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Abstract submission (poster)

Title : Chrono-Systemic Timeline : Innovative Tool for Cross-Sectional Analysis – Case Study in Wallonia, Belgium

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Abstract :

Droughts are a complex hazard with multiple, and often dramatic, impacts, depending on the environmental and societal contexts (Thibaut & Ozer, 2021). In order to enhance our understanding of the interdisciplinary dynamics of droughts – an essential step to improve anticipation and crisis management by stakeholders – we develop an original and innovative cross-disciplinary analysis tool: the chrono-systemic timeline (Thibaut et al., 2023). This consists in a transversal analysis instrument that allows simultaneously visualization – in a single diagram – of temporal and multi-sectoral highlights of crisis and their relationships. The chrono-systemic timeline is particularly adapted to a holistic analysis of water scarcity through the integration of environmental, economic, social and political data.

Applied to the successive droughts of 2018, 2019 and 2020 in Wallonia (Belgium), the chrono-systemic timeline reveals water stress situations in all socio-ecosystems of the territory, many interdisciplinary connections and a reactive crisis management. It also enables management strategies to be criticised and adjusted in order to address future droughts effectively. Finally, we conclude that it is necessary to better consider drought risk in public policies and to implement anticipatory and adaptive management of this risk.

Thibaut, K., & Ozer, P. (2021). Les sécheresses en Wallonie, un nouveau défi du changement climatique ? Quelques pistes pour améliorer la gestion de ce phénomène. *Geo-Eco-Trop, 45* (3), 517-527.

Thibaut, K., Ayral, P.-A., & Ozer, P. (2023). Development of the Chrono-Systemic Timeline as a Tool for Cross-Sectional Analysis of Droughts—Application in Wallonia. *Water, 15* (23), 4150. doi:10.3390/w15234150

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