

4th SADC GROUNDWATER CONFERENCE

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VIRTUAL CONFERENCE



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Investigating local-level institutions and groundwater management approaches in the borderland communities of the Horn of Africa

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International Association
of Hydrogeologists
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Groundwater management in the Horn of Africa – main goals

- Identify the main **uses** of groundwater in the region, and the **role** of communities in managing groundwater
- Understand the **relationship** between:
 - Communities and community institutions
 - The formal national frameworks and institutions for groundwater management
- Examine **changes** in institutional responses and interactions as well as household and community strategies in response to shocks over time
- Identify the specific **barriers** hindering institutional functioning and make concrete recommendations for their improvement



Groundwater analysis - research questions

Q1. How do communities and community institutions interact with the formal national frameworks and institutions in relation to the management of groundwater?

- Are transboundary communities involved in management of groundwater? If so, how? And how are these related to national policies and development interventions?
- How have these institutions evolved over time?
- What are key obstacles to the effective and efficient functioning of these groundwater institutions?

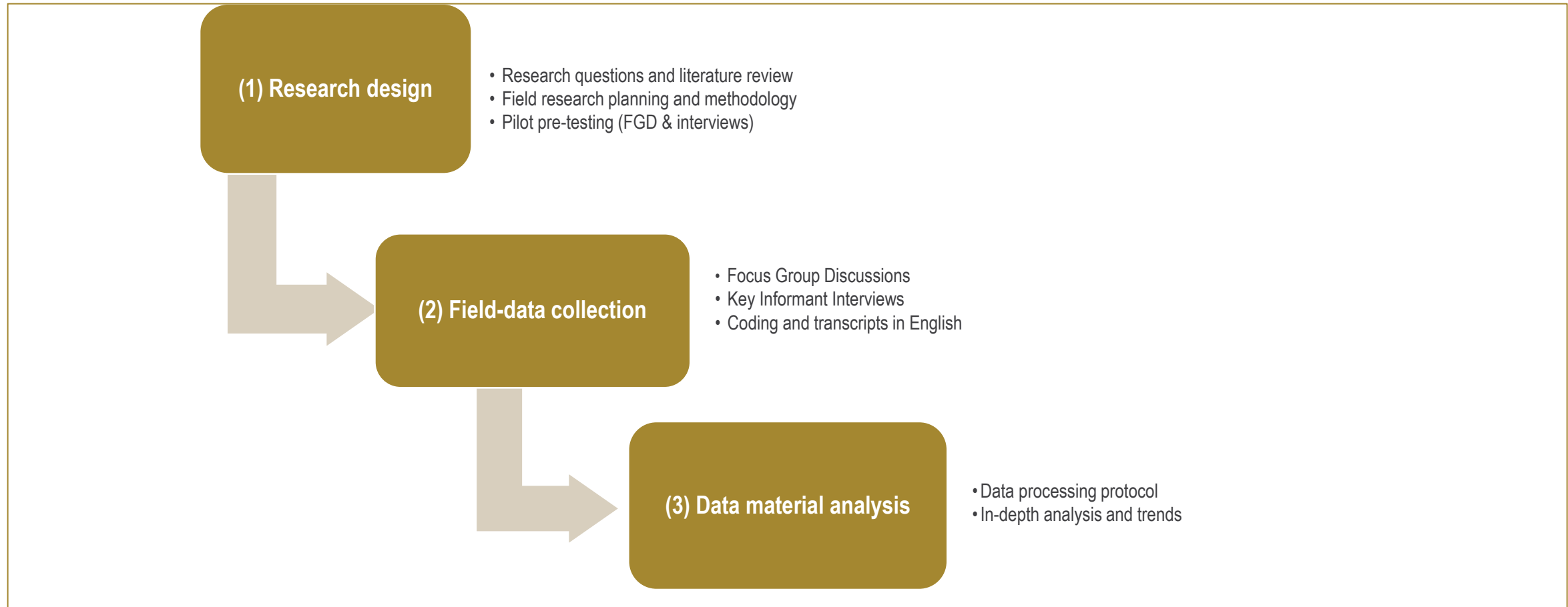
Q2. What is the role of groundwater (and groundwater management) in community and household resilience?

