

Synthesis and conclusions: Perspectives on water governance.

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Introduction

The papers in this volume address water governance issues and phenomena from different perspectives, and at different levels. These collected papers, however, set out to address similar questions. The first is: ‘How is water governance evolving at different levels of government?’ In this question government refers to public (democratic) organisations in which politics, guidance and administration are combined in a formal set of rules, positions and procedures. Governance refers to the variety of organisations active with respect to a certain collective topic, like in this case water. The need for protection against flooding, drought and pollution can only be fulfilled if a variety of public organisations and private organisations dealing with public services and investments and non governmental organisations are able to generate jointly governance capacity.

The second question well-known in the international debate on good governance is: What are the implications of existing water governance constellations in different parts of the world for principles of good governance such as equity, legitimacy, efficiency, transparency and accountability? It is already difficult to identify these principles for one organisation and improve them if they are insufficient and even more challenging for a constellation of organisations in charge for a variety of parts of the water domain. The protection against flooding is often a combined responsibility of national and regional governments as well as specific agencies like water boards. Each of the bodies can be held accountable for parts of the protection, but who is accountable for the whole? Or to phrase Crosby and Bryson (2005): “Who is and what is accountability in a society where nobody is in charge?”.

These two intriguing questions are the core of the debate about and improvement of water governance capacity. They were addressed at global, international and national level from the perspectives of researchers, practitioners and policy makers. In the concluding contribution to this volume, we attempt to take stock: What do these collected papers tell us about the key questions that they set out to address?

Regardless of the perspective through which water governance is encountered, or the specific governance arrangement that is discussed, one continuum across all papers is that water governance is characterized by a multitude of components and relations. Whether it is a multitude of laws and rules in global water governance (Gupta), the multiple actors involved in multiple roles and at multiple levels (Toonen), the multiple ‘silos’ through which governments tend to work (Van den Bergen), the multiple scientific disciplines needed to study and understand water governance arrangements at multiple levels of scale (Slinger), the multiple interests that affect the evolution of water governance systems over longer historic periods in a particular region (De Schutter), or the multiple capacities needed to organize for adaptive governance processes among various stakeholders (Satijn). Where government is more about actions (decisions) of a single organisation in charge of a part of the water challenge, governance is about the interactions between a variety of actions and the question whether these interactions lead to future-proof water protections. Interactions can be competitive, cooperative, conflicting and coordinative in orientation and outcome. Conflict in one level of the system can lead to cooperation on other levels and the other way around. Studies on water governance focus on this multitude of interactions, trying to answer the question: “Does the combined set of interactions lead to sufficient governance capacity to

prevent a region or country from flooding, water shortage and pollution of the common water pools (surface and sub-soil)?”

This “multitude of everything” illustrates that complexity is a key notion when it comes to water governance. Where government is often about creating ONE policy, ONE organisational structure (often a bureaucratic one) and ONE order, governance is more about understanding the complex interactions between a variety of governments and other organisations active in a joint domain. Governance is about MORE: a combined and intertwined set of ambitions, goals and future challenges, a joint mutual dependent set of organisations beyond the public private boundaries, and a set of sub processes creating a more or less unmanageable water governance process system (Teisman et al, 2009; Flood, 1999)

Arguably, the interest in water governance is growing and will grow further precisely as a result of the complex action field in which water systems need to be managed and governed and the knowledge that the complexity will only increase in a society of rising expectation and demands. Due to rising expectations the quality of the water management has to go up and will also be forced to take demands from other domains into account. Water management is increasing intermingled with urban and regional development.

This increasing complexity means that straightforward solutions for water management, based on linear relations between cause and effect within the water domain, are not sufficient for governance capacity and practicability (cf. Warner, panel discussion). Likewise, hierarchical public management arrangements focussing on the solution of one single part of the water challenge often will fall short, as do pure market arrangements. It is intriguing to see that in many regions all over the world we end up with some kind of hybrid complex arrangement beyond the boundaries of public and private domain, while the dislike for these hybrid and difficult to understand networks will not disappear at all. This will lead to a fascinating paradoxical challenge for public leaders in the next decade. On the one hand new modes of governing are required, which include hybrid forms, in which not only hierarchies and markets are blended and network arrangements, which are typically associated with governance in multi-actor settings and pluricentric societies (e.g. Rhodes, 1996; Klijn, 2008, Teisman et al 2009), while at the same time the desire for simplicity, autonomy and someone in charge will not disappear. Stronger government is desired, effective governance is needed, so it seems.

