

Community governance of urban wetlands

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Introduction

The last three decades have witnessed an explosion of studies around common property resources (CPRs). However, one major gap in the current literature on CPRs is the lack of research on urban commons (Colding et al., 2013). Urban ecology faces massive pressure due to urbanisation and population growth; on the other hand, natural resources such as urban wetlands also provide crucial ecosystem services [Millennium Ecosystem Assessment (Program), 2005]. The need of the hour is to protect and conserve them to tackle climate change.

This study explores factors that impact the cooperation of the government with local communities for governing urban wetlands in Bengaluru, a city in south India. Urban wetlands play an important social and ecological role [Millennium Ecosystem Assessment (Program), 2005]. However, management of urban wetlands is challenging. Bengaluru, known as the 'Garden City of India', has witnessed tremendous damage to its well-connected system of artificial lakes—a form of urban wetland. Recent efforts by citizen groups to rejuvenate and manage different lakes provide important insights into the fragmented governance of CPRs. The research question for this study is: what factors impact the cooperation of governmental actors with local communities, for collective action in management and rejuvenation of lakes in an urban setting?

Methodology

Due to a paucity of literature on urban commons, this is an exploratory study. To achieve the objective of this study, existing literature on natural resource management to identify factors that impact the cooperation of the government with local communities was first reviewed, followed by a review of studies on lakes in Bengaluru to identify additional factors. The author also conducted semi-structured interviews with four lake groups (at least two members from each group) that have been engaged in collective action in Bengaluru. Of the four lake groups, two were successful—hereby referred to as successful lake 1 (SL1) and successful lake 2 (SL2); and two were unsuccessful, hereby referred to as unsuccessful lake 1 (UL1) and unsuccessful lake 2 (UL2)—in rejuvenation and management of lakes to identify more factors as well as to validate the factors identified from existing literature. Additionally, the study will also look into how different factors impact successful and unsuccessful lake groups.

Literature Review

Coordination and communication between different governance actors has been identified as an important factor that enables collective action for natural resources, both in theoretical models (Ostrom, 2000) and field experiments (Andersson, 2004; Meinzen-Dick, 2007). This factor becomes even more pronounced with the emergence of polycentric forms of governance, (Ostrom, 2010) which rely on nested enterprises (Ostrom, 2007, 2009) where multiple actors at different levels engage in management of natural resources.

While there is a growing recognition that natural resource management requires a more holistic approach with an emphasis on creating institutions that enable collective action, it is also important to recognise that coordination between the multiplicities of actors is also accounted for. One obvious and extremely important actor in such institutional arrangements is the government (Agrawal, 2003; Bardhan, 2000; Meinzen-Dick, 2007). Agrawal and Gibson (1999) claim that governments can resolve intra-community and intercommunity conflicts, provide external intervention to change exploitative norms, provide specialised knowledge, resources and technical support that local communities do not possess.

While the positive effects of government involvement have been highlighted above, it can also have negative effects including resistance to external imposition of rules by communities (Bardhan, 2000; Ostrom, 2000), frequent transfer of government officials, lack of coordination between government and other actors (Andersson, 2004) as well as between different government agencies (Ratner, Mam, & Halpern, 2014).

The indispensable role played by the government in natural resource management makes it extremely important for other actors to cooperate with them by creating effective channels of communication. Andersson (2004) states that 'for governance actors to be able to cooperate effectively they need to communicate effectively with one another'. However, poor communication between different government agencies across sectors acts as an impediment in the governance of natural resources (Ratner et al., 2014). This lack of communication hinders coordination due to differences in the actors' preferences, interests, disparities in their access to power, resource and information, short tenures of government officials, presence of multiple government agencies (Andersson, 2004) and misaligned political and economic incentives (Gibson and Lehoucq, 2003).

Problems of coordination can be overcome when actors engage in repeated interactions, valuing the future benefits of increased cooperation and are allowed to communicate face-to-face. They should be able to discuss optimal joint strategy, exact promises from each other, give verbal tongue lashings and have a richer language structure coupled with the ability to read intonations and body language (Ostrom, 2000).

Based on the above literature review, factors impacting the cooperation of the government chosen for this study are trust and reciprocity (includes repeated interactions and face-to-

face communication); communication between different government agencies; frequent transfers; and resistance to external imposition of rules. Political and economic incentives were also identified as a factor. However, due to limitation of time, the author did not get the opportunity to interview government officials to understand their perspective behind certain decisions. Hence, these factors were dropped for this study.

Context of Bangalore

Historically, lakes in Bengaluru were managed by communities. Other than being a source of fresh water, they were also useful for agriculture, drinking, fishing, cattle washing and domestic uses (D'Souza & Nagendra, 2011; Sundaresan, 2011). As a result, the ecology of the lakes was shaped by different social conceptions and needs of different groups (Unnikrishnan and Nagendra, 2016). Over the years, the city has struggled to balance conservation and management of its resources with urban expansion and economic growth, (Unnikrishnan and Nagendra, 2015) leading to severe pollution and encroachment of lake areas. Additionally, the governance structure shifted from being community managed lakes to a more formal government structure during colonial times, which continued after independence with the number of government departments increasing progressively. This was accompanied by increasing migration, erosion of traditional communities, and changes in land-use pattern (D'Souza & Nagendra, 2011; Sundaresan, 2011).