- What kinds of household-based and community-based coping strategies have been used over time in respect of accessing groundwater (especially in the context of shocks/climate stresses), and what have been the medium/longer-term consequences?

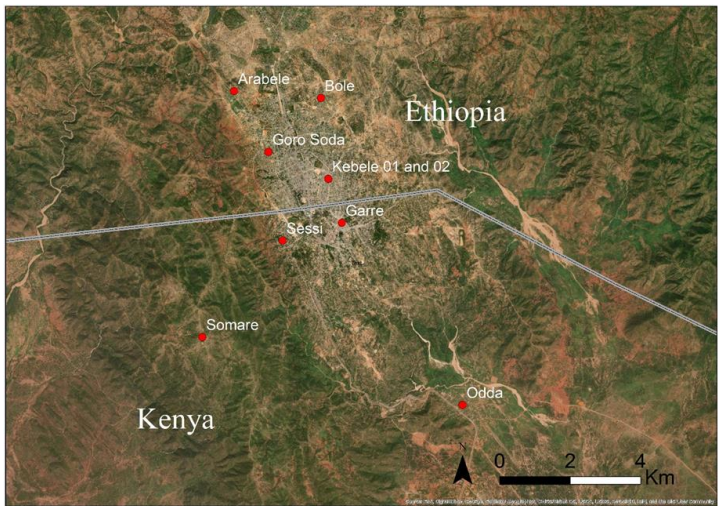
