



FEATURES OF INSTITUTIONS AND GOVERNANCE PROCESSES THAT ENABLE EFFICIENT, EFFECTIVE, AND EQUITABLE WATER MANAGEMENT

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Introduction:

Water governance has emerged as a key focus of Canadian policy debates and scholarship in recent years. Escalating water security concerns, together with increasing dissatisfaction with the current management of water resources have prompted a series of legislative and governance reforms across Canadian provinces (the most recent of which is British Columbia's Water Sustainability Act). These reforms are intended to enable new models of water governance, involving the creation of new governance institutions, roles and processes, as well as the devolution of authority, and enhanced participation by a range of non-government actors. Simultaneously, an active debate is taking place over the reform of transboundary watershed governance [1].

In addition to government-led reforms, an increasing number of watershed groups have taken on key roles in Canadian water governance over the last ten years [2]. Given this increasing emphasis on the role of local communities in multi-level governance arrangements¹, this essay examines the state of knowledge on the features of institutions and governance processes that are expected to enable the efficient, effective and equitable management of water resources.

A number of scholars have identified best practice principles for water governance (most recently, POLIS's 'winning conditions' [3]). Drawing on key debates on water governance (particularly within Canadian scholarship), five features that enable efficiency, effectiveness, and equity are identified. The essay concludes by identifying priorities for ongoing research on multi-level water governance, and their respective uses/users.

Current state of knowledge on efficient, effective, equitable governance:

Efficiency, effectiveness and equity are three commonly identified pillars of integrated water resources management [4, 5]. The IWRM framework suggests that management should maximize the social and economic outcomes of water resource use and investments; focus on policies and actions that deliver desired outcomes; and promote the equitable distribution of water resources, costs and benefits across communities [4]. Features of governance institutions and processes may enable one or more of these objectives.

¹ In which a range of actors "exercise different levels of power, authority and action, to determine 'who gets what' and 'who gets to decide'" (Reed and Bruyneeel, 2010: 646).

Multi-level or multi-scalar governance has become a dominant rhetoric in water governance, in recognition of the multiple levels of action that are required to govern water interactions that vary in scale from the individual to the global [6, 7]. Significant debate has ensued over which spatial scales and governance arrangements are most appropriate for what aspects of water management, and which actors should be vested with what roles and responsibilities [6, 8]. Trends towards local, global and private governance arrangements have been described as processes of scaling up, down and out respectively [8]. In theory and practice, much attention has been directed at local or community based water governance, and the watershed as the fundamental unit for water governance and management [see 9]. Simultaneously, others have noted the problems created by a lack of coordination and investment in water governance from higher levels of government, and maintain the need for effective national and international governance [10, 11]. This essay describes debates over appropriate scales of water governance through their focus on the spatial scales and objects, and institutional scales of governance. Embedded in these debates are propositions on the nature of effective, equitable participation by various actors; this essay highlights the implications of decentralization and multi-level arrangements for meaningful participation in water governance.

1. Ecologically Relevant Scales

Firstly, proponents of socio-ecological systems approaches suggest that water governance and management should be organized around ecologically meaningful scales [12]. In most cases the watershed is identified as the most relevant ecological scale [13], although groundwater-based governance is also gaining prominence [14-16]. It is argued that institutional scales need to better align with hydrological and ecological scales, to enable the integrated management of land and water uses, and their effects on upstream-downstream and surface-groundwater dynamics [14, 17]. Misalignment is identified as resulting in inefficient uses of resources, environmental externalities, and exacerbation of social inequalities due to distribution of effects and the costs of management [6]. Further, it is argued that aligning governance and management within hydrological boundaries provides for the strategic, scientifically-based prioritization of management activities [4]. Governance arrangements for transboundary water bodies require particular attention to enable the equitable, effective management of upstream and downstream land and water uses [18, 19].

