Co-developing strategies to promote inclusive water governance in Malawi

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Aim: Integrating methods in systems thinking to uncover emergent network structure, system behaviour, and leverage points for change

1. Malawi's water sector

Malawi is a small, landlocked country in sub-Saharan Africa, bordering Tanzania, Zambia, and Mozambique. Malawi has one of the lowest average national income levels in the region, and over 80% of the population reside in rural areas that **depend largely on communal water points** for safe drinking water.

Functionality rates of these water points have averaged around 70% nationally without much change over the last decade. Groups of **community volunteers make up the majority of frontline managers** of rural water systems. Despite dependence on community-based management of water supplies, **citizen engagement** has yet to be hard-wired into sector governance processes.

Poor governance has been identified as the cause of many ongoing challenges in the water sector, and threatens to impede progress towards Sustainable Development Goal 6.

2. Meet the stakeholders

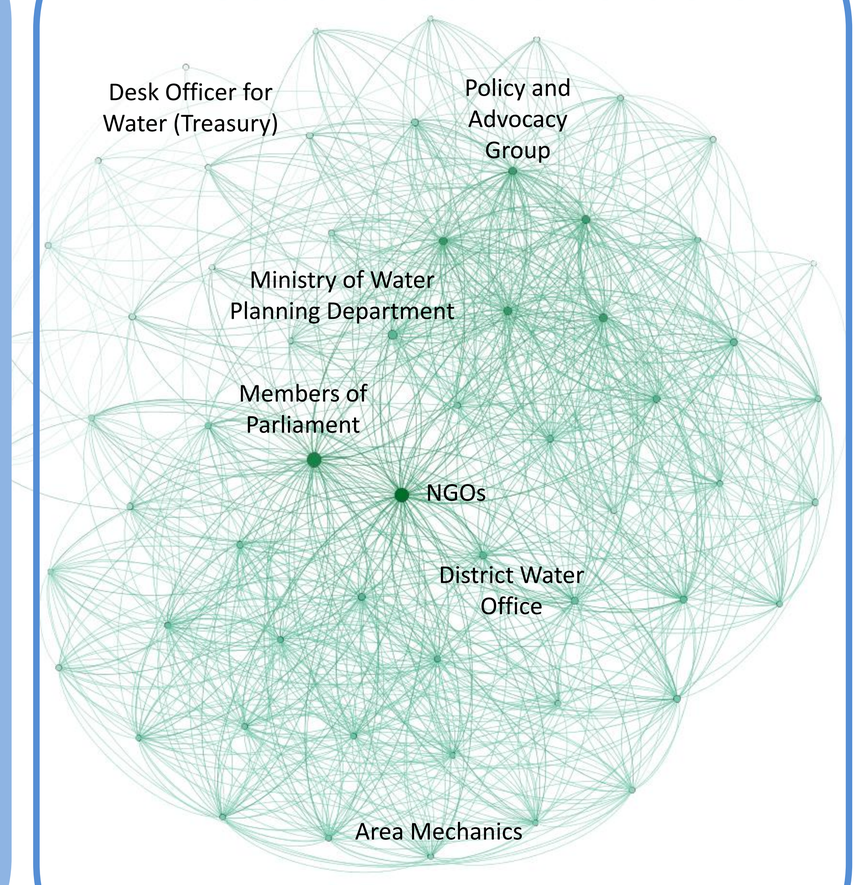


Figure 1: Social network ties of 60 water sector stakeholders according to policy in Malawi

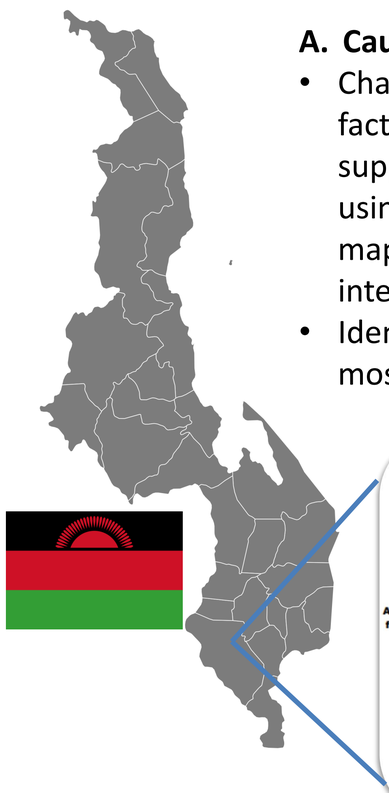
3. Governance and Systems Thinking

With hundreds of governmental, non-governmental, parastatal, regulatory, private and community organisations operating in the same space, **water sector governance challenges remain primarily social in nature**.

