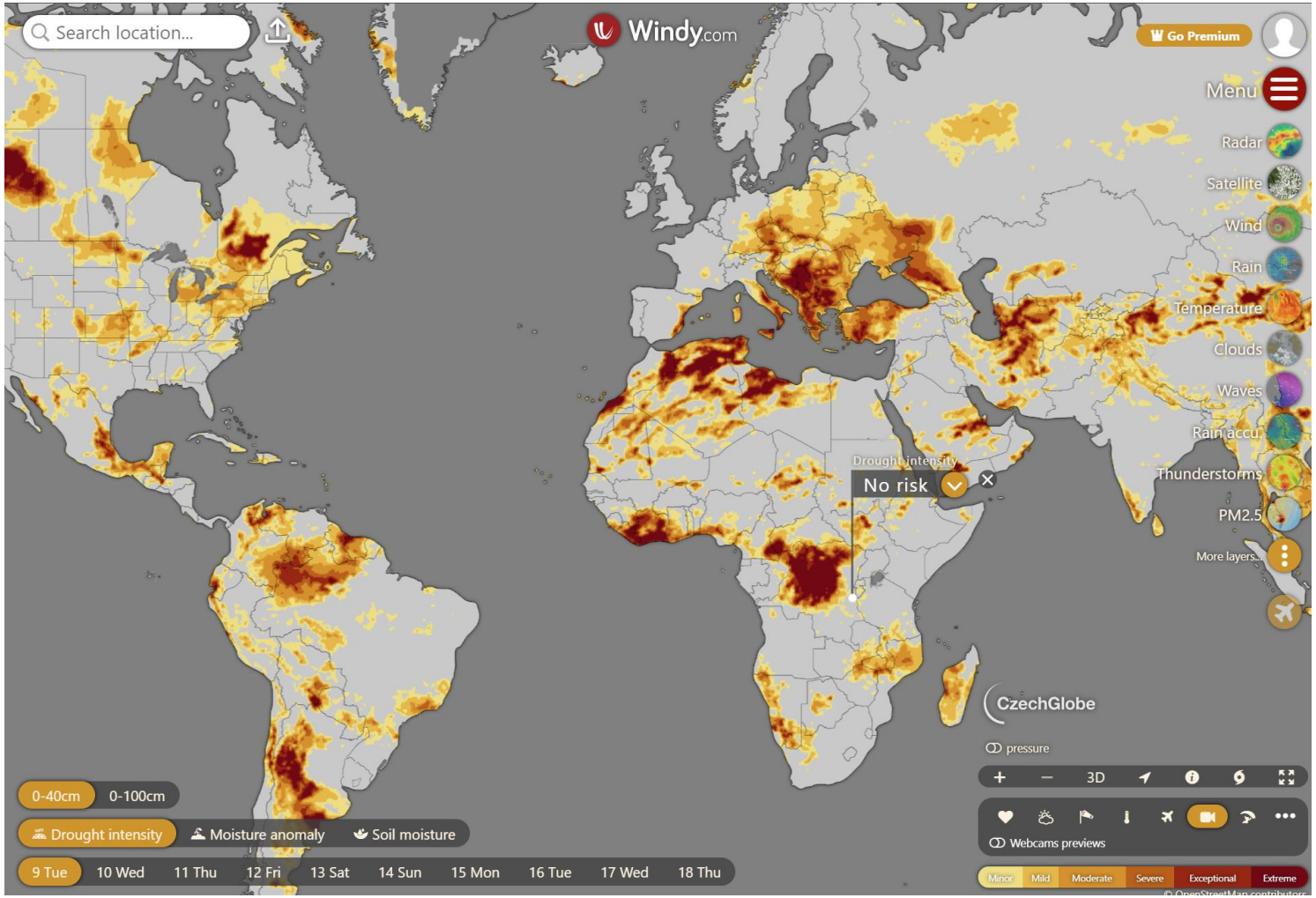
Remote sensing products



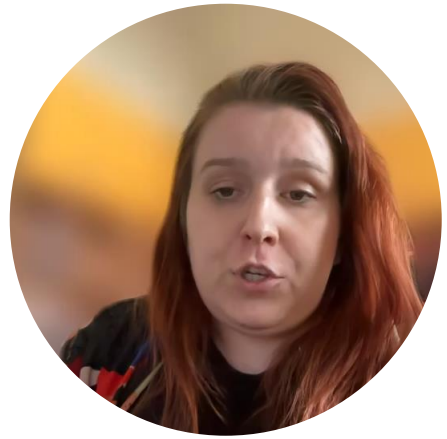
National reporting network



Czech National Drought Monitoring System – Global layers