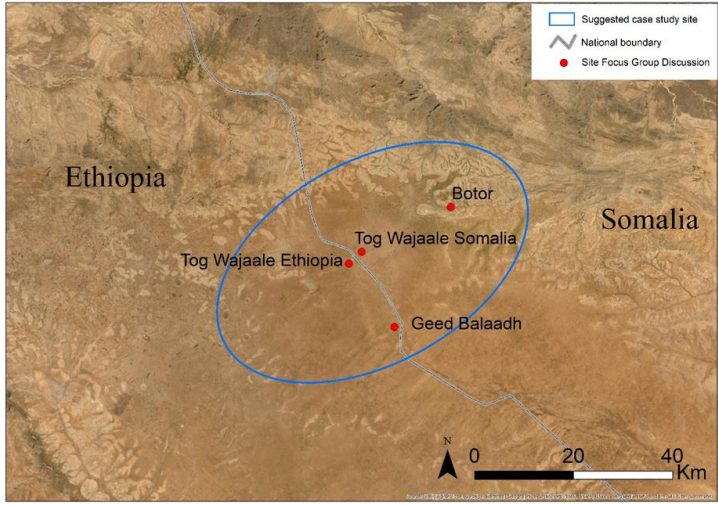
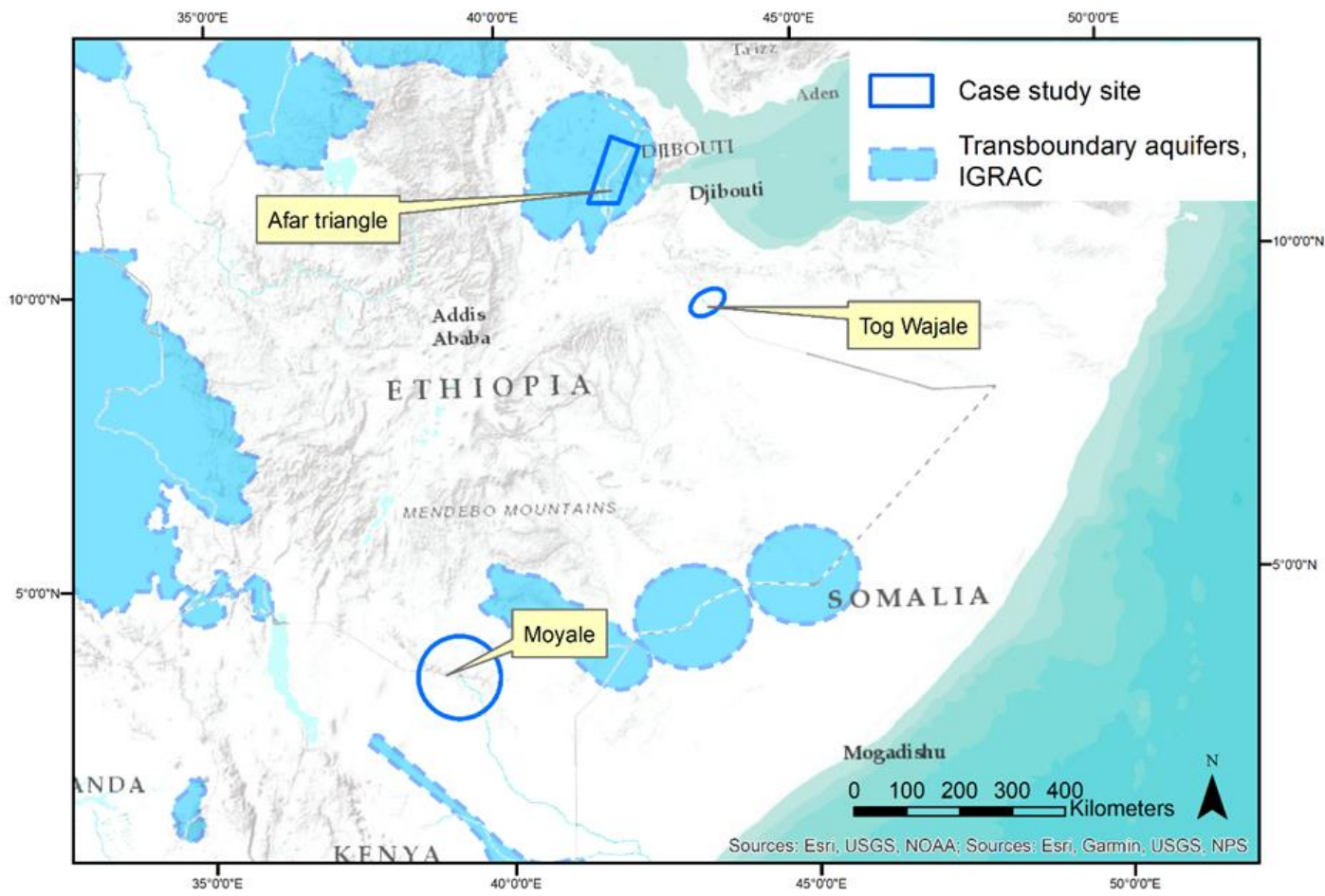
Q3. What are some of the effective community-based approaches to groundwater use and management (specifically in HoA, but also elsewhere) which can be drawn on to inform the HoAI Interventions?