Importantly, it is not clear **which actors or processes in this complex system impact most on water outcomes**, or how strengthening certain system linkages would make the most out of limited resources.

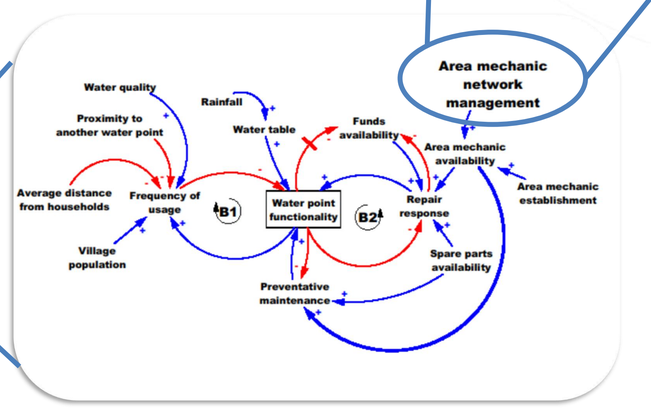
While the use of 'systems thinking' approaches for the management of water resources is not new, **the successful integration of natural and social science methods remains elusive.** This study aims to integrate systems mapping with social network analysis to identify existing behaviour patterns and leverage points for change.

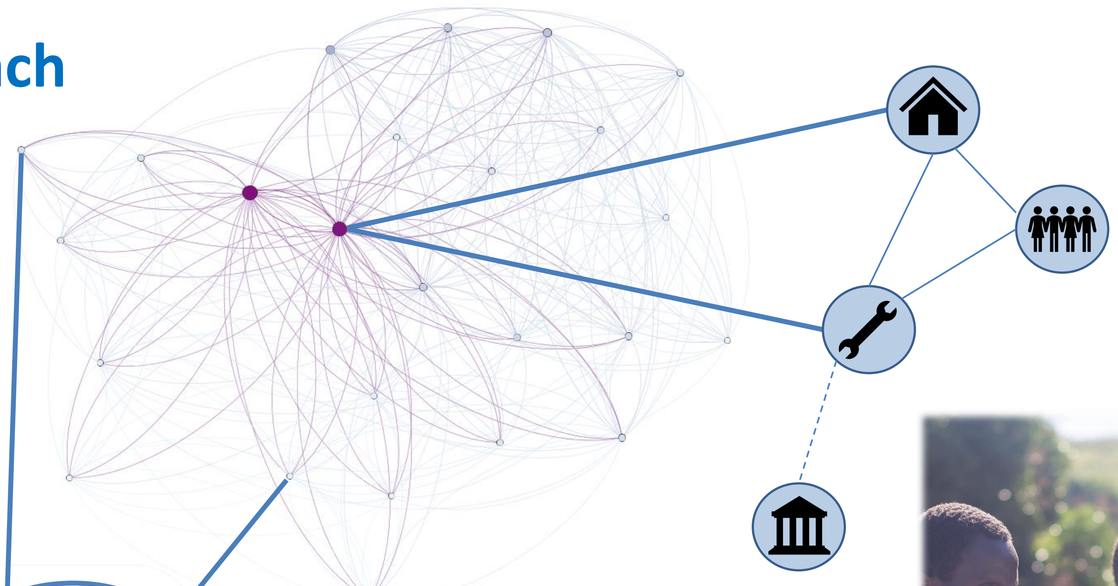
4. Proposed research approach



A. Causal Loop Diagramming

- Characterise all localised factors influencing water supply in a catchment area using participatory systems mapping and model their interactions.
- Identify feedback loops that most impact water supply.





B. Social Network Analysis

- Analyse the system of human interactions and decision-making that drive the identified feedback loop. Which stakeholders have the most influence? Who are the gatekeepers of information?
- Identify opportunities to close feedback loops.

C. Co-design and trial methods to close feedback loops

- Focus on novel pathways to improve citizen interest and participation in water governance in Malawi.
- Develop linkages between isolated decision-makers in the system.

5. Anticipated outputs

Results of the study will inform recommendations for changes to policy and practice in Malawi, including national policies and guidelines, local authority engagement with communities and NGOs, and prioritisation of donor investments including those made by Scottish Government. The study will also contribute practical methods of identifying routes for bolstering connections between stakeholders, especially citizens, by building from existing network behaviours and system realities.

Results could also form contributions to the wider water governance sector through illustrating favourable network "archetypes" for specific governance factors; providing insight on proxy indicators of improved governance derived from network archetypes; and provide novel methods for combining systems thinking and participatory approaches.

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