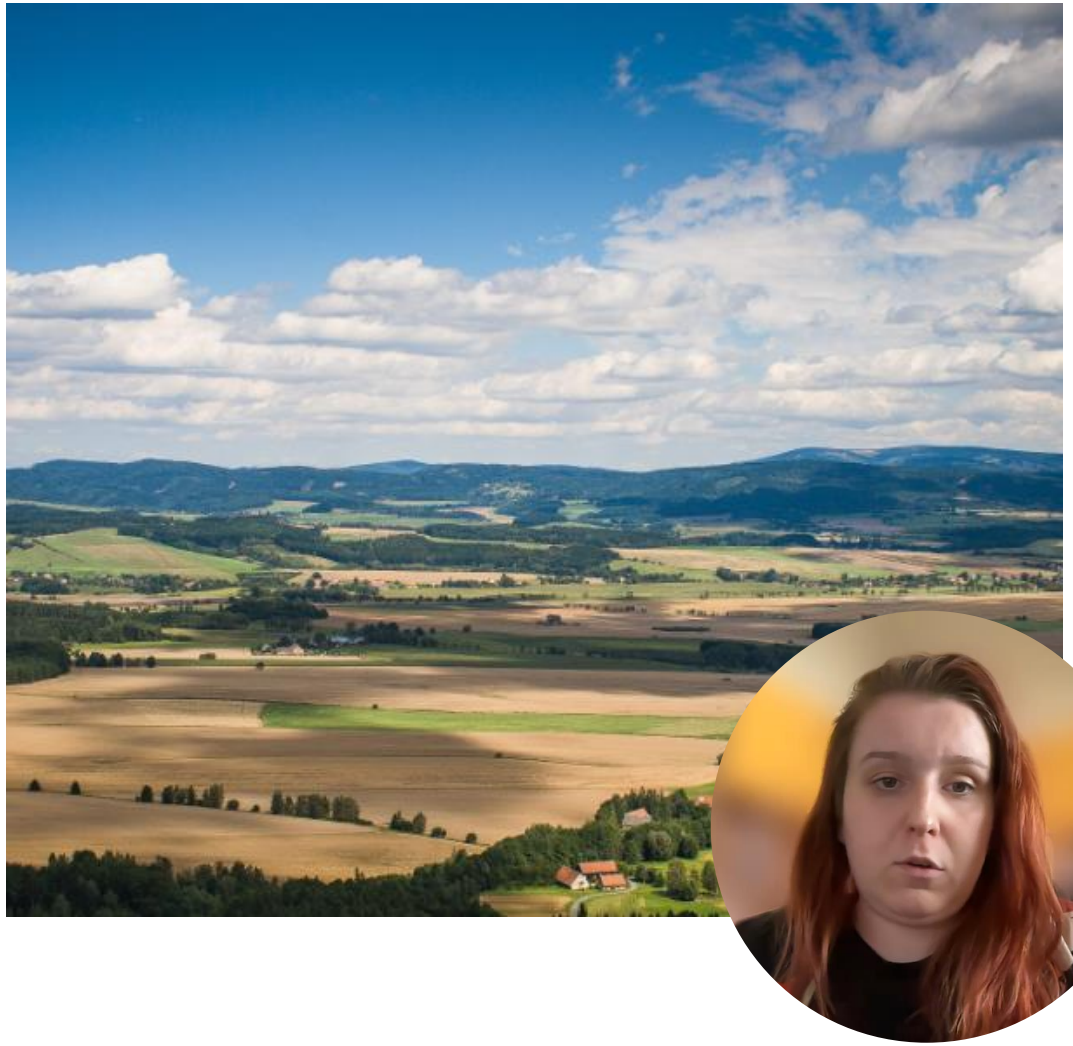


- Global version of SoilClim drought layers
- Windy.com -> Drought monitoring
- 9 day forecast
- Drought and fire danger



National Reporting Network – Who is that?

