Many faces of droughts

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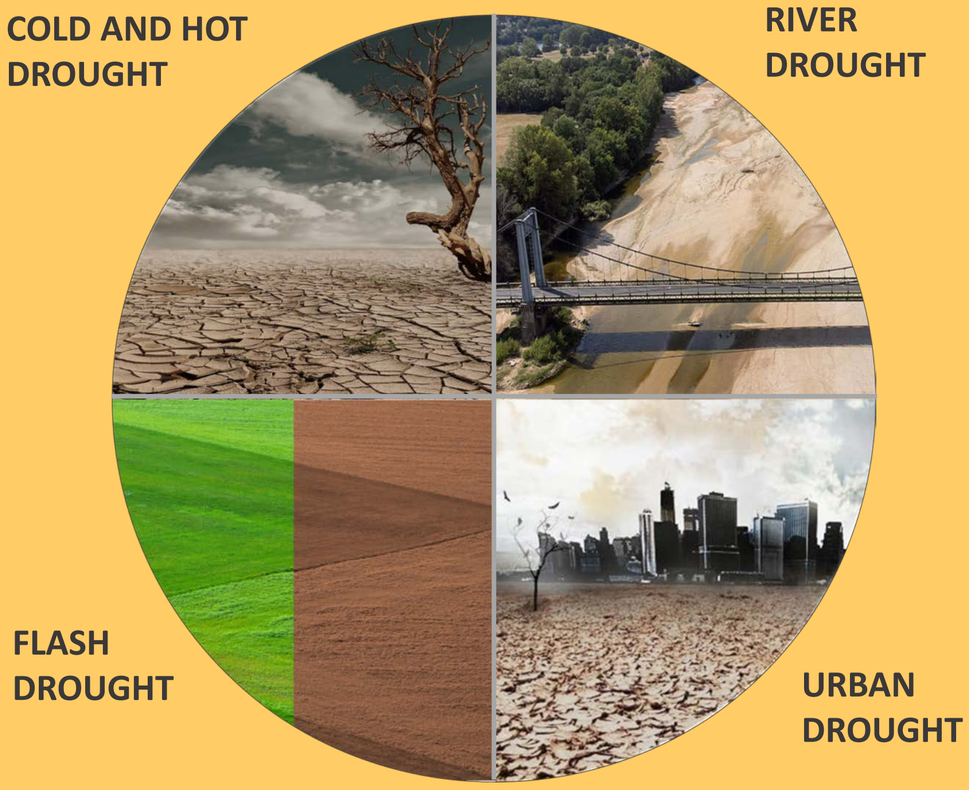
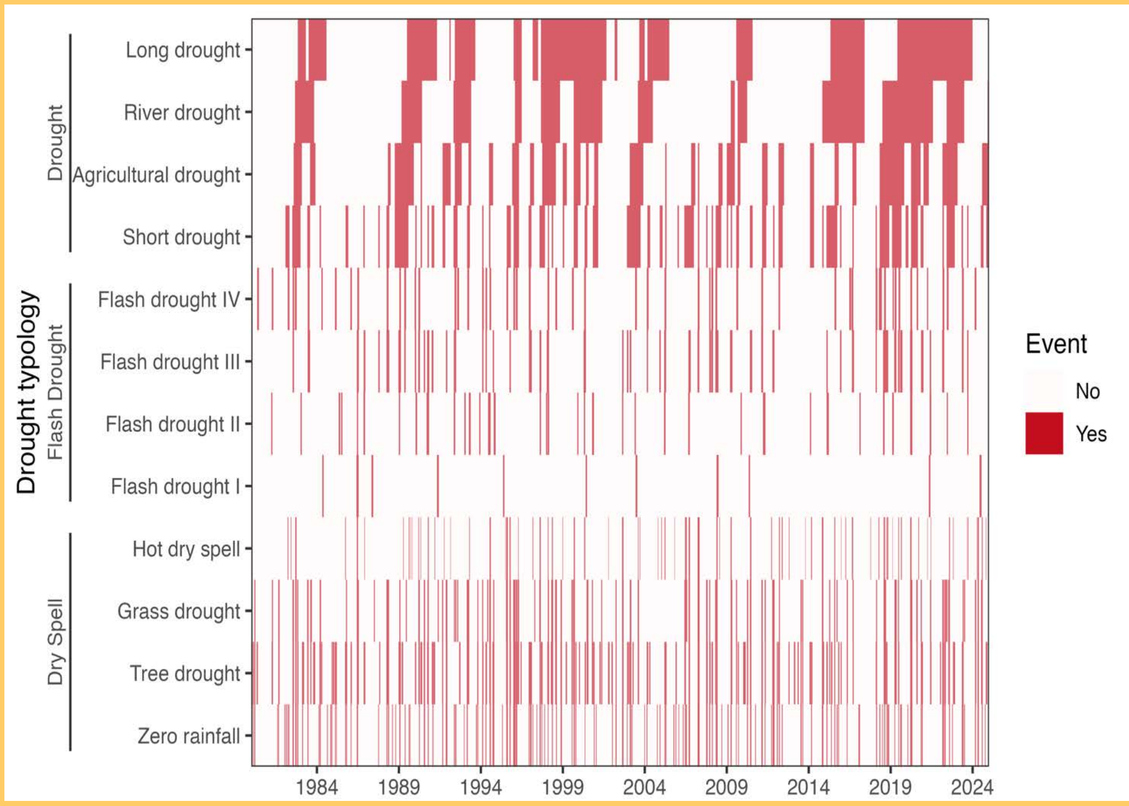
Problems