A consequence of complexity as a key feature in water governance, is that it is hard to see the forest for the trees. In this final chapter, we will give our interpretation of the trees and the forest as they emerge from the various contributions in this volume. We shortly revisit the main trees, as they have been presented in the previous papers, to then assess what this tells us about a possible forest. How are different aspects of governance evolving, as perceived through different lenses? And what does this tell us about the evolution of water governance as a whole?

Water governance trees

Processes among actors, governed by rules and laws

Rules, and rule making authority, are an important feature of certain governments in the water governance networks. It is only up to certain authorities to make and enforce rules. This special privilege does give these authorities a special role in governance networks. Governments can contribute to level playing fields, to legal certainty. They can create incentive structures for sound behaviour. They can prevent organisations on a lower level

from egoistic behaviour that easily can lead to tragedies of the commons. But who has this authority and who can claim successful enforcement?

If we focus on the international level, there are already multiple actors and assemblies claiming legitimacy and rule making authority (Gupta). Gupta argues that, as a result of the inability to get consensus in these debates, three major shifts can be observed in the rules and laws that provide the institutional background for water governance processes: (a) Shift from state consent to administrative law; (b) Shift from public international to hybrid public-private; and (c) Shift towards pluralism/ fragmentation and multi-level governance systems.

Against this background, multiple competing and overlapping governance arrangements and platforms co-exist. This co-existence of competing actors, platforms and arrangements and our understanding that the development of societies goes hand in hand with growing multiplicity, seems to challenge the well-known international principles of good governance such as accountability and transparency. Some will dislike and even condemn the actual networks of hybrid governance relations, compared to the traditional government structures, which seemed to be more transparent. At the same time, Gupta and others stumble, a little astonished and confused, into the preliminary conclusion that these hybrid arrangement, arising all over the world, are perhaps more flexible, more adaptive and more reflective to recent challenges than the traditional power structures.

Similar issues are raised by Toonen when he focuses on the national – regional interaction in the water governance networks. He also discusses the challenges that the involvement of multiple actors on multiple levels pose for principles such as accountability and legitimacy. What is accountability in networks when it becomes clear and indisputable that nobody is in charge, or to state it the other way around, when many are in charge for parts of the challenge, but nobody for the whole? It seems vital to develop new concepts and principles of good governance that are able to deal with the characteristics of governance networks.

Another tree in the forest important for understanding governance and our aim to increase water governance capacity is the crucial insight that governance is about interaction. The logical consequence is that our focus should shift to processes. Governance systems do have structure in terms of networks, but these structures are only for a small part designed and open for redesign. Networks are for a large part self-organizing in the sense that many of the constituting nodes (actors or organisations) in the network can decide to change their participation and course of action. By doing so they contribute to the restructuring of the network, without knowing in advance how the network will change, due to the fact that this depends on the action and reactions of many other nodes in the network. This is not a new lesson. We share it with previous authors on governance and water governance (Kickert et al, 1997; Rogers, 2003; Pahl-Wostl, Gupta and Petry, 2008)

A dynamic balancing act

A next branch in the forest has to do with improvement and effectiveness. In a government approach it is assumed that effectiveness is created by solid policies, clear decisions and enforcement. In a governance approach there is much more attention for the interactions between the variety of policies, decisions and enforcement attempts. It is much more about high quality interaction. Governance capacity is generated by effective interaction creating mutual added values to each others content, actions and sub processes. This is one of the reasons why adaptive capacities are gaining popularity in theory and practice. Governance is not only about action, but also, and for an important part, about the ability to develop rows of

actions that are committed to one's own ambitions on the one side and are well embedded and enforced in the network on the other side. In that sense water governance requires a dynamic balancing act. Multi-level governance capacities increase when actions across levels and across domains of content and responsibility are sufficiently aligned (Gupta) or synchronized (Teisman, Jaworski, 1998).

A crucial subject for further research and revision is the question how alignment or synchronicity can be achieved. In governance terms it can be ensured through hierarchical structures. The effectiveness of this approach however is not undisputed. Alignment or synchronicity can also be achieved, and increasingly is, through the facilitation of bottom-up processes of consensus-building and negotiation (Toonen) and integration into broader programmes of collective action (van Buuren, Buijs, Teisman 2010). Balancing is not only required between levels and public and private domains, but also between interests and values. Care for our waters is not the only interest in a society – and often not the most important one. Water governance therefore is not only a balancing act between water issues, it requires also balancing interests in a broader domain of socio-economic development. This raises attention for the question to what extent water governance actions in any of the regions in our world are perhaps to 'aquacentric' and for that reason undermine their own effectiveness. (Gupta, Toonen, Teisman).