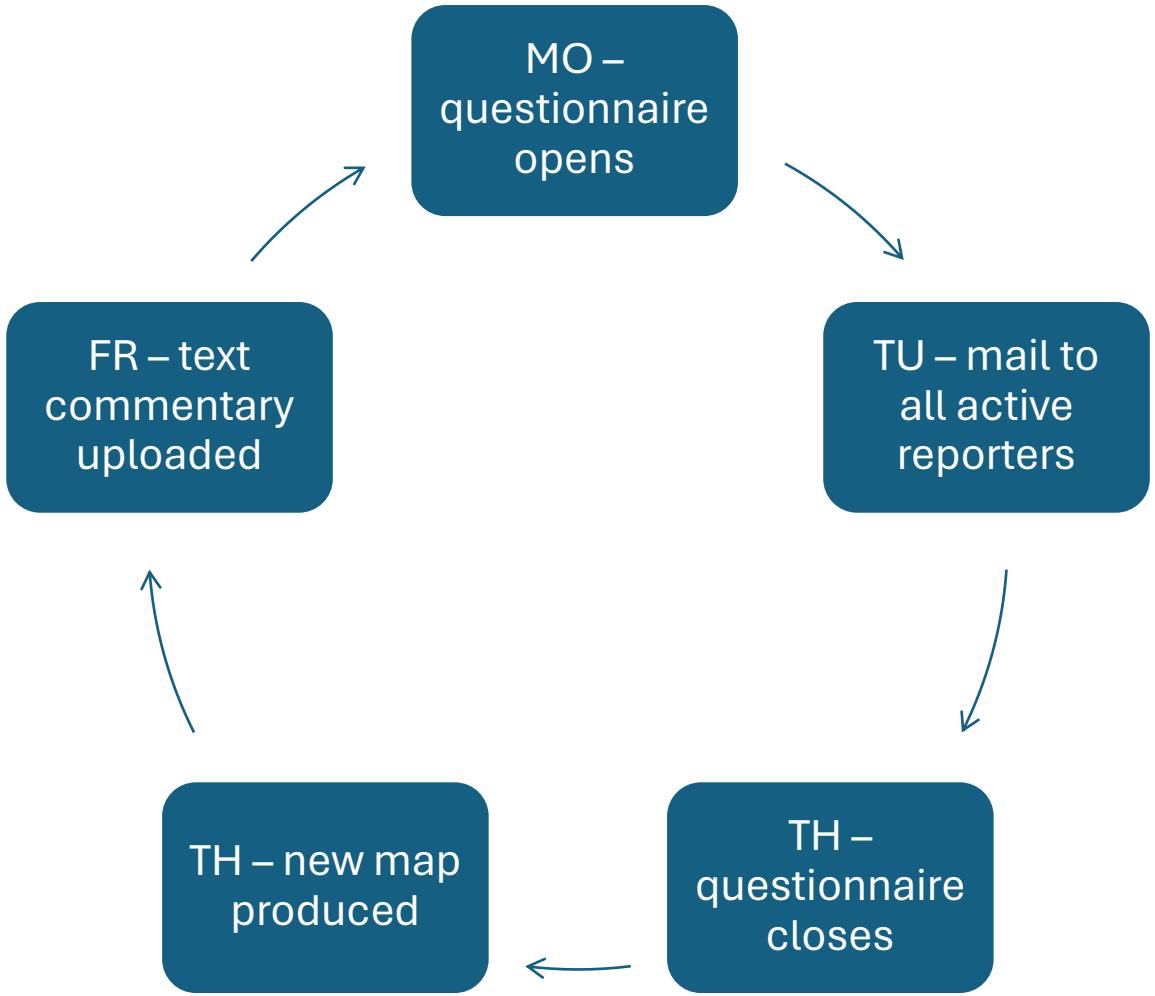
- Voluntary group of farmers and other experts
- Weekly feedback from their locality
- Evaluation of drought conditions and drought impacts based on expertise
- No measurements
- Online questionnaire



