Tropentag, September 16-18, 2026, hybrid conference

"Towards multi-functional agro-ecosystems
promoting climate resilient futures"

Influence of power dynamics on multi-level governance of climate adaptation in the water sector of khuzestan, Iran

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Abstract

The impacts of climate change transcend political and territorial boundaries, requiring coordinated responses across global, regional, and local scales. This transboundary nature necessitates a shift from traditional, top-down governance toward Multi-Level Governance (MLG) – a system where decision-making authority is distributed among diverse actors, including state institutions, private entities, and civil society. This shift is essential for addressing the intricate socioeconomic challenges posed by climate-induced water scarcity. Although actor plurality promises enhanced learning and accountability, it functions as a double-edged sword. Overlapping responsibilities, fragmented mandates, and conflicting institutional priorities often trigger coordination dilemmas that disrupt essential adaptation processes. The decisive factor in this context is power dynamics: whether institutional interactions gravitate toward an elite-centric arrangement (concentrating power within a small minority) or a pluralistic one (fostering equitable influence) determines the success or failure of climate-responsive policies. However, prevalent literature often conceptualises the state as a monolithic entity, neglecting intense intra-governmental contestation and the ways power asymmetries impact lower-level actors – a challenge acute in the Global South. This analytical blind spot marginalises local stakeholders, allowing institutional elites to maintain disproportionate control over critical decisions. To unpack these complexities, this study focuses on the water sector in Khuzestan Province, Iran, a region facing severe climate stresses. The research adopts a mixed-methods approach. We utilise stakeholder analysis to classify organisations based on their material (e.g., funding, infrastructure) and ideational (e.g., knowledge, policy framing) power resources. This is complemented by semi-structured interviews and Social Network Analysis (SNA) to map interaction patterns and uncover the gap between official structures and the real flow of power. The findings demonstrate that agricultural water governance in Khuzestan reproduces a pervasive form of hidden centralisation. Despite an outward appearance of participation, these structures constrain local agency. Consequently, this study proposes a strategic framework for redesigning governance structures to recalibrate power dynamics, advocating for more inclusive policies essential for the transition toward climate-resilient agro-ecosystems.

Keywords: Climate change adaptation, Iran, multi-level governance (MLG), power dynamics, social network analysis (SNA)

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