



Case Study 1: Social Networks in Water Governance and Climate Adaptation in Kenya

Water scarcity in Kenya was a cursed affair but Kenyan Government was able to solve this problem through a result-oriented community-based approach wherein all important stakeholders cohesively participated in the governance schedules. They applied the decentralized governance method with effective climate change adaptation strategies in the water sector. Their government applied Integrated Water Resource Management (IWRM) at the small scale of community level in rural part of Loitokitok district which is located at southern Kenya.

Loitokitok district in Kenya is inherently water scarce due its arid to semi-arid physiography. Some of the other reasons that led this region to water insecurity are, recurrent drought due to climate change, widespread deforestation and poor land management and governance. According to Kenyan government 2009b report, only 647 m³ per capita per annum water available in Kenya whereas the international benchmark of 1000 m³ per capita per annum. To address the issues

Kenyan government adopted Integrated Water Resource Management (IWRM) based on the decentralization principle involving a network of water governance actors namely Public actors (government agencies manage the water resources in Loitokitok district), Private actors (foreign government or international organization actors that usually collaborate with the Kenyan government), Non-governmental actors (NGO work to increase water provision, distribution, and building capacity in the district) and Civic actors (66 water project and several business groups licensed sell water to the community). The actors are interlinked with each other on the basis of three activities - financial support, research and technology development, and/or project implementation in water governance at Loitokitok. Throughout the implementation phase the public actors strengthened technical know-hows of water harvesting and efficient irrigation practices. Private actors like UNICEF, SNV and Red Cross worked on WASH to reduce waterborne diseases. These private actors along with

other civic actors initiated leadership interventions for increased collective actions in water infrastructure. With all these supports and activities the Loitoktok community should have become technically sound and equipped in water governance, provided the actions were integrated. However, the improvement was not up to the mark.

To find out the level of coherence among stakeholders in water conservation and adaptation implementation the author carried out Social Network Analysis in this study. "Social network analysis is an approach that analyses relationships among various social actors as real interactions with local potentials and liabilities that influence success of any decision-making process" (Lourenço et al. 2004). It can also reveal the deficiencies in the existing system, which can be used to formulate improved policy framework for future challenges. Though the structural policy of IWRM enables the stakeholders and actors to work on water management synergistically from a single location, the social network analysis of Loitoktok district reveals low and/or incomplete interconnectivity and coordination among stakeholders involved in water

governance. This has led to development of many structural holes that hindering spread of adaptation strategies to the wider community and results in independent implementation of water conservation measures. The case study of Loitoktok confirms that through individual effort to implement IWRM can gain success at small-scale in securing water for the region, but at the national level implementation of IWRM essentially require synchronization among stakeholders to upscale existing adaptation measures for water management. There is also need for alignment between national development objectives and rural strategy plans, as the competition over water across all sectors increases with population growth and industrialization. Increased synergy among actors will reduce conflicts over water, enhance water security and open up new opportunities for livelihood.

(Source: Grace W. Ngaruiya, Jürgen Scheffran and Liang Lang, (2015), Sustainable Water Use and Management: Examples of New Approaches and Perspectives, Springer International Publishing, Switzerland.)