- What are some approaches/recommendations in respect of groundwater which could help increase the climate resilience of communities and households?
- Examples of relevant development projects and interventions?

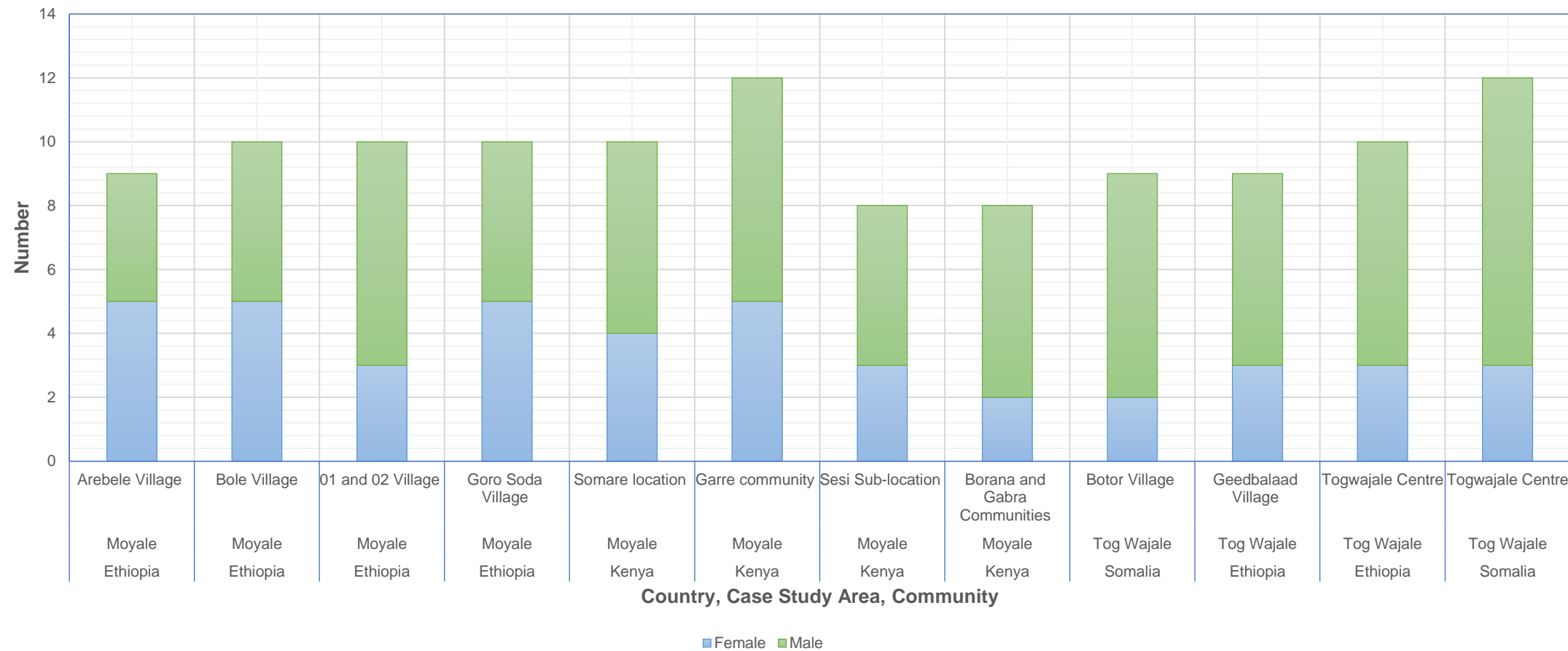
Project methodology



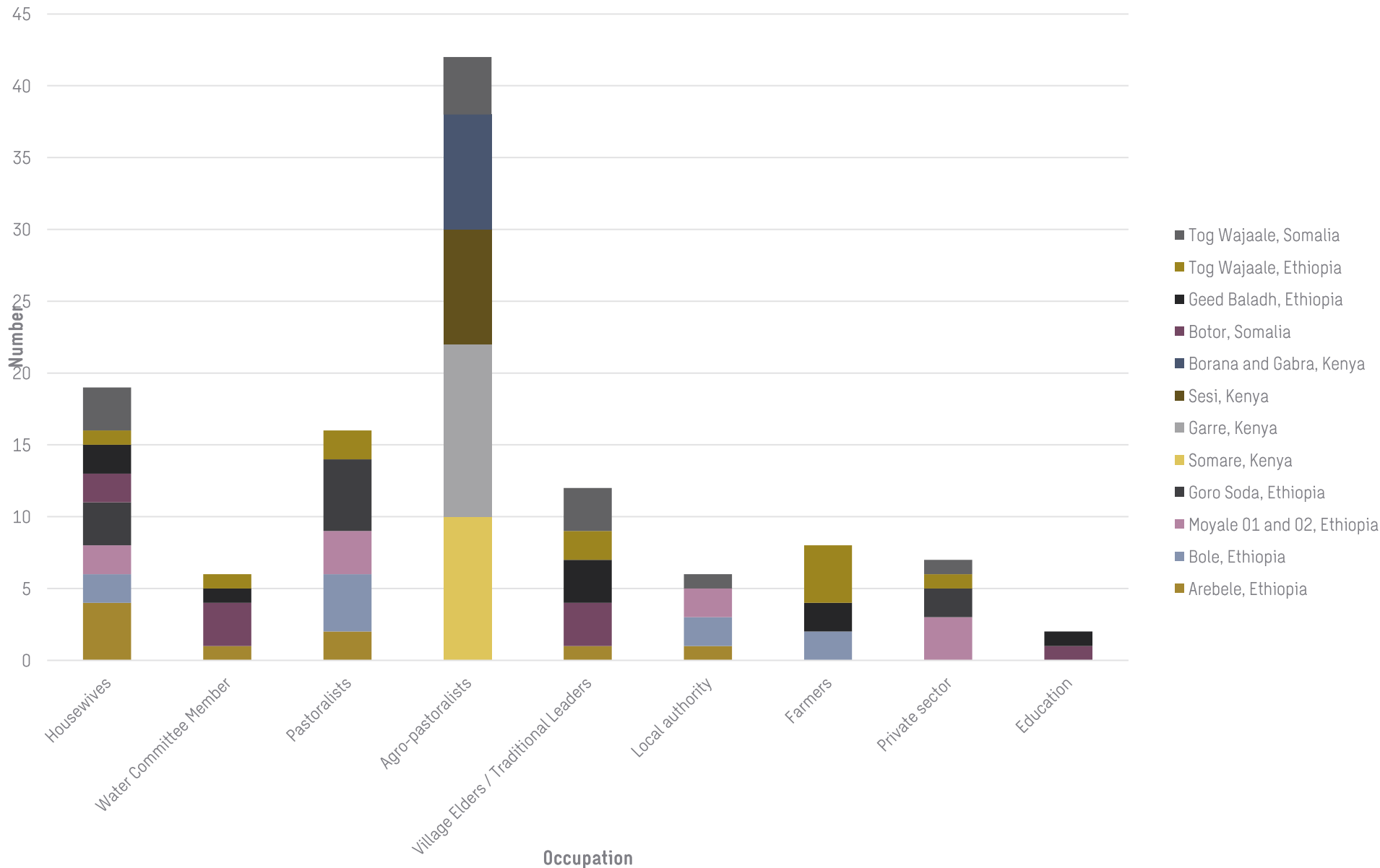
Selected case study areas



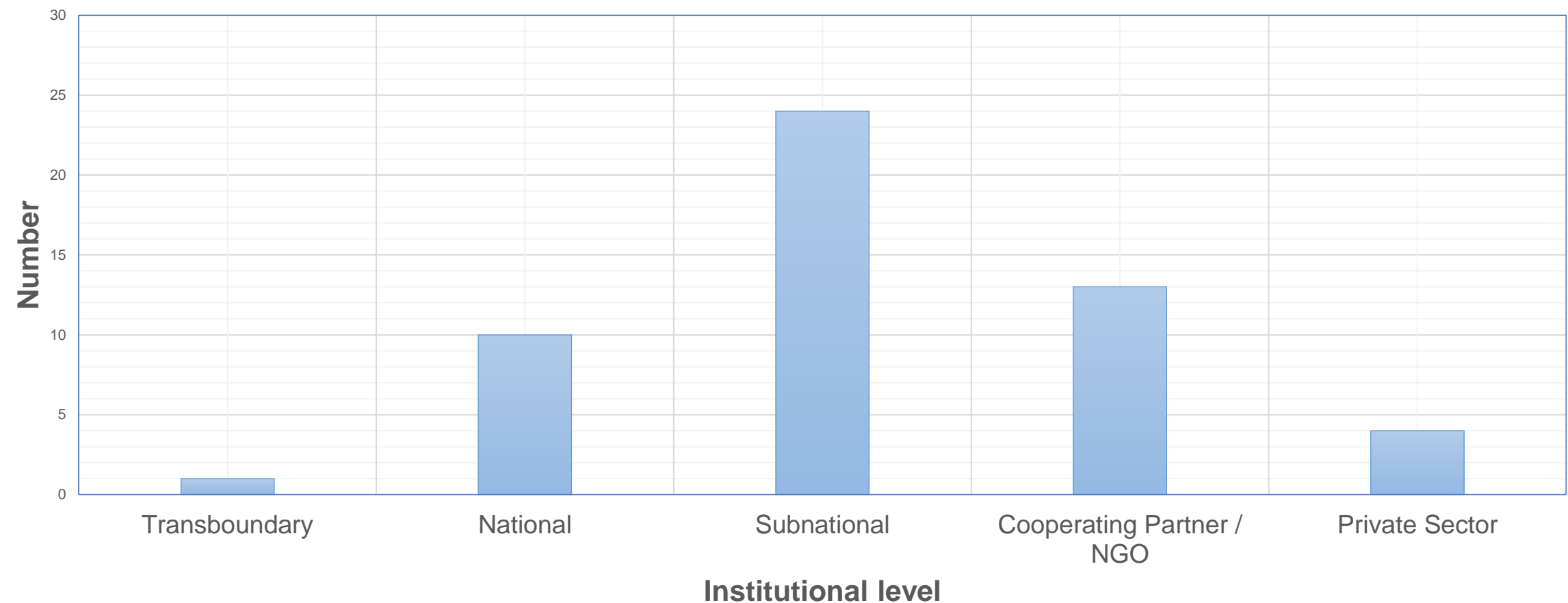