However, recent studies have highlighted that realigning institutional with ecological scales is neither simple nor apolitical. Rescaling governance requires a choice of the relevant ecological scales and boundaries, which vary in terms of the hydrological system (ground or surface water), spatial scale (watersheds occur as nested systems), and related biophysical systems of interest (e.g. forest biomes, receiving systems) [20, 21]. Analyses of rescaling initiatives highlight that these choices are not 'natural', but indeed are often aligned with economic and political agendas, transforming power relationships and decision-making processes [20, 22-24]. Ferreyra et al. [9] further note the importance of the existing social and institutional context in providing effective water governance, and the danger of rescaling based on 'imagined communities' of practice, while ignoring the existing scales of use and management. Therefore, as Canadian provinces continue to pursue water governance reform, it is important that the ecological, social, economic and administrative implications of these choices are brought to light. Re-politicizing governance scales will promote the development of governance arrangements to effectively manage cross-scalar biophysical processes, without reinforcing existing or creating new inequalities. 'Ecologically relevant' governance arrangements will accordingly differ from place to place.

2. Participatory Governance Processes

The second feature of effective, equitable multi-level governance is the direct involvement of both actors with the ability to affect water management outcomes, and actors who will be affected by them. In Canada, as elsewhere, there is an increasing trend toward decentralization of governance from federal and provincial levels of government to municipalities and arrays of nongovernmental actors [11, 25]. The increased involvement of local government, community and market actors is proposed in part due to the perceived failure of government to adequately protect freshwater resources, ecosystems and communities [3]. In addition, it is argued that local governance arrangements are more effective and equitable, as they can be tailored to the key management challenges for an area, and incorporate local knowledge, expertise, and resources [26-28]. Indeed, the emphasis on local governance mirrors trends towards the decentralization of water management and infrastructure [e.g. water supply and treatment, see 29].

Participatory governance processes are expected to result in better quality, more widely accepted decisions through the direct involvement of rights-holders and stakeholders [30, 31]. By engaging land and water users and those affected by management outcomes in governance processes, externalities are assumed to be internalized within decision-making frameworks, and synergies identified, resulting in more efficient, effective management [20, 22, 32]. Inclusion of those affected by decisions is thus often promoted as a means to improve the procedural legitimacy and environmental justice of governance processes [33]. In addition, participatory governance processes may provide opportunities for social capital building and new forms of development [34]. 'Scaling out' is intended to provide for greater private sector participation, creating new (green) economic opportunities and promoting greater resource use efficiency through decentralized management practices [35, 36]. However, market environmentalism has in some cases exacerbated existing inequalities, resulting in environmental and social externalities, changes in access to resources, and a lack of accountability and oversight [37-39]. Indeed, despite ongoing support for participatory governance approaches and their widespread uptake, in many cases application has failed to live up to expectation [27]. Fragmentation, local capacity limitations, failure to meaningfully engage communities, and ongoing resource use conflicts have often prevented the effective, efficient, equitable management of water resources [16, 40-42]. The success of local, participatory efforts is therefore interdependent with wider multi-level arrangements.

3. Coordination across Scales and Actors

A further feature of effective and/or equitable multi-level governance is the coherent, integrated involvement of multiple institutional scales in vertical and horizontal governance arrangements. A common critique of the decentralization of governance to local scales is that it results in the devolution of responsibilities, without the concomitant devolution of resources or authority to carry out those responsibilities [19, 43]. Decentralization has also been attributed with the fragmentation of governance institutions, resulting in gaps, overlaps, and uncertainty in regulations and jurisdictional authority [10, 44]. Recent work has therefore emphasized the increased need for greater harmonization and integration of multiple scales of governance in the context of increased 'local' involvement, through polycentric and nested governance arrangements [31, 42, 45, 46]. In such arrangements, roles and responsibilities are allocated to the lowest level of governance with the capacity to carry them out, according to the principle of subsidiarity [45]. As such, federal and state governments continue to have an important role to play in regulating, coordinating, resourcing and monitoring other governance institutions and processes [8, 10, 14].

Institutional analyses of multi-level governance arrangements have highlighted the importance of strong horizontal and vertical relationships between scales in determining local capacity. Such relationships are built upon the clear definition of roles; senior government support for, and resourcing of local governance; devolution of 'real' authority; accountability mechanisms; supportive local actor-networks; and clear information flows [14, 43, 47-49]. Formal relationships and clear mandates are argued to be important for the legitimacy and effectiveness of governance institutions; regulatory instatement of responsibilities and support is noted to be an important (but not sufficient) feature of effective devolved governance arrangements [10, 48, 50]. However, in the context of differing capacity to undertake and participate in local governance initiatives, attention should be paid to the way in which multi-level arrangements reinforce or reconfigure power relationships or resource inequities [41, 42].

