





The European Drought Impact Database (EDID) from Research to Operation



Kerstin Stahl¹, Kathrin Szillat¹, Monika Blahova², Veit Blauhut^{1,3}, Lauro Rossi⁴, Dario Masante⁵, Willem Maetens⁵, Andrea Toreti⁵

¹University of Freiburg, Faculty of Environment and Natural Resources, Freiburg, Germany

²Global Change Research Institute CAS, Brno, Czechia

³Saxon State Ministry for Energy, Climate Protection, Environment and Agriculture, Dresden, Germany

⁴CIMA research foundation, Savona, Italy

⁵European Commission Joint Research Centre, Ispra, Italy

A history of collecting drought impact information and acknowledgements to the many people involved!

2012 2016 2018 2024

Idea&Project First paper

Improving

Roadmap Implementation





Hydrological Drought

Groundwater

2nd Edition - June 1, 2023

Editors: Lena M. Tallaksen, Henny A.J. van Lanen Paperback ISBN: 9780128190823



European Drought Observatory for Resilience and Adaptation



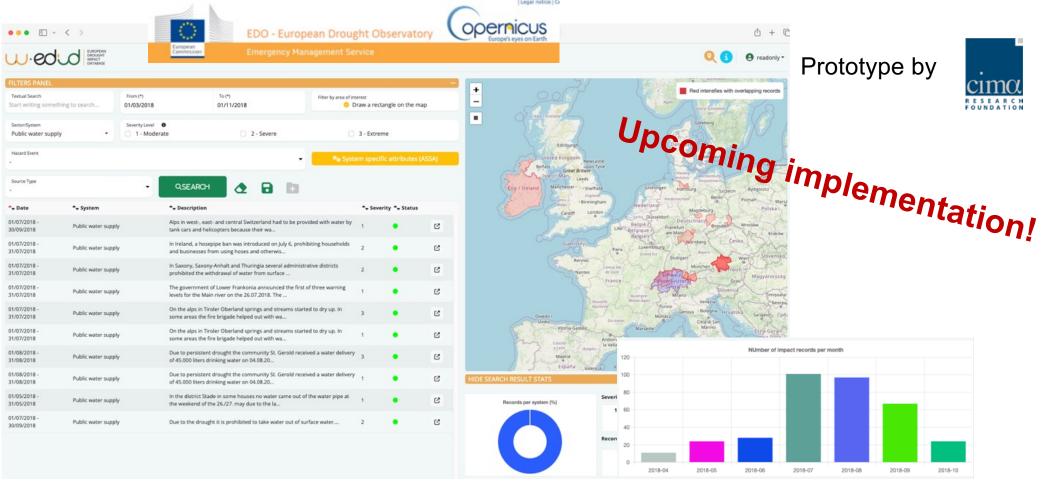




EDID – European Drought Impact Database







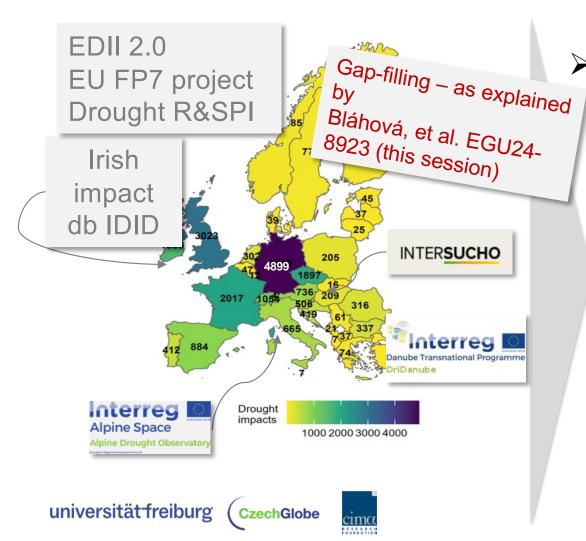




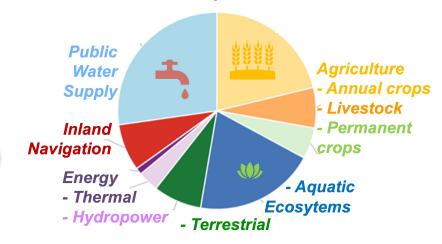




Sources: feeding (research) data into EDID



Assignment to new EDID data model with 9 "systems":



- > Content reflects
 - previous&national efforts
 - different cultures of reporting

From Research to Operation







- Simplified categories, but added features such as severity score, full geo-db functionality
- Comprehensive baseline for Europe
- ➤ For research (reminder): not as homogeneous as systematically measured/monitored variables must remove biases and subselect carefully!



For monitoring: W(eb-)EDID for easy access, but will rely on (your) future input!





References

- The new EDID (European drought impact database) will be launched withing the European Drought Observatory in the next months. Check at https://drought.emergency.copernicus.eu/
- Publications on the EDID creation and contents are in preparation and not yet published. An internal report is available on request

Here is a list of the references related to published datasets from which selectied impacts were used for inclusion. They present a proportion of the information (not all drought impacts!) in EDID:

- Bartošová, L., Fischer, M., Balek, J., Bláhová, M., Kudláčková, L., Chuchma, F., ... & Trnka, M. (2022). Validity and reliability of drought reporters in estimating soil water content and drought impacts in central Europe. Agricultural and Forest Meteorology, 315, 108808.
 https://doi.org/10.1016/j.agrformet.2022.108808
- Blauhut, V., Stephan, R., and Stahl, K. (2022) The European Drought Impact report Inventory (EDII V2.0), [data set], Uni Freiburg, Freiburg, https://doi.org/10.6094/UNIFR/230922
- Jobbová, E., Crampsie, A., Seifert, N., Myslinski, T., Sente, L., Murphy, C., McLeman, R.A., Ludlow, F. and Horvath, C. (2022) Irish Drought Impacts Database v.1.0. Zenodo. https://doi.org/10.5281/zenodo.7216126
- Jakubínský et al. (2019) Repository of Drought Event Impacts Across the Danube Catchment Countries Between 1981 and 2016 Using Publicly Available Sources. Acta Univ. Agric. Silvic. Mendelianae Brun. 2019, 67(4), 925-938 DOI: 10.11118/actaun201967040925
- O'Connor, P., Murphy, C., Matthews, T., & Wilby, R. L. (2023). Relating drought indices to impacts reported in newspaper articles. *International Journal of Climatology*, 43(4), 1796-1816. https://doi.org/10.1002/joc.7946
- Stahl, K., Kohn, I., Blauhut, V., Urquijo, J., De Stefano, L., Acácio, V., Dias, S., Stagge, J.H., Tallaksen, L.M., Kampragou, E. and Van Loon, A.F. (2016) Impacts of European drought events: insights from an international database of text-based reports. Natural Hazards and Earth System Sciences, 16(3), pp.801-819.
- Stahl, K., Stagge, J., Blauhut, V., Barker, L. (2023): Chapter 12 Drought Impacts. In: HYDROLOGICAL DROUGHT Processes and Estimation Methods for Streamflow and Groundwater (edited by Tallaksen, L.M. and van Lanen, H.A.J. Development in Water Sciences no. 48. Elsevier Publ. The Netherlands. 2nd Edition.
- Stephan, R., Erfurt, M., Terzi, S., Žun, M., Kristan, B., Haslinger, K., and Stahl, K. (2021): An inventory of Alpine drought impact reports to explore past droughts in a mountain region, Nat. Hazards Earth Syst. Sci., 21, 2485–2501, https://doi.org/10.5194/nhess-21-2485-2021.