Field data collection – FGDs Number of Participants



Field data collection – FGDs characteristics



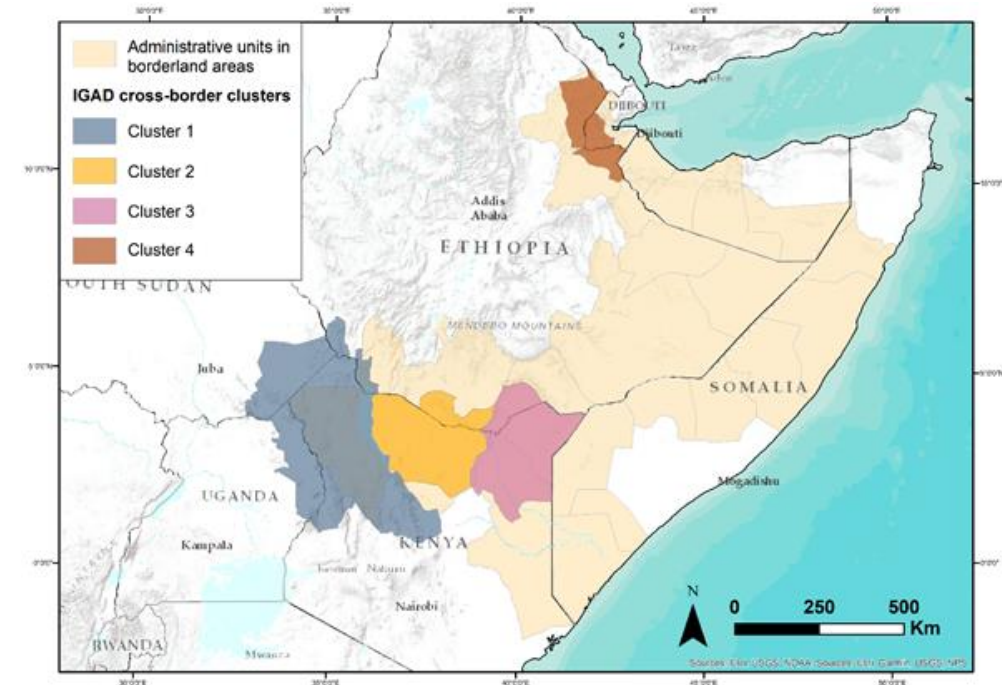
Key Informant Interviews (n = 51)



