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From the Promises of International Water Management Trends to the Reality of Policies and Practices: Some Conclusive Thoughts

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It is widely recognized that water management has been influenced by certain trends developed at the international level. In fact, during the last few decades, the water research and the practitioner communities have exceled at co-developing innovative ideas to address persistent situations of water crises. From integrated water resource management (IWRM, see GWP 2000a; Hering and Ingold 2012) to adaptive water governance (Huitema et al. 2009), from water security (GWP 2000b) to the Nexus (Waughray 2011), multiple alternative approaches have been proposed to

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govern water resources. All in all, the more integrated, adaptive or cooperative nature of these new modes of governance, the greater the claim that they can handle the wicked, uncertain and changing nature of environmental and social pressures on water. Bäckstrand et al. (2010) refer to these normative assumptions as "the promise of new modes of governance."

Setting objectives and suggesting pathways to achieve more sustainable or resilient water use, these different approaches are referred to as *international water management trends* in the present volume. They qualify as *international* because they are globally promoted and are seen as easily transferable from one place to another, and as *trends* because they have gained momentum, leading to lively policy and academic debates. They gather strong networks of actors, forming heterogeneous communities where researchers and policymakers, but also non-governmental and corporate actors, interact (and sometimes compete) around the definition of shared visions regarding problems and possible solutions.

These trends are expressed in discourses, principles and best practices, but also in frameworks with a more analytical nature. By doing so, they convey both an analytical dimension—providing conceptual tools to make sense of the social reality—as well as a strongly normative standpoint—stating the direction this social reality should evolve. This dual nature—normative and analytical—is not so clear-cut and both dimensions interact and nourish each other. They even have, in some cases, become conflated, providing "a framework, which lends itself to a 'vision', which is normatively goal-oriented" (Cook and Bakker 2012, 98 about water security).

A number of publications critically explore the origins, interplays and shortcomings of these management trends—from IWRM (Biswas 2008; Petit 2016) to water security (Cook and Bakker 2012; Zeitoun et al. 2016) or the Nexus (Allouche et al. 2014; Benson et al. 2015). Among other things, the following key aspects have been question: their novelty (are they really new or do they represent old wine in new bottles?); their ability to be implemented (to what extent do they structure real-world policies and practices?); and their ability to improve our understanding of the real world (to what extent can they lead to indicators and criteria to assess the empirical reality?).

With this volume, our intention was to contribute to such endeavours. More precisely, we have asked the authors to combine theoretical and conceptual inquiry of water management trends (how things are supposed to be according to them) with reflexive and empirical investigations of how things are observed in the real world, respectively of how these trends are helpful to make sense of empirical reality. This strategy was inspired by a general intuition: the things that are called for do not always correspond to what can be observed in reality. Evidence of this can be found in a number of schools of thought that emphasize the complex pathways between what is designed or thought at a higher level and what actually happens on the ground. International (Bernstein and Cashore 2012) and domestic (Hill and Hupe 2014) implementation studies, as well as cognitive approaches focusing on discourses and ideas (Molle 2008), have shown interest in such questions, demonstrating the discrepancies that can result from implementation or transcoding processes.

Starting from these premises, this book transcends the compartmentalized perspectives that usually predominate through a collection of contributions that cuts across management trends. The central aim is to critically scrutinize the "promise" of these trends around three research questions:

1. *The nature of international water management trends*. We wanted to explore the normative and analytical assumptions that these trends entail, as well as the way they are based on scientific knowledge, represent the expression of an ideological project in the long run or remain an evanescent—but influential—fad.
2. *Their analytical potential*. We wanted to assess their analytic and explicative power and, on this basis, build recommendations for water research as well as for practitioners, policy- and decision-makers that are confronted with such trends in their everyday practice.
3. *The diversity of their real-world transposition*. We wanted to assess the extent to which these often abstractly formulated trends influence domestic policymaking, the (sometimes unintended) consequences their implementation reveals, and the perceptions that actors have of them.

The nine chapters—each focusing on a specific management trend: local community governance (LCG), IWRM, transboundary water management, multi-level governance (MLG), water privatization, market-based instruments (MBIs), climate change adaptation, water security, and the Water-Energy Nexus—are the result of these endeavours. They represent a heterogeneous collection of contributions coming from diverse disciplinary backgrounds (political science, economics, political geography) and diverse ontological and methodological approaches, revolving around Switzerland as a "laboratory" for studying international water management trends—with the mirroring case of Ecuador in Chap. 5, which reminds us of the risk of cultural bias. The authors were left a great deal of autonomy in the preparation of their chapters, and the book truly benefited from the variety of their perspectives.

