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Complementary safeguards for robust regional watershed governance in a federation: New York City and its municipal water supply



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ABSTRACT

In federations such as the United States, governments at various levels are experimenting with new watershed governance arrangements to protect water quality for both ecosystem health and human consumption. Such arrangements may bring previously uncooperative governments together to credibly commit to resource protection under the auspices of new and intricate formal institutions. Given the risks of cooperation, theory indicates that a robust arrangement will contain means of holding governing actors accountable to each other. This paper examines a purportedly successful case, the New York City watershed governance arrangement, to identify how safeguards against intergovernmental opportunism promote lasting cooperation. Using the qualitative method of process tracing, this paper finds that the New York City watershed governance arrangement uses structural, judicial, and popular safeguards against opportunistic behaviors by governing actors that might threaten the resource or the arrangement. The results indicate that such safeguards are present and interact with other safeguards and rule institutions at the state and federal level to maintain compliance.

1. Introduction

Water and watershed governance is an increasingly important policy area worldwide as scientists and governments realize the potential of protecting ecosystem services to produce public goods (Milennium Ecosystem Assessment, 2005). Understanding what design elements of institutional arrangements and what levels of government involvement tend to improve governance outcomes is a major theoretical challenge (Parkes et al., 2010; Lant, 2011). When governments cooperate at the regional level to govern surface waters that span jurisdictional boundaries, how they do so is variable and the outcomes mixed (Imperial, 2005; Bidwell and Ryan, 2006).

Regional watershed governance has been examined in the international context regarding international river basins (Hooper, 2011; Conca et al., 2006; Ratner, 2003) and in regards to regions within a nation that contain multiple subnational governments (Abers and Keck, 2006; Kayser et al., 2015; Robins, 2007). A region, therefore, can refer to various scales. Intergovernmental cooperation can take different flavors and rely on different theories of cooperation depending on the scale. If the governance challenge is international and relies on treaties, institutional arrangements will likely differ greatly from those crafted to manage watersheds that occur within the boundaries of a single sovereign nation. Governance of water within a single country can also

vary depending on the political system in which it occurs. For example, watershed governance in a federal republic, which contains semi-sovereign state and sub-state governments, may differ from watershed governance in other forms of state such as parliamentary republics, socialist republics, unitary states, or totalitarian regimes (Benson et al., 2013).¹

Given the variety of scales and forms of government, it remains worthwhile to examine how robust water governance may be conducted in different contexts. Though many scholars have tackled this, much of the literature has focused on the large scale of international cooperation and on the small scale of highly localized water management. There remains a theoretical need to examine the middle range of water governance, where small governments and civil society groups interact with state, territorial and national governments to govern watersheds that spans jurisdictional boundaries within multi-state or sub-state regions of nations.

To that end, this paper deeply examines one crucial case in the United States over time for the purpose of theorizing about what institutional design elements promote robust watershed governance in federations, and how those designs promote credible commitments by multiple sub-state governments to protect water resources. The New York City watershed governance arrangement is a famous and well-catalogued case of regional watershed governance in the United States,

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¹ In this paper, "states" refer to sub-national governments in a federation, while "nation" refers to what are commonly called nation-states. "Sub-state" governments refer to smaller governments (such as counties and municipalities) within states.

and if examined through a theoretical lens of "robust federal governance," may produce some understanding of what institutional design elements promote robust watershed governance in a federation. This paper asks: How does the New York City watershed governance arrangement use federal safeguards to promote lasting cooperation for regional watershed governance? The following Sections 1.1 and 1.2 provide a theoretical justification for the question and define key terms and concepts.

1.1. Watershed governance in theory

Watershed governance generally refers to the cooperation of actors (individual people and/or their governments) to parse out access to water resources in a contained drainage basin for a variety of uses. This may take the form of allocating water by quantity or crafting rules regarding activities that may damage or enhance water quality for a variety of users. As scientific understanding about watersheds improves, such governance initiatives are increasingly about protecting ecosystems in watersheds, which are responsible for "producing" water (both in volume and quality).

Because watersheds may cross national, state, county, township, village, and special district boundaries, and encompass public and private property; developed and undeveloped land, watershed governance is inherently complex and has been examined from a political process perspective, a networks perspective, and from a normative policy perspective (Lant, 2011; Schlager and Blomquist, 2008; Rathwell and Peterson, 2012).

Thanks to the work of common-pool resource scholars, we know a lot about what tends to create robust water resource governance at local levels among individuals. However, these theories explain human behavior to craft institutions that overcome dilemmas of cooperation. They do not explain intergovernmental relations. Prominent common-pool resource scholars have called for researchers to tackle this short-coming of the theory as it stands- to systematically scale up understanding of how collective entities such as governments can govern common-pool resources together (Dietz et al., 2003).