A balancing act in a dynamic process system that evolves over time demands the ability of governments and other organisations to align and synchronize their own behaviour with changing circumstances, while the classic government approach often has the ambition to adjust the circumstances to their own policy. This generates an intriguing dilemma. On the one hand clear, understandable and rational policies and decisions are desired and on the other hand the effectiveness of decisions heavily depends on the way they are encountered in the networks. Rational decisions (rational from a single perspective) can surprisingly turn into an ineffective intervention in broader networks. Rational in one domain and irrational, illegitimate and differently understood in a broader domain can go hand in hand. The concept of adaptive governance does help to gain sufficient attention for the importance of the evolution of external interests and actions and the effectiveness of responsiveness in terms of reactions and governance arrangements. Governance capacities will increase when a governance network does not only cater to the vested interests, that have historically shaped existing governance structures, but also admit entrance of new interests into the water related policies and management (Toonen). Innovations are needed and will often be found on the edges with other domains (Teisman, Schumpeter, 2003)

The interconnection between social governance processes and physical water systems

Even though water governance has to increase its awareness that it is embedded in a broader world where water is not always the central issue, it still is and will be the case that water governance is about water. There can be debate whether or not water is, or should be, *the* central issue for societies per se, but definitely, water is central in water governance. The added value of water governance is its knowledge of and care for vital water systems and water chains. Water systems are for a large part physical phenomena and a part of good governance is related to the realisation and management of water infrastructures. Governance of infrastructures, especially if they are large, poses specific challenges (Slinger). This gives a specific role to the people and organizations that possess specific knowledge of these technical infrastructures, including the operation on a daily basis. Also, it means that, as these physical and technical phenomena themselves are complex, different types of knowledge and disciplines need to be involved. Here, communicating across boundaries is as essential, and as

difficult, as in other domains of water governance. Also here, issues of scale play a confounding role (Slinger). River basin planners typically look at water-related phenomena at levels that are different from those used by conservationists interested in a specific local habitat.

Governance and societal interest in water

Water governance is about the processes through which we manage and govern our water resources. It thus derives meaning from the interests that societies have in these water resources. If water governance is about power and power sharing (Van den Bergen), then it can only be so, because various parties have an interest in the benefits and services associated with sound water management. Be they the availability of sufficient fresh water, or the protection against floods or diseases. Through this connection to societal services provided by a physical water system, water is related to development.

The importance that these water-related goods and services have in a society, and hence the importance associated with power over water governance, tends to be reflected in the existing water governance arrangements; Water governance arrangements are part of a larger governance and government system, which reflects how countries have organized the protection of interests critical for their societies to thrive and survive (Toonen). If water management and flood defence is critical to societal survival, water management agencies will get a more prominent role, as illustrated by the institutional position of water boards in the Netherlands. In other countries, this may not (yet) be the case.

Governance arrangements, as they have evolved in particular countries, regions or localities, need to be understood fully, before conclusions can be drawn regarding their transferability to other countries or regions. The corollary of this, is that also the specific needs, resources and problems of a recipient country need to be well-understood, when considering a transfer of governance arrangements from one place to another (cf. Gupta in this volume, and Hermans, 2010). This not only applies to formal governance arrangement in developed countries, but also to the water governance arrangements used by indigenous people (Van Eindhoven, panel)

It is likely that water becomes a more critical interest in a growing number of countries and regions, for different reasons. Climate changes and more extreme weather conditions are expected to result in growing water scarcity and flood risks. If water becomes more important, societies will demand more of their water governance arrangements in terms of their transparency, and the extent to which they are a legitimate reflection of contemporary concerns and need of societies (Panel-discussion).

Uncertainties, and three responses

Water governance takes place in, and at the same time generates, a complex system of interrelations and interactions, in the physical as well as in the social system. This means we have to take this complexity serious, accepting that uncertainty is a key element in water governance. Three responses were highlighted in the papers and the workshop discussions. First, it means governance capacities that help build resilience, robustness and flexibility gain prominence. This puts demands on competences of people, on processes and process arrangements – and less on definitive specific solutions (Satijn, Ligtoet). We have to look for ways to deal with complexity and uncertainty in a sensible way, rather than through the

promotion of linear solutions and stopgaps (Warner, Panel-discussion). Second, taking complexity and uncertainty serious, means that research is needed. And as part of this research, we need to expand the toolkit on uncertainty analysis (Szollosi-Nagy, panel). Promising avenues here include exploratory modelling and analysis (EMA, Agusdinata, 2008) and similar developments. Third, we have to accept that surprise will always be there. Therefore, we need to learn from experience, through learning by doing and monitoring (Slinger and others in panel, Van den Bergen)

The contours of a water governance forest?