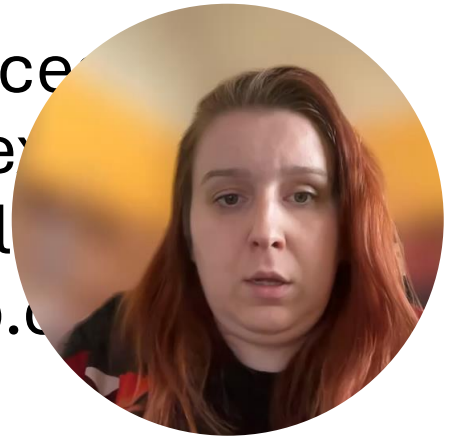
National Reporting Network - Questionnaire

- Available directly at www.intersucho.cz
- 4 types based on expertise
  - Agriculture
  - Fruit and viticulture
  - Forestry
  - Seedlings
- Evaluation of soil moisture
- Impacts on crops
- Comments, pictures

National Reporting Network - Workflow

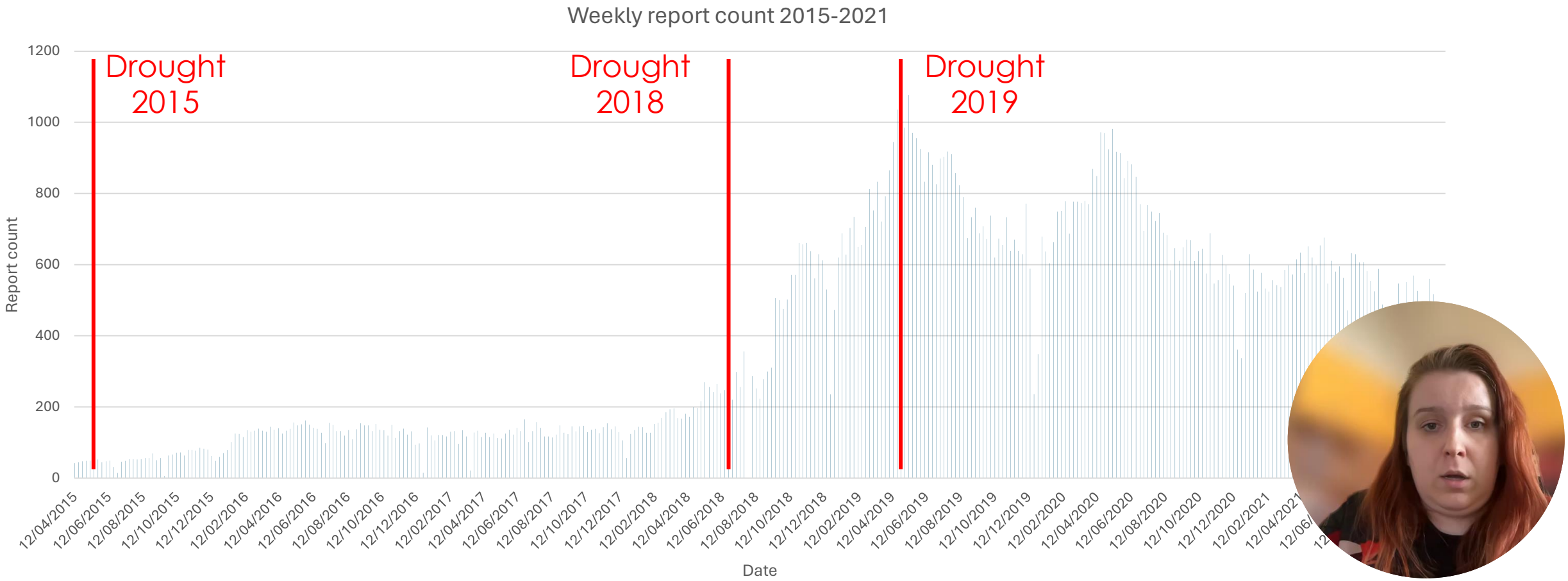


- Weekly evaluation
- Retrospectively - evaluating conditions from last week
- Reporters engaged to be active by constant communication
- Weekly data proce
  and maps and te
  commentary upl
  www.intersucho.