Different types



Drought risk management plans need to take into account a wide set of indicators to describe different impacts, to enable early warning and successful mitigation of very different drought types.

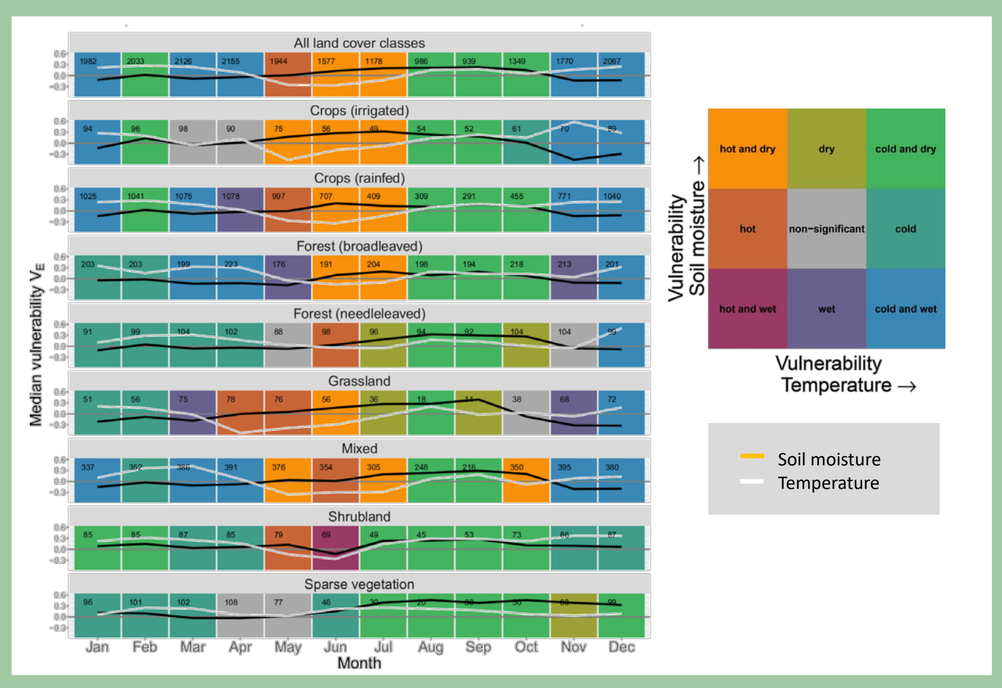
Different timings



Different types of droughts may coincide, overlap or come in series – thus requiring different timings of actions. Long dry periods followed by heavy rainstorm may cause severe surface water quality deterioration.

Recommendations

Impact in rural areas



Different types of droughts result in different impacts on ecosystem function and services and require different actions formulated in a drought management plan to enhance drought resilience on the local to trans-national level.

Impact in urban areas

Drought impacts climate-adaptation measures such as green infrastructure for stormwater & pollution control, and the cooling of cities. It is essential to implement drought adaptation measures such as rainwater harvesting so that they fully function.

Further literature:
Alencar et al. (2024) Flash droughts and their impacts. DOI: 10.1088/1748-9326/ad58fa,
Alencar & Paton (2024) Which Droughts Are Becoming More Frequent? DOI: 10.1007/s11069-024-06848-y,
Tams et al. (2023) Water stress of urban trees DOI:10.1002/eco.2556 ,
Alencar & Paton (2022) How do we identify flash droughts? DOI: doi.org/10.2166/nh.2022.003,
Vogel et al. (2021) Seasonal ecosystem vulnerability to climatic anomalies. doi.org/10.5194/bg-18-5903-2021,
Vogel et al. (2021) Increasing compound warm spells and droughts. DOI: 10.1016/j.wace.2021.100312
Picture reference: https://www.space4water.org/news/urban-water-scarcity-how-data-nasas-grace-fo-mission-can-be-used-near-real-time-water
https://msmmeng.com/project/blue-and-green-corridors-stormwater-resilience/

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