The focus in Bengaluru is often on economic growth, while conservation and management of natural resources takes a back-seat (Sundaresan, 2011; Unnikrishnan and Nagendra, 2016). Focussing on economic growth alone points to misaligned political and economic incentives for conserving natural resources. However, this can be tackled by mounting pressure on government officials through lake groups and civil society organisations as was done in the case of Guatemala (Gibson and Lehoucq, 2003) and previously in Bengaluru (D'Souza & Nagendra, 2011; Sundaresan, 2011). This section adds another factor: the ability to apply pressure on the government.

Findings

In addition to the factors identified above, the interviews revealed four more factors that can impact cooperation of the government. These factors are: presence of a committed government official in a position of power, political support, delayed action and deliberate non-action, and downward accountability. The table below shows how the factors impacted the four lakes.

Factor/Lake	SL1	SL2	UL1	UL2
Trust and reciprocity	+	+	-	-
Communication between different government agencies	-	N.A.	N.A.	-
Frequent transfers	N.A.	-	N.A.	-

Factor/Lake	SL1	SL2	UL1	UL2
Resistance to external imposition of rules	-	-	-	-
Ability to apply pressure on the government	+	+	-	.
Presence of a committed government official in a position of power	+	+	-	-
Political support	N.A.	N.A.	-	.
Delayed action and deliberate non-action	-	-	-	-
Downward accountability	-	-	-	-

Table 1* + indicates a positive impact on the lake; - indicates a negative impact on the lake; indicates no impact on the lake and N.A. indicates that the factor was not found impacting the lake.

In the case of successful lakes, it was clear that their efforts in rejuvenating and managing the lakes were strengthened by the presence of a committed government official in a position of power as well as trust and reciprocity. In both cases, the official was present in the government agency which had been mandated to manage the lake. On the other hand, UL 1 neither had the support of the government agency responsible for managing the lake nor any official in it. UL 2 was able to garner the support of a junior officer in the government agency, but that officer could not wield significant power, thereby diluting his ability to influence governmental decisions.

The findings also reveal that trust and reciprocity can be enhanced without face-to-face communication but not without repeated interactions. Establishing a point of contact is equally effective in enhancing trust and reciprocity as face-to-face communication, which both the successful lakes were able to do. Repeated interaction is still an important factor that impacts trust and reciprocity. While all the groups tried to apply pressure on the government through public events like signature campaigns, walkathons, human chain, and by repeatedly visiting government agencies, the effect was positive for only the successful groups.

All four lake groups suffered due to resistance to external imposition of rules. UL 1 faced resistance from elected representatives. Despite receiving political support, UL 2 suffered from resistance to rejuvenate the lake, mainly by people or institution(s) wanting to make economic gains from high land prices around the lake. This problem was further compounded by its invisible presence. The lake group did not know the people or the institution(s) that were resisting rejuvenation of the lake.

Delayed action and deliberate non-action was a general issue that plagued all four lakes. The government agencies delayed taking action against encroachments that the lake groups informed them about. In some cases, the government would respond after the encroachment

construction was complete, by which time any action would be ineffective. Additionally, for the two unsuccessful lakes, the concerned government agencies never conducted a land survey of the lakes to demarcate their boundary despite several requests from the lake groups. A review of literature on CPR clearly highlights the importance of the presence of clearly defined boundaries for successful management of lakes. This non-action by government agencies was a major hindrance for the unsuccessful lakes.

The lack of downward accountability was another issue that all the lake groups identified. In all cases the government agencies would give verbal commitment to take action on a complaint but rarely took any concrete steps. This also meant that the ability to put pressure on the government had limited impact. In some cases, the local ombudsman was able to put some pressure, but that was inadequate. The lack of political support also limited the impact of the pressure on the government as public events like walkathons, human chain, and a signature campaign did not solicit adequate response from the elected representatives. This also points to the fact that misaligned political incentives tend to dilute the effect of citizens applying pressure on the government to take action. Amongst other factors, lack of communication between different government departments was an issue for SL 1 and UL 4 while frequent transfers of officials were issues for SL 2 and UL 2.

Conclusion

The study shows that fragmented governance negatively impacts management of lakes due to problems associated with cooperation. The absence of a clear policy on management of lakes has led to a dilution in downward accountability of different government departments leading to delayed action and deliberate non-action on their part. Additionally, trust and reciprocity along with the presence of a committed government official are two of the most important factors that can determine the success or failure of natural resource management in an urban setting.

The study reveals a few puzzles too. The puzzles relate to the interactional effect of different factors with each other. In case of UL 2, why was it that despite enjoying political support and applying pressure on the government, the lake group was unable to rejuvenate the lake? Did resistance to their efforts completely undermine all other factors? Or was it just the absence of a committed government official who would be apathetic to the cause of saving the lake, undermining all other efforts? While the study discusses some of the interactions, more research needs to be conducted to investigate it further.

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