Recent scholarship has begun to address this issue. Heikkila et al. (2011) and Schlager and Heikkila (2009) have examined the roles of cross scale linkages between governance levels and the role of conflict resolution forums in interstate river compacts in the US, in an attempt to scale up the principles of robust common-pool resource governance to explain intergovernmental relationships. Examining cooperation below the interstate level in federations, Garrick et al. (2012) found that the subsidiarity principle of including sub-state local governments and civil society in decision-making and administration promotes robust water governance in multijurisdictional federal systems such as Australia. This is one example of a broader issue raised by Garrick et al. (2014): that as federal systems of government proliferate worldwide and allocate jurisdictional responsibilities to states (and thus multiple sub-state jurisdictions like counties, townships etc.), we must better understand how these multiple layers of government govern water that crosses their boundaries.

At least as it applies to federal systems, such a perspective begs an understanding of when and how to decentralize governance of water resources to the watershed scale. Lant (2011) argues that our modern understanding of how and why watershed contained ecosystems function to produce services to human populations has led us to a new governance challenge: decentralize watershed management to state-facilitated, locally-led, watershed-scale governance. However, such political reorganizing creates new sets of "winner and losers" and is not by default more effective (Cohen, 2015). Whether the resource and user outcomes are beneficial depends on the contours of the emergent and designed governance arrangements, and the ways in which such arrangements are nested within and integrated with larger scales of governance (Ostrom, 1990; Marshall, 2007).

We are therefore at a point where watershed governance in

federations is becoming more common and is involving sub-state governments. The body of work examining interstate river basin management in federations (i.e. interstate river compacts) has produced knowledge regarding broad federal relationships in watershed governance, and recent scholarship is further developing understanding of robust governance at smaller scales that include sub-state governments and civil-society groups. However, there still exists a theoretical gap in understanding how governance of water resources at the sub-state watershed scale interacts with broader federal design to produce robust governance over the long-term. Additionally, we don't know if new watershed governance institutions are designed to include "federal" safeguards to guide the behavior of sub-state governments. Is it possible to use a theory of robust federalism to explain this interaction?

The System Theory of Safeguards

Theories of robust federalism and of robust common-pool resource governance, to a great degree, converge on a few key lessons. In both, robust governance seems to hinge on principles of institutional design which promote sharing of authority to make and enforce rules, and which produce venues in which governance actors (people and governments) may resolve conflicts (Ostrom, 1990, 2008; Bednar, 2009). Theories of robust federalism lean heavily on the idea that federal cooperation is a result of managed conflict (Wechsler, 1954; Riker, 1964; et al., 2005). States are vigilant for opportunities to gain power relative to the central government and to gain resources and influence relative to other states. The central government also seeks to grow in influence relative to the states. Federal design, therefore, is a system of institutional safeguards against such behaviors so that despite their best efforts, states remain credibly committed to the Union.

Bednar (2009) composed a theory of robust federalism that congealed the federalism literature into a parsimonious explanation of how a system of safeguards works to keep federations in tact. Her system theory of federal safeguards proposes that a robust federation maintains compliance with federal laws, is resilient to internal and external shocks and internal exploitation of design flaws, and may adapt the rules to changing circumstances. It does so via a system of complementary safeguards against opportunistic behavior by governments. Opportunistic behavior, or opportunism, comes in three varieties: shifting burdens (i.e. externalities) onto other governments, encroaching upon the authority of other governments, or shirking responsibility for maintaining the Union. It is admitted that governments in a federation will continuously pursue these behaviors, but that is not treated as a fatal disease. Rather, Bednar argues that four key types of safeguards produce multiple lines of defense against these behaviors and provide means of correcting opportunistic behaviors when they occur.

Structural safeguards divide authority among member governments, i.e enumerated powers; the very structure of authority detailed in formal institutions like constitutions makes unilateral action difficult. Judicial safeguards such as courts create conflict resolution venues where such authority divisions can be defended. Popular safeguards such as free elections both create and resolve the problem of opportunism in that they provide the means for people to hold their governments accountable and working towards pluralist interests. Local interests gain representation (and demand preferential treatment) but also challenge other local interests' demands of the same. Elected representatives strive for higher office (and broader constituencies) and to appease party platforms, thus even state politics become moderate. This last phenomenon refers to the political safeguard. These safeguards are not assigned to any one type of opportunism, rather, they provide multiple checks against two extreme and opposite federal fears: development of an authoritarian central government or dissolution of the Union.

The safeguards of federalism interact in a complementary fashion and are meant to prevent opportunism by signaling to cooperating governments that any attempts to gain at the expense of others will be detected, corrected, and possibly punished. They are also meant to

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