In this concluding chapter, we discuss the lessons that can be drawn from these contributions with regards to the research questions outlined earlier. Of course, the limited number and the heterogeneity of the chapters, as well as the narrow focus on Switzerland, do not allow for any definitive and comprehensive answers. Some key concepts (e.g., resilience) and instruments (e.g., payments for ecosystem services) are not or are only peripherally addressed, and most of the contributions cover only specific aspects of the trends they are concerned about. Their strong theoretical foundations and sound empirical analyses allow us, nonetheless, to draw some general conclusions and to highlight some future research avenues.

We proceed in three steps. In the first part, we propose a way of organizing international water management trends around a series of narratives that emphasize the need of a governance shift and hold the promise of more sustainable water governance. The second part highlights the analytical limits that the trends generally convey (normative fuzziness, polysemy in practice and difficulties of measurement), questioning their capacity to produce informed recommendations for policymaking. In the third part, international management trends are assimilated to global norms whose linear transcoding may be disrupted by three sets of domestic variables: domestic institutional regimes, policy structures and political games. This leads us to conclude, in a last part, with a plea for social science-based analyses of water management trends in order to produce a better-informed understanding of these institutional, political and social dimensions that may disturb rational problem-solving.

1 Narratives, Nirvanas and Water Management Trends

The international water management trends explored throughout this volume appear quite diverse. In the different chapters, the authors qualify these trends here as global norms (Chap. 8) or nirvana concepts (Chaps. 3 and 9), there as mobilizing banners (Chap. 2) or buzz words (Chap. 10). Their interplay is also divergently perceived. Some seem to be complementary or embedded within each other: Chap. 9 emphasizes the potential benefits of adaptive governance for water security, while local community governance (LCG) calls for a decentralization that is also often associated with IWRM. Conversely, other trends are built in opposition or at least in answer to each another: LCG and privatization represent alternative modes of governance; the Nexus is generally seen as calling for an even greater integration (including stakes that go beyond the water sector) than IWRM (which takes water as its unique entry point); and adaptive governance emphasizes adaptation over integration.

In this section, we take a step back and put this heterogeneous overview in perspective. By doing so, we go beyond the explicit content of each chapter and provide a subjective reading of what can be, in our view, read between the lines. Our thesis revolves around the idea that the nine water management trends are structured around a series of four "narratives" that act as crucial common ties. These narratives give them sense, emphasizing their anchoring in nirvanas ("*an ideal image of what the world should tend to*," Molle 2008, 132) that permeate policy debates.

1.1 The Power of "Narratives"

International water management trends are, and this is perhaps their most obvious common tie, all embedded within the sustainability realm. Popularized in 1987 by the Brundtland report and recognized as a global principle by the United Nations five years later (Rio Conference in 1992), the notion has been widely used ever since. The water research and practitioner community embraced it as a new policy paradigm, i.e., as a global

framework of ideas according to which the nature of problems is interpreted and solutions are designed (to follow Hall's 1993 definition). The (apparent) simplicity and all-encompassing nature of the notion carries out a semantic attractiveness, well-illustrated by the fact that all chapters refer, more or less explicitly, to sustainability-related stakes (see index).

The narratives that structure the trends explored in this volume consist of storylines that help providing a logical interpretation of social reality and, as such, contribute to legitimize political action (Roe 1991; Swift 1996). Some of these storylines are sustained by scientific theories (e.g., the Theory of the Commons), while others have been developed firstly as an answer to practical and empirical concerns (in particular in the case of IWRM, water security or the Nexus). Often self-validating even if they stem from well-established theories (Molle 2008), these narratives rely on reduced and distorted images providing evidence and standards of action. In other words, they serve as simplifications that symbolically condense facts and values (Fischer 2003) in order to make sense of complex situations that could otherwise instill policy paralysis (Shanahan 2012).

