



## Assessing water scarcity narratives in Brazil – Challenges for urban governance

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### ABSTRACT

Analyzing water scarcity narratives is important for formulating policies. However, narratives and discourse are not neutral but are deeply embedded in societal contexts. They have the power to influence decision-making processes by legitimizing some solutions and disregarding others, as well as by including or excluding the needs of specific social groups. In this study, we examine water scarcity narratives in Brazil, identify those that perpetuate and support strategic viewpoints and determine which types of narratives possess the most persuasive and coordinative power. Furthermore, we aimed to understand how framing the issue impacts local-level solutions, policies, governance, and water management, specifically emphasizing the state of São Paulo. We analyzed a large textual dataset from Brazilian newspaper articles from 2010 to 2021, utilizing machine-learning text classification tools, an essential method in Natural Language Processing. Our findings indicate that the water scarcity narrative in Brazil is multifaceted and encompass various narrative typologies that offer insights into different aspects of the issue. These typologies include narratives on institutional, management/mismanagement, escalating deforestation, and causal factors such as reduced rainfall. These narratives tend to downplay the responsibility of local governments for effective water management and align with climate-centric perspectives. Furthermore, various groups have politically appropriated some narratives, including those promoting denial narratives, which undermine the severity of the water scarcity problem and emphasize the abundance of this resource. On the other hand, water justice narratives bring attention to the challenges of limited access to water and inadequate infrastructure. The COVID-19 pandemic has brought these issues to the forefront revealing the urgent need for equitable water distribution and improved infrastructure.