Transboundary institutions

- There are no formal transboundary organisations in place dealing with groundwater exploration, assessment and management
- Cross-border clusters has been identified by IGAD based on their importance in terms of human and animal cross-border movement, and the need for regional cooperation
- There was recognition by the key informants that lack of knowledge of groundwater systems in the region is a constraint to utilisation
 - Countries have not invested in groundwater exploration, monitoring and management

The clusters were identified by the key informant at practicing at transboundary level but not by key informants at national and subnational levels



Formal institutions

- Formal institutions have created pressure on the pastoralists and the pastoral economy.
- The interventions were based on wrong assumptions that pastoralism is backward, extravagant and unfit for the modern way of life, i.e. pursuing large-scale commercial agriculture, the establishment of national parks and the settlement of pastoralists
- Gebeye., 2016



Subnational institutions

- **Poor operation and maintenance** of groundwater schemes. Dramatic escalation of prices in goods and commodities costs result in difficulties to source spare parts. There is also **limited budgets** to improve the water supply system. There is **limited financial capacity** in managing the water fees. Lack of financial resources to buy fuel or pay electricity bills are also mentioned as common reasons for interruptions in the water supply.



- “Communities don’t interact with the groundwater management institutions, they interact with politicians like area member of parliament (MP) and the governor, because they are the ones with power to influence the ground water management
- Politicians have made communities not to interact with legal groundwater management institutions, but with themselves
- There are more legal institutions than necessary, and they have overlapping roles or responsibilities, and it is confusing, that is the reason for people to stay away from interacting with those different levels of institutions

Informal institutions

- Decisions about access to and control of natural resources are made by the village council, which consists of the clan leader, clan elders, local wise men and a traditional rule-enforcing unit
- Informal institutions play a key role in regulating and facilitating economic activity and managing conflict, especially as the formal institutions are often weak or absent



- The WUAs in collaboration with Abba Herega (traditional water management system) manage our water points on behalf of the community.
- While the WUAs are responsible of community's groundwater resources management, the traditional structure called Abba Herega, is responsible for water distribution to our communities and those from the neighbouring villages and regions (Wajir County). The Abba Herega develops schedules for the water users, for examples, whose livestock should be watered first, and from what time, which type of livestock should drink first, is camels, or cattle. He determines what time water for domestic and farming are fetched.
- Participants in focus group discussion in Borana and Gabra villages, Kenya

Women, IDPs and youth

- Underrepresented in decision-making structures and grievance mechanisms

A good example of involvement of women in water management include Somare community in Kenya the FGD and KI state that the water availability in the local water pan has increased from 1 to 2-3 months following the appointment of nine women in the water committee group. The group has received training in water management and water point maintenance



Roux, K. Drought takes hold in Djibouti - IFRC. <https://www.ifrc.org/ar/news-and-media/news-stories/africa/djibouti/drought-takes-hold-in-djibouti/>.

Main findings from the study

- Governments have a very limited knowledge of groundwater resources in the borderlands and transboundary aquifers which pose a problem of planning and developing water resources to meet the population water demands in the borderlands
- Informal institutions and clan or ethnic affiliations dictate access to natural resources such as groundwater and conflict resolution in borderland areas
- Transhumance is the primary coping mechanism to drought – groundwater development should be carefully planned in terms of risk of degradation, loss of ecosystem resilience and of access to resources (especially women, youth and IDPs)
- Multi dimensional strategies including integrated planning for groundwater resources development and pastoral institution building are required to increase resilience for both groundwater resources and communities



