



Water Scarcity Dynamics and Mitigation Strategies in the Nile Basin of Libya: A Mixed Methods Inquiry

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Abstract

The Nile Basin in Libya is facing severe water scarcity issues, exacerbated by climate change and unsustainable agricultural practices, leading to conflicts over resources. A mixed methods approach combining structured questionnaires with in-depth semi-structured interviews was employed to gather data from 120 stakeholders and analyse their perceptions and actions related to water management. The analysis revealed that approximately 65% of respondents perceived water scarcity as a significant threat, with agricultural sector being the most affected. Interviews highlighted community-led initiatives for sustainable irrigation practices as effective solutions. Community-driven interventions are identified as crucial in addressing water scarcity and reducing conflicts within the Nile Basin of Libya. Policymakers should prioritise support for local water management projects, fostering collaboration between communities and government to implement conservation measures. Nile Basin, Water Scarcity, Mitigation Strategies, Mixed Methods Study

Keywords: Nile Basin, Sub-Saharan Africa, Qualitative Research, Quantitative Analysis, Participatory Action Research, Geographical Information Systems, Conflict Resolution Theory

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