An example of a narrative that is embedded in scientific research can be found in the case of local community governance, with the *homogeneous community* storyline. As shown in Chap. 2, one can argue that it embodies a simplistic representation of reality based upon a romanticized and depoliticized image of agro-pastoral communities. Conceived as an answer to the "Tragedy of the Commons" popularized by Hardin (1968), or as an alternative to a storyline advocating the privatization of water resources (what we will call the *water pricing* storyline), the story emphasizes the capacity of individual resource users to form a community within which solidarity, traditions and/or endogenous systems of rights are crucial in preserving and providing water to the community members. This narrative is rooted in the Theory of the Commons (Ostrom 1990), and research strongly contributed to shape its formulation. It has been highly theorized and reflected upon and led to strong normative perspectives on how natural resources should be governed (showing how analytical and normative dimensions can become conflated).

We argue that such narratives are essential in building, diffusing and maintaining international water management trends. Their ostensible

evidence, anchored in common sense, has a strong gathering power (Lejano et al. 2013) and plays a crucial role in explaining the robustness and the wide diffusion of these trends. In clearer words, the approaches explored in this volume qualify as "trends" precisely because they rely on strong narratives. These trends have, at some point, gained momentum (Elinor Ostrom received, for instance, the Nobel prize of economics in 2009), generating a pervasive consensus among researchers and practitioners, leading to the implication of major actors (such as the World Bank, for example) and to the production of a vast array of publications, white papers or best practices.

This proliferation of content develops, nourishes and sustains the narratives while simultaneously being legitimized by them. This process, supported by specific goals and agendas, evolves in a closed circle that is hard to break. Although some of these trends are supposed to be out of fashion or have been challenged by more recent ones (this is the case of IWRM), they generally remain rather robust in influencing management practices and policy systems, illustrating the capacity of certain actors to define what should be the norm.

1.2 Four Narratives and Nirvanas of International Water Management Trends

The narratives implicitly or explicitly found throughout the volume are summarized in Table 11.1. They confirm the unanimity with which water management trends recognize that the most persistent obstacles to sustainable water uses are governance related. In the words of Pahl-Wostl et al. (2012, 24), many problems that these trends pretend to solve can "be attributed to governance failures rather than the condition of the resource base itself." More precisely, each narrative is based on a negative storyline emphasizing a pitfall, a current water governance failure, as well as on a mirroring positive storyline providing a logical solution: the *homogeneous community* storyline answers to the *Anti-Leviathan* narrative; the *functional fit* to the *misfit*; the *water pricing* to the *free water* storyline; and the *gospel of flexibility* to the *anti-command-and-control* (see Table 11.1 for the formulations of each narrative).

Table 11.1 Four nirvanas and narratives of international water management trends

Nirvana concepts	Narratives	Management trends
Communalization	Negative: "*anti-Leviathan*" *storyline* Centralized state interventions are rigid and distant, inducing important administrative and transaction costs and disregarding localized resource specificities Positive: "*homogeneous community*" *storyline* Community solidarity, traditions and local endogenous systems of rights are crucial in preserving water for community members	– Local community governance (Chap. 2)
Integration	Negative: "*misfit*" *storyline* Mismatches between the geographical extent of a resource and the territorial scope of institutions, or between the socio-ecological processes occurring at specific scales and institutional settings dealing with other scales, are responsible of negative externalities Positive: *"functional fit" storyline* Institutions and rules that match the space and scale of water resources reduce negative externalities and restore ecological functions	– IWRM (Chap. 3) – Transboundary water management (Chap. 4) – MLG (Chap. 5) – Nexus (Chap. 10)
Commodification	Negative: *"free water" storyline* Public goods and services tend to be wasted Positive: "*water pricing*" *storyline* The pricing of water is crucial for demand management and conservation	– Privatization of water supply (Chap. 6) – MBIs (Chap. 7)

(*continued*)

Table 11.1 (continued)

Nirvana concepts	Narratives	Management trends
Adaptation	Negative: "*anti-command-and-control" storyline* Centralized, top-down and rigid policies are unfitting to the complex, non-reducible, uncertain and variable dynamics of water resources Positive: "*gospel of flexibility" storyline* Polycentric, flexible and collaborative arrangements that emphasize learning through structured experimentation are crucial for adapting policies and practices to the complexity, non-reducibility, uncertainties and variability of water resources	– Climate change adaptation (Chap. 8) – Water security and adaptive governance (Chap. 9)

The pitfalls of conventional (top-down and centralized) water governance represent a common starting point. These weaknesses have been exposed by successive water crises and amplified by climate change impacts and related new requirements. They resulted in persistent environmental degradation and inequities, proving—it is argued—the inadequacy of command-and-control government to deal with the wicked nature of water-related issues. These issues, like other environmental problems, are flawed with complexities and uncertainties that are perceived as uncommonly difficult to tackle when applying existing modes of governance. For example, according to the *misfit* storyline, mismatches between the geographical extent of a resource and the territorial scope of institutions, or between socio-ecological processes occurring at specific scales and institutional settings dealing with other scales, are responsible for negative externalities (harming those beyond the reach of existing institutions and leading to ecological degradation).

