

Capacity of governance systems to respond to early warning signals

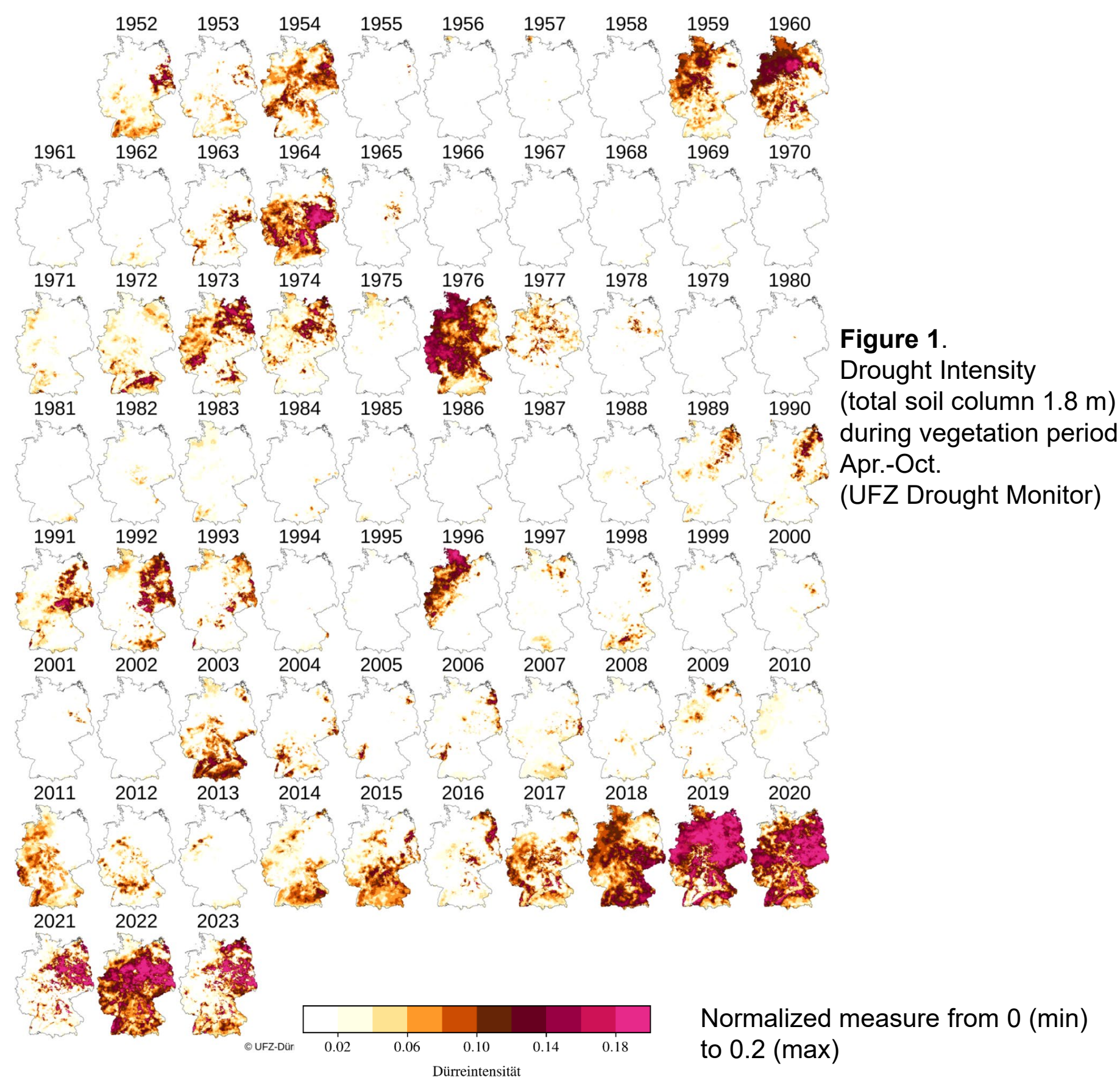
C1. Governance

Motivation & Innovation

- Major knowledge gaps exist in understanding anticipatory response to regime shifts and associated systemic risks
- Response to drought crises as model systems
- Development of conceptual foundations and typologies to classify governance systems and crises responses

Objectives

- Determine the capacity of governance systems to respond to early warnings of increasing (drought) crises severity
- Identify conditions under which (anticipation of) severe crises will trigger transformative change