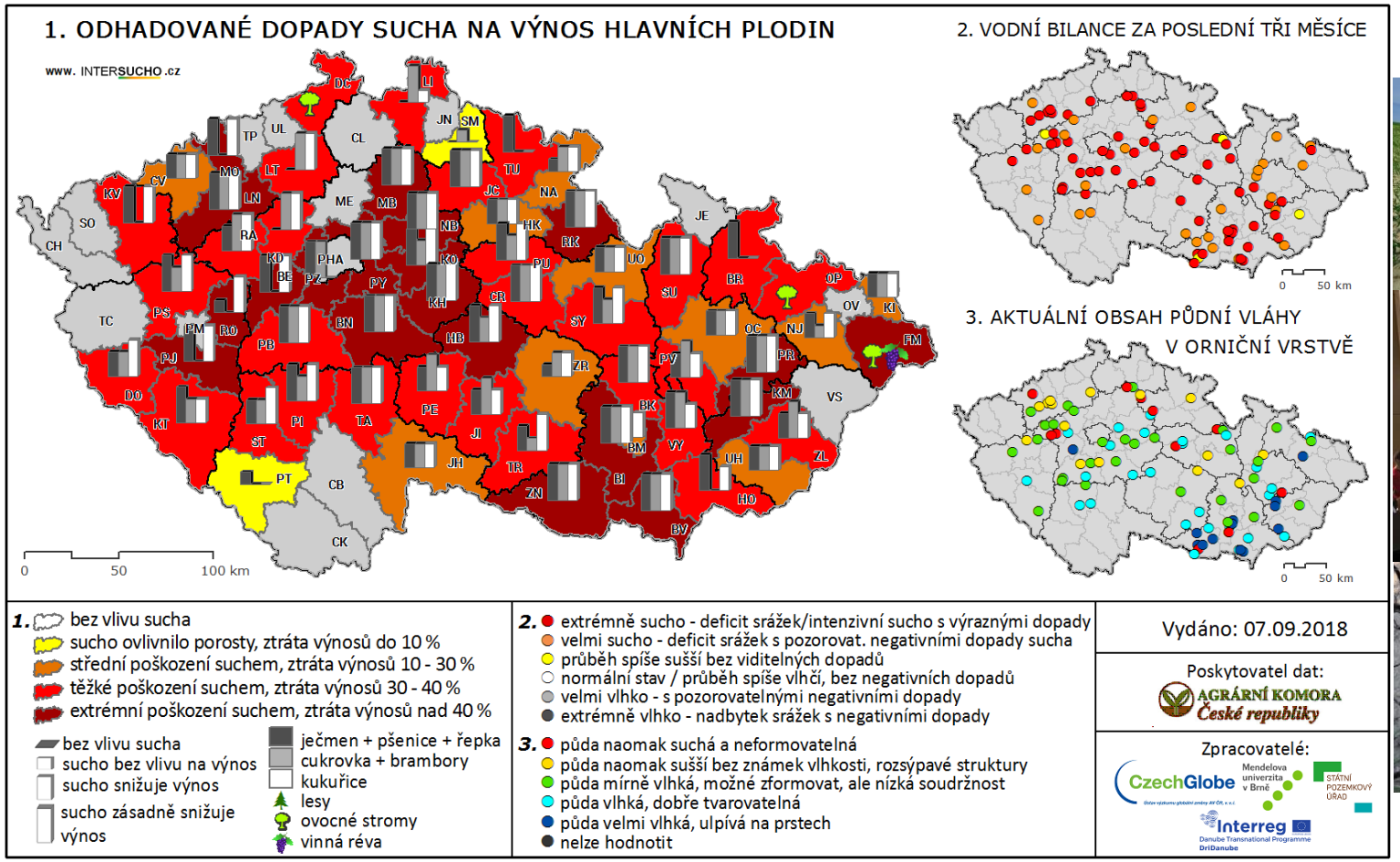


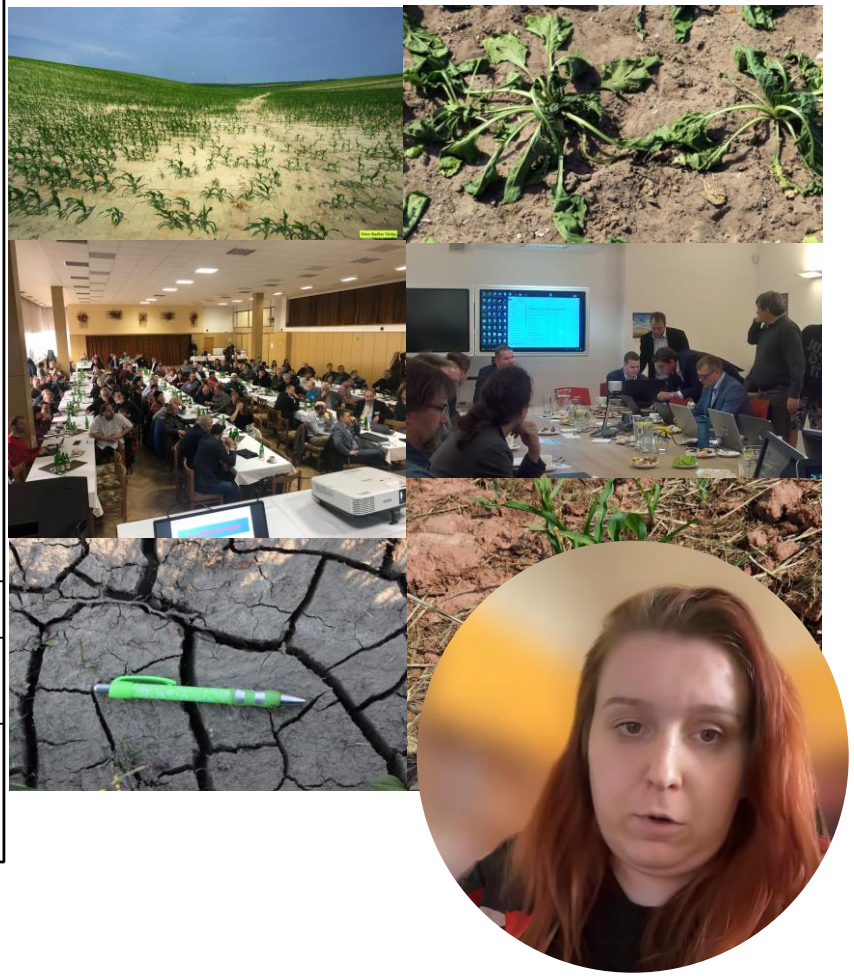
National Reporting Network – In time

- Reporting since 