4. Modes of Participation in Decision-Making

In order for participatory and multi-level water governance to deliver efficient, effective, and/or equitable outcomes, institutions and processes that support meaningful community involvement are required. The nature of participation has been analyzed along two key axes; firstly, significant attention has been dedicated to the types of participatory forums and methods that enable social learning and consensus building [e.g. 51-54]. Second, participatory institutions have been evaluated on the extent to which they enable meaningful 'community' involvement in decision-making. Early 'ladder of participation' analyses have been succeeded by more nuanced examinations of asymmetric contributions to decision making, and the 'capture' of community voices in government partnerships [40]. Considerations of equity also suggest a need to gear processes towards vulnerable populations or locations, and that different forms of participation will be perceived as legitimate among different communities [42]. In particular, it is likely to be more appropriate to engage First Nations as a level of government, rather than a stakeholder, in participatory governance arrangements [55].

Paavola [33] highlights that the nature of participation raises important issues of social justice, due to the way in which participatory institutions structure power differentials and access to decision-making. Given the pluralism of goals and values in environmental governance, procedural justice is required to ensure the incorporation of diverse or frequently underrepresented interests, and the legitimacy of decisions made [33, 56]. Developing equitable participatory institutions and processes therefore requires consideration of entitlement, representation, accountability and legitimacy [35]. In particular, questions are raised as to who is being represented by whom, and the democratic legitimacy and accountability of decisions made by non-elected representatives [see 57]. In the context of such concerns, open dialogue and the transparency of decision making are highlighted as important for building trust [25, 58].

5. Sensitivity to Socio-Environmental Context

The final feature to consider, and which underpins all other features, is that governance processes need to cater to the specificities of socio-environmental context. Attention must be paid to the policies, people, ecosystems, history, and other situational aspects that shape particular water concerns and responses. Young describes this as a matter of 'institutional fit', in which multi-scalar governance regimes respond to the biophysical and socioeconomic characteristics of the setting, and the nature of the policy problem [59, 60]. As such, for water governance to be considered efficient, effective and/or equitable, it must be geared to the variabilities of space, place, and time.

Priority research directions:

All of the above considerations would benefit from further research to substantiate their claims to efficiency, equity, and effectiveness, and to explore related political and practical implications. In the context of current Canadian governance reforms, and ongoing trends towards decentralization, two additional issues are worthy of attention.

Firstly, while the objectives of equity, efficiency and effectiveness have become normalised within the IWRM discourse, they should not be considered normatively 'good' across all cases. Studies highlight that these objectives may be varyingly appropriate for different governance institutions and problem framings, and that in some instances the pillars may present competing or even contradictory objectives for water management [27, 61, 62]. In particular, pursuing the objectives of efficiency and equity simultaneously can be problematic, since meaningful participatory engagements are typically time and resource intensive. There is a clear need for further reflection on the objective and problem framings of water governance, particularly to support the development of processes that respond to locally specific needs and institutional settings [40, 62].

Secondly, while consensus is a commonly cited objective and rationale for participatory processes, the plurality of values, objectives and ethical norms means that consensus based decision-making is neither appropriate nor possible in many cases [33, 42]. Indeed, competing agendas and differences in the decision-making contexts of participants have resulted in power struggles and the failure of collaborative processes [63, 64]. Forester [65] suggests the need for deliberative practice and mediated participation to identify practical outcomes that serve multiple interests. However, managing such conflicts and facilitating deliberative processes will require significant up-skilling among current governance actors [66]. There is therefore a need for ongoing research on the theory and practice of participatory/collaborative decision making processes, and their outcomes for long term capacity building for local governance arrangements.

Commissioned in 2014 for the Water Economics, Policy and Governance Network (WEPGN), funded by a Social Sciences and Humanities Research Council (SSHRC) Partnership Grant.

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