Lake Mead, 2022
Photo: M. Tama/ Getty Images



„River“ Dreisam, 2022
Photo: J. Bergmann/ SWR

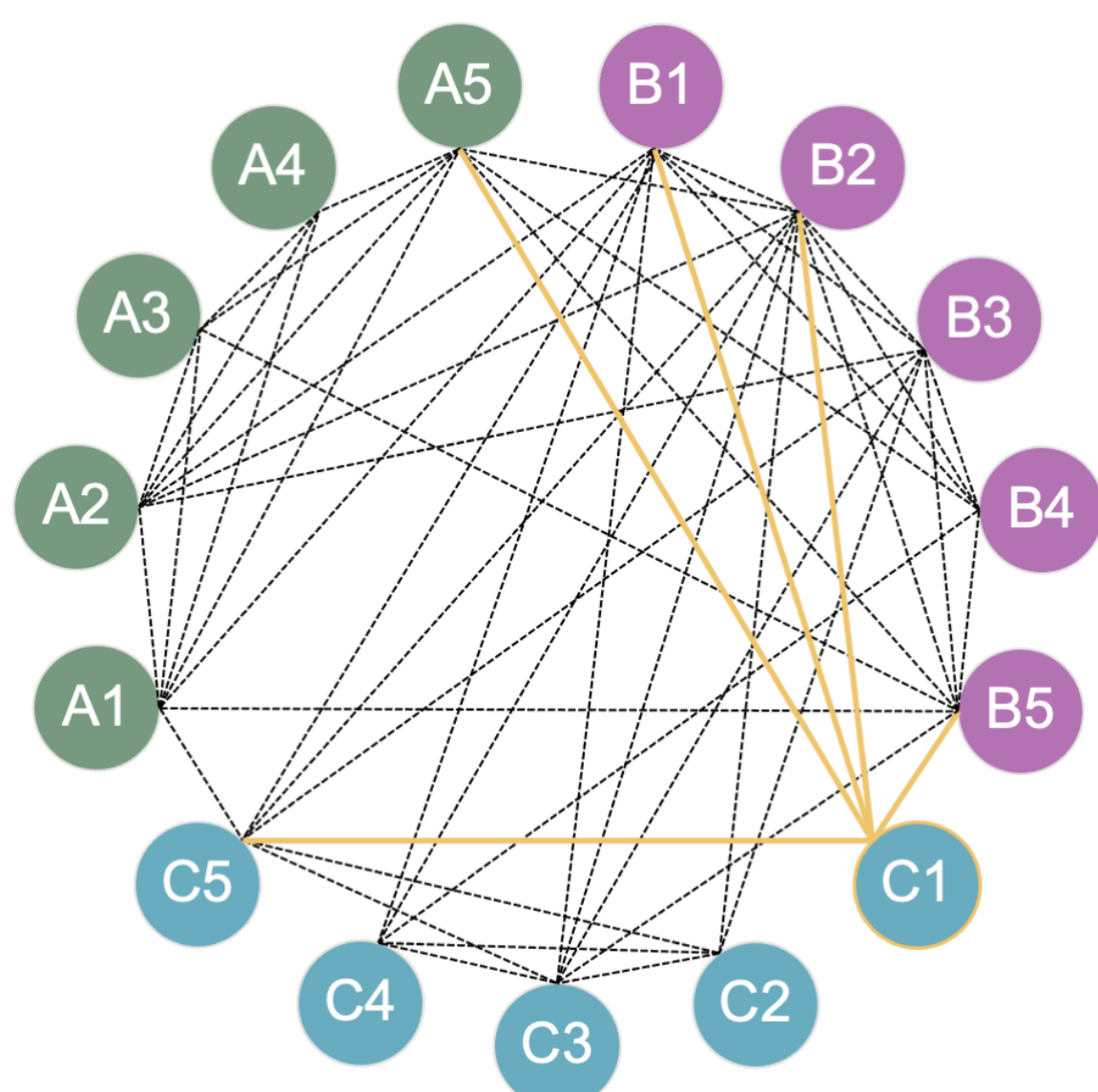


Drought in Germany
Photo: I. Bartussek/ Adobe

Scientific Design

- Comparative case studies (a) with a pronounced history of dealing with droughts and (b) that have more recently been confronted with severe water scarcity problems
- Potential countries: (a) Spain, Southwest USA, (b) Germany, the Netherlands, Canada
- Analysis of (1) knowledge generation, (2) framing of uncertainties and the risk problem, (3) learning processes and transformative change

Linkages



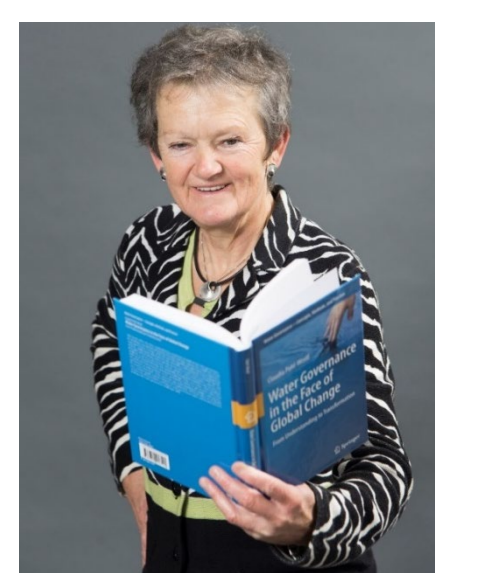
Collaborations on potential for abrupt environmental change and responses at the level of individual behaviour.

Principal Investigator

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Internationally leading scholar on:

- Water governance
- Adaptive management
- Social learning
- Transformative change



References

Pahl-Wostl, C. (2015). *Water Governance in the Face of Global Change - From Understanding to Transformation*. Water Governance: Concepts, Methods and Practice Cham: Springer.

Pahl-Wostl, C., Odume, O. N., Scholz, G., De Villiers A., & Amankwaa E. F. (2023). The role of crises in transformative change towards sustainability. *Ecosystems and People* 19(1), 2188087.