2015, first 25 brave nominated by chambre of Agriculture

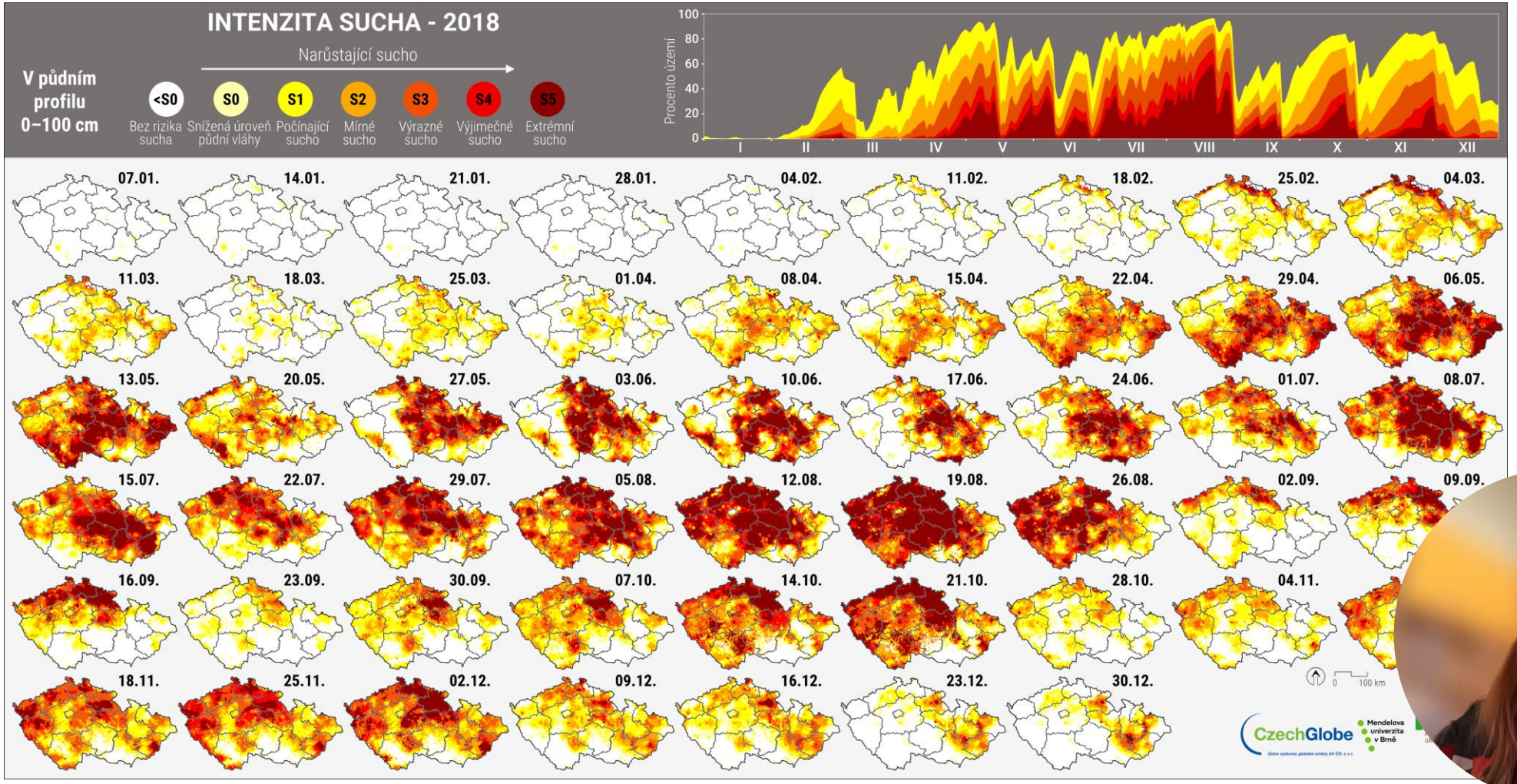


National Reporting Network – Results (2018)