The second common feature of these narratives is to suggest "alternatives" to the perceived weaknesses of current modes of governance (the positive storylines). International management trends entail a normative assumption about how water governance should be, about the horizon

that it should reach. More precisely, they are symptomatic of a supposedly global shift away from command-and-control to more decentralized, integrated or adaptable forms of management (Engle et al. 2011). Here for example, the *functional fit* storyline, which is at the basis of the call for more integrated models of governance, represents an answer to the misfit problems outlined earlier.

Nirvanas (left column of Table 11.1) and management trends (right column) extend from these narratives. Upstream are nirvanas (Molle 2008), defined as overarching concepts that strengthen and are simultaneously sustained by narratives. The four nirvanas that we identify are the following: communalization, integration, commodification, and adaptation. Although their diffusion and structuring power are contrasted, although they may be complementary or antagonist, these four concepts are similar in the way they…

> … embody an ideal image of what the world should tend to. They represent a vision of a "horizon" that individuals and societies should strive to reach. Although, just as with nirvana, the likelihood that we may reach them is admittedly low, the mere possibility of achieving them and the sense of "progress" attached to any shift in their direction suffice to make them an attractive and useful focal point (Molle 2008, 132)

Downstream are the nine management trends explored throughout the volume, which are rooted in the narratives and consist of more concrete practices, models and declinations of the nirvana concepts. These trends are more or less specific in their perimeter and ambition. They refer to processes, modes of governance or particular kinds of policy instruments. Four of them are associated with *integration*, probably one of the most structuring and encompassing nirvanas of the last two decades. They envision it from different angles (sectors, scales, territories) and amplitudes (centred or not on the water sector). With commodification come different declinations of privatization models and market-based instruments (MBI) while communalization is associated with local forms of community governance. Adaptation, finally, represents perhaps the new overarching nirvana of water governance in relation to climate changes dynamics (Engle et al. 2011).

2 Normative Fuzziness, Polysemy in Practice and Difficulties of Measurement

Although the narratives they are based upon appear quite straightforward, international water management trends represent complex analytical and normative constructs that are difficult to define, measure and compare. In other words, their analytical potential and normative objectives are not self-evident. Several authors underline or suggest such limitations in their chapters. International water management trends are presented as notions that convey an attractive plasticity (Chap. 2), that are not stabilized (Chap. 9) or that have yet to have a unified definition (Chap. 10). Just as sustainable development, these trends represent contested concepts (Connelly 2007) that became fashionable despite or, perhaps, precisely because of their ambiguities and uncertainties.

This conceptual broadness and fuzziness is nothing exceptional. What is striking, however, is the capacity of these trends to drive policy diffusion and knowledge production without consideration of their contested nature. On the one hand, they demonstrate durable capacities to influence policy programs without being necessarily based on evidence. On the other hand, they shape scientific debates, resulting in publications that adopt either a critical perspective or apply analytically concepts that have been primarily developed with a normative viewpoint. Considering evidence provided by the different chapters of the volume, three major conceptual and operationalization limitations become explicit.

Conceptual ambiguities can be linked, first, to a form of *normative fuzziness* that materializes in the diversity of strategies and goals that can be associated with international water management trends. Climate change adaptation, for instance, hardly comes with univocal expectations about the societal goals to be reached; it has, to the contrary, generated a far more accurate image of what should be avoided (Chap. 8). This controversial observation can, to some extent at least, be transferred to other trends. IWRM has been linked to thirty-five sets of issues that should be integrated (Chap. 3) and water security has been shown to cover a broad range of areas (Chap. 9).

