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“Filling gaps and removing traps
for sustainable resource management”

Waterbody Management in Peri-Urban and Rural Areas of Metropolitan Bengaluru: Example of a Polycentric System

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Abstract

Urban and rural areas were regarded as distinct areas in the past, which in the recent years has increasingly blurred. This is mainly associated with interdependence between the two areas leading to a functional relation due to complementarity, which comprise of economic, political, physical and social issues including resource use and sharing. The nature of interactions between rural and urban areas can be viewed as partnerships with two-way flows and establishment of variety of governance systems to manage these relationships leading to emergence of polycentricity. Our focus is on the Metropolitan region of Bengaluru, India. It covers an area of 8005 km², across three administrative districts, comprising of numerous small and medium towns and villages in addition to the metropolis. The region is struggling to prevent the destruction of its waterbodies that are converted into wastewater dumps. The wastewater from the urban area has transformed a seasonal river into a perennial river leading to an increase in the agricultural production and dairy farming in the periphery and the rural areas. This increased availability of water [wastewater] to farmers in addition to improved access to services and market has changed the patterns of interactions among actors in relation to management of waterbodies in the region.

This paper tries to understand these interactions between peri-urban and rural areas through the lens of polycentric governance framework developed in Thiel & Moser (2019) based on Ostrom & Ostrom (1999) and Ostrom *et al.* (1961) to understand foundational aspects shaping the emergence of planning and governance of waterbodies in the region. Based on the preliminary analysis of the secondary and field interview data we identify three main forms of interactions, which affect the structure of polycentric governance in the region namely: competition, cooperation and coercion, between actors both in urban and rural areas which lead to coordinated outcomes. The paper further argues that polycentric governance is established first, due to overarching rules, which enables self-organisation by providers and consumers involved in governance. Second, the heterogeneity of the community referring to the capabilities, values and interests, income and information available which dictate how actors introduce into negotiations over governance.

Keywords: Polycentric governance, urban-rural interactions, waterbody management