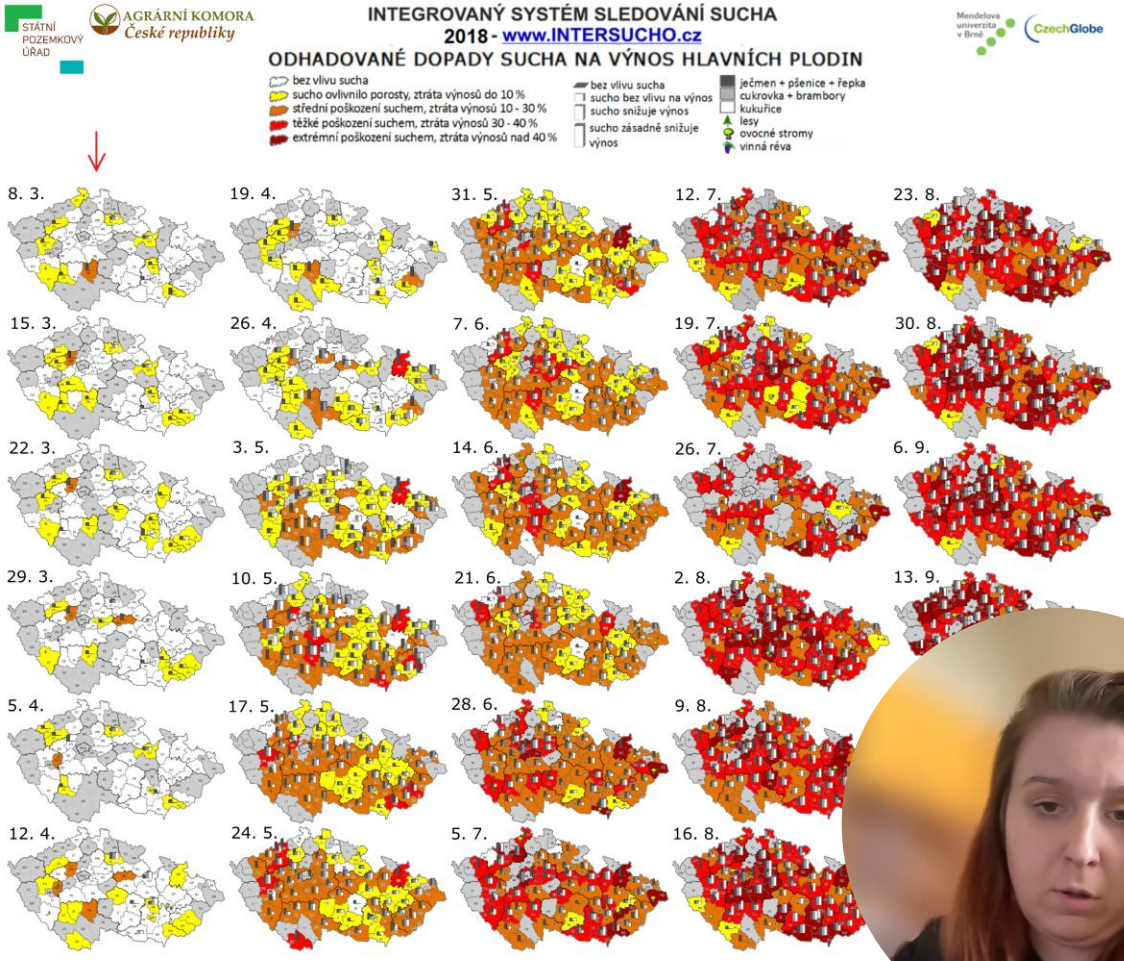


National Reporting Network – Results (2018)



National Reporting Network – Results (2018)

- Extreme drought event after 3 dry years
- Heavy impacts in yields
- Yields loss 60%
- Drought subsidies for agricultural sector
- **Drought reporters taken as the main source of crop damage and yield loss information**



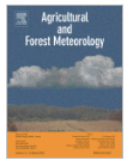
National Reporting Network

- We learned that NRN is a viable tool for drought monitoring
- Near real-time information from the most concerned group
- Experienced reporters with a good sense of what is going on
- High level of detail
- Responsive network of contacts
- Feedback on any other drought monitoring tools

ELSEVIER

Agricultural and Forest Meteorology

Volume 315, 15 March 2022, 108808