What is the bigger picture that emerges from the summary of various elements that were discussed in the contributions to this volume, and during the workshop? Can we discern the contours of a forest? Can we identify some shared features, and draw some boundaries?

First and foremost, the water governance forest is about dedication to vital water systems and chains on the one hand and about social interaction between people, partly in their role as citizens but also in their formal role as official and agent of a specific organisation and interest. Neither of the two worlds is subordinated to the other. It is not the case that the needs of the water system will lead to policies that will be embraced by the social system passively and neither is it the case that societies can exploit the water systems without any response from the system. Both have a life on their own. Water governance is about the question how the two dynamic and changing systems meet and how they can develop jointly in a vital way, safeguarding existing qualities and developing new qualities. The quality of the interaction is the centre of our attention. The term water governance is well-chosen in that respect. It is not only about one organization managing a water system. It is about the ability of a mutual development adding value.

Water governance is primarily focussing on the demands and desires of the water system and on the man-made infrastructures that have been engineered over centuries. Water governance, however, is at the same time willing to analyse and understand the demands and desires of people for protection, consumption and development in relation to water and the consequences for water system development and changes in infrastructure solutions and the maintenance of these infrastructures.

Taking care for the demands of water systems and infrastructures is more than investment and maintenance alone. Water investments and maintenance do not evolve in isolation to other systems and developments. In order to take care of a vital water system it will become more and more important to improve the embeddedness of the water system development and maintenance in other streams of policy issues. Water governors have to make sure that important water issues are taken on board by other issue communities, often as part of another overriding concern. Internationally, these may be climate change negotiations and discussions. Nationally and locally, these may be other concerns, such as spatial planning in urban areas. The extent to which water is seen as impacting on critical interests for societies, will be a key aspect that is sometimes too easily overlooked by experts coming from the water domain. Imaging and framing the water issues in such a way that it can be more easily synchronized with or embedded in other issue communities is and will be an increasingly important part of water governance capacities.

Water governance, means that, in addressing water issues, it is about people and processes. In that sense it adds to well-developed issue of water management, where the focus is more on knowledge of the water systems and its infrastructures as such. This is a key difference between water governance and integrated water resources management, or IWRM (see also Lautze et al., 2011). Designing new governance arrangements and management

strategies can be done more effectively if the designers do understand the possibilities and desires of the water system and at the same time also the dynamics, desires and logics of behaviour in the social process system in which the care for water is embedded in. As these processes are changing, and increasingly take place in a pluricentric and multi-actor society, boundary work and overcoming interface problems is important. This requires dancing across the boundaries between different levels of government and across the boundaries between the public and private domain as well as connecting the silo's that exist in most government administrations between the water domain and neighbouring domains. Water governance capacity is about the ability to generate clearly different roles for all in such a way that the actions lead to interaction patterns with maximum outcomes against affordable efforts. Water governance research will help to find innovations on the edges of domains and to increase efficiencies by way of system integrations beyond the boundaries of existing systems.

Water governance combines two main features, a physical and technically-oriented water systems approach and a multiple governance processes orientation. It balances on the edge of social and technical systems, and emphasises the elaboration of new combinations that can be found on the edges. Boundary crossing as activity will stimulate innovation as well as the ability of synchronicity.

In order to become competent boundary crossers, the complexity of the system has to be understood, embraced and used. We need to think how domains divided in the past can be confronted in a creative manner leading to more efficiency, innovation and effectiveness. Transparency and accountability can probably not be created in advance, due to the fact that networks are self-organizing and dynamic. Governments however can take the role of selector in variation in the sense that joint actions or proposals of alliances able to meet a variety of desires and able to generate support could be facilitated and empowered.

A process of evolutionary selection would create adaptive capacity in a network, even if governments themselves do have a limited adaptive capacity themselves. The evolution into new combinations can create the needed adaptiveness. In this system people are allowed to do things wrong – which is not allowed in many government settings. And we can increase governance capacity by addressing people's skills, by ensuring that these are embedded in appropriate arrangements, and build on solid knowledge and sound monitoring systems. But, in the end, although we can increase governance capacity, new problems and challenges will always arise in these complex systems. This is not due to a lack of capacity but to the evolution of rising expectations. That is what we call progress.

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