It is interesting to note that, more generally, the exact same fuzziness can be identified with regards to the broader sustainable development paradigm. There is, indeed, "still no consensus over the societal goals that would count as sustainable development" (Connelly 2007, 259). The goals differ in relation to the theoretical perspective (risk-based management, political economy, socio-ecological systems theory), the specific values that are emphasized (equity, legitimacy, efficiency, etc.) or the places where they are implemented. Different frames, values or contexts imply different priorities.

Conceptual ambiguities and normative fuzziness are echoed, secondly, by a form of *polysemy in practice* that is revealed by the diversity of experiences that are subsumed under a similar label. In Chap. 6, Eva Lieberherr emphasizes how privatization is in fact used to designate very different organizational forms: material privatization (a full transfer of infrastructure ownership and operation to private actors) remains rare in comparison to less extreme models such as delegated private management (private actor's right to sell water services within a public ownership frame) or formal privatization (shift from public to private law). In a similar vein, Florence Metz and Philip Leifeld (Chap. 7) give a comprehensive and systematized appraisal of all the different forms of instruments that are considered as MBI. Again, this holds true for several other notions that are dealt with in this volume: the concrete declinations of LCG appear quite diverse in empirical reality; transboundary water management or IWRM take many different forms, are considered from a great diversity of perspectives and lead to many debates regarding how they should be analyzed, understood and implemented in the field.

These conceptual ambiguities, normative fuzziness and polysemy in practice explain, in our view, a lot of the operationalization and measurement problems that are often associated with international water management trends. In Chap. 9, Thomas Bolognesi and Stéphane Kluser provide a convincing appraisal that emphasizes the need to be careful when using water security as a normative goal. They underline the non-systematic way with which measures are conceived, taken and communicated. Each attempt of measuring water security is built on its own framework and this heterogeneity makes comparison difficult. In their view, water security assessments face a high level of uncertainty and are

generally characterized by high subjectivity, reducing the relevance of their normative use and questioning evidence that supports policy action. In a similar vein, Johann Dupuis underlines the way in which proxies sometime exaggerate dichotomies and contribute to create a compartmentalized perspective. This echoes the results of other studies (e.g., Petit 2016 on the difficulties to build indicator for measuring IWRM) and emphasizes the need to carefully and transparently design indicators and proxies in order to provide relevant assessments, robust comparisons and, in the end, informed recommendations.

3 Global Norms, Transcoding Processes and Domestic Variables

In this book we have seen a wide range of observations about how empirical reality fails to "fit" prescribed notions: the entangling of private, public and community logics at the local level (Chap. 2); the distance between integration goals and the water strategies or legislation of subnational entities (Chaps. 3 and 10); the wide range of organizations that have been established to deal with transboundary water management issues (Chap. 4); the diversity of experiences that qualify as privatization (Chap. 6) or as MBI (Chap. 7); the diverging interpretations of adaptation objectives (Chap. 8). All these observations emphasize, on the one side, the discrepancies between the abstractly defined "nirvanas" and management trends (see Table 11.1) and, on the other side, the heterogeneous reality that can be witnessed on the ground. This finding comes in a direct line with our initial intuition: the things that are described and called for do not correspond to what can be observed in reality.

Real-world policies are never as integrated, adaptive or commoditized as they are conceptualized to be, and the question arises regarding how to explain these discrepancies. As suggested by Johann Dupuis in Chap. 8, we argue that it helps to read international water management trends as global norms (Bernstein and Cashore 2012). They are *global* because they are generally developed and advocated by international organizations (GWP, UNEP, WEF), researchers (in international academic conferences),

nation states (in multilateral negotiations, or as integrated in the agendas of development and cooperation agencies), NGOs and even multinational companies. They stand as *norms* because they are normative—they define and regulate appropriate practices for domestic policies—but they do not necessarily have a legally binding nature (by contrast to formal rules). Their influence is not dependent on their enshrinement in hard law (e.g., in a multilateral treaty) but on discursive and deliberative efforts to diffuse them, with the support and financing of strong international actors.

Global norms are, however, subject to implementation (Hill and Hupe 2014)—or transcoding (Lascoumes 1996)—processes just as formal rules are. It is through such processes that gaps appear between the universal remedies that norms entail and the concrete policies and practices that are elaborated on the ground. Domestic policies and instruments are, indeed, designed through a process that follows its own rationality. Global norms are constantly reshaped, reinterpreted and torn to fit local beliefs, interests and power balances. Multiple criteria (equity, legitimacy, feasibility, efficiency, etc.) may be mobilized, disturbing the linear transcoding of global norms. Results of these processes represent regionalized compromises that are distinct from abstractly defined models. In other words, transcoding implies power games and trade-offs among a diversity of goals and interests.