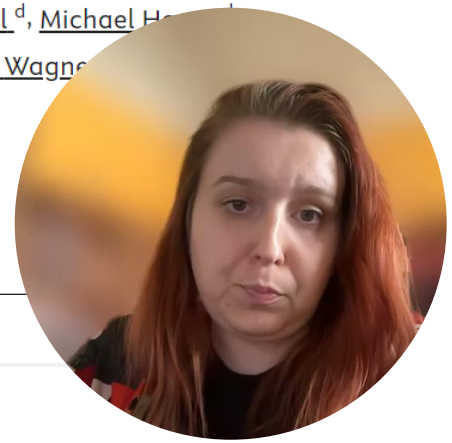
Validity and reliability of drought reporters in estimating soil water content and drought impacts in central Europe

Lenka Bartošová [a b], Milan Fischer [a b], Jan Balek [a b], Monika Bláhová [a b], Lucie Kudláčková [a b], Filip Chuchma [c], Petr Hlavinka [a b], Martin Možný [c], Pavel Zahradníček [a], Nicole Wall [d], Michael Ha…, Christopher Hain [e], Martha Anderson [f], Wolfgang Wagne…, Zdeněk Žalud [a b], Miroslav Trnka [a b]

Show more

Outline | + Add to Mendeley | Share

https://doi.org/10.1016/j.agrformet.2022.108808

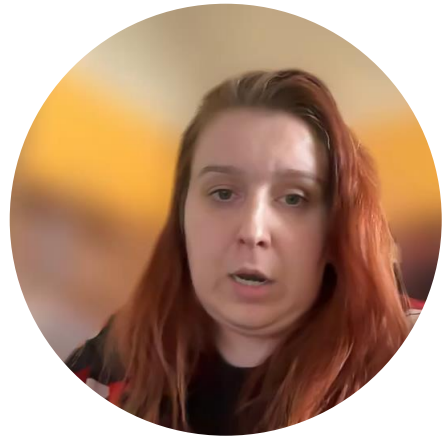


Thank you for your kind attention

Monika Bláhová

blahova.m@czechglobe.cz

Global Change Research Institute CAS, Brno, Czechia



IDMP Virtual Exchange | 11.04.2024