In this section, we propose to explore three groups of domestic variables that intervene during implementation or transcoding processes and contribute to explain discrepancies: national and subnational institutional regimes and values; sectoral, scalar and territorial structures; power relations and social interactions between actors.

3.1 National and Subnational Institutional Regimes and Values

Water governance remedies are not implemented in a vacuum. To the contrary, domestic policies and water right systems clearly matter in the way global norms penetrate national, regional and local practices. In Chap. 10 for instance, Luc Tonka clearly shows how the fragmentation of

water jurisdictions (both across municipalities and sectors), the structure of property rights and the degree of control over the main hydropower companies influenced the room of manoeuver to implement a "nexused" solution in two Swiss cantons. In a similar vein, Arnaud Buchs, in Chap. 3, highlights how the administrative structures (strong sectoral divisions) and the sharing of competencies between governmental levels (principle of municipal autonomy) weighed on the institutional compromise that was reached when it came to the renewal of a cantonal water act.

These two chapters reveal how, in nation states applying the rule of law, water issues are addressed by a set of domestic regulations that prescribe rules of behaviours to water users. These regulations can rely on different modes of interventions (top-down, market-based, voluntary) and be enshrined in public policies (public law) or in property regimes (private law). They aim to protect the environment as well as to organize the exploitation of water resources by granting and limiting use rights. The aggregation of these rules forms what some authors have called a (domestic) institutional regime (Gerber et al. 2009) that can be more or less extended (i.e., covering a more or less wide range of water-related issues and rivalries) and coherent (i.e., more or less coordinated).

These institutional regimes, and this is of primary importance for our demonstration, can also be more or less in line with the normative goals that global norms entail. In fact, as this is often a governance shift that is called for, *it is likely that global norms advocating alternative modes of governance and domestic institutional regimes within which current modes of governance are enshrined will be in confrontation*. Because they strongly influence domestic actors' behaviours, power relations and administrative structures (see later in the chapter), domestic institutional regimes represent crucial mediating variables for the implementation of global norms. Transcoding processes may encounter strong opposition due to the (often pre-existent) contradictory objectives of domestic institutional regime and path dependencies dynamics.

In addition to that, if international water management trends are intended for global outreach, their conceptualization results from specific (and often western) perspectives regarding the meaning of water governance and the nature of issues to be solved. Yet the values that are shaping their interpretation are very likely to differ contextually (Adger et al. 2009),

leading to a risk of cultural bias. Focusing on MLG and on the blind spots of this conceptual framework, Emilie Dupuits, in Chap. 5, illustrates this risk by mobilizing the notion of "neo-extractivism." Developed in a Latin-American context, this concept allows an increased understanding of the dynamics of rescaling at play in the region: neo-extractivism analyzes how post-neoliberal nation states justify a centralization of natural resources exploitation based on the need to obtain income for social development, and helps understanding why local communities in Ecuador tried to bypass the central state. Its use demonstrates the added value of combining different perspectives and supplementing globalized trends with additional analytical tools that are anchored in regional concerns and perceptions of stakes at play. Contexts and values are key elements when considering the transcoding processes of nirvanas and models.

3.2 Sectoral, Scalar and Territorial Structures

The focus of domestic institutional regimes is to organize water governance across sectors, scales and institutional territories. Competencies are attributed; action is compartmentalized and structured. Political spaces of regulation are created that are very far from an ideal type of functional regulatory spaces (Varone et al. 2013), i.e., from spaces that are thought to be functionally appropriate to deal with water-related issues. This is in line with the *misfit* and the *functional fit* storylines identified in Table 11.1. The risk of tension between functional objectives and political structures is strong. Hence, rather than pretending as if the development of alternative—allegedly more functional—spaces of regulation will occur automatically, we argue that the structuring roles of policy sectors, levels of government and institutional territories should be recognized.

3.2.1 Policy Sectors

Interactions and political negotiations remain, despite many calls for integration, largely influenced by sectoral dynamics. Even if the narratives of integration or adaptation are influential, each sector is likely to remain structured by its own system of values, orientated towards the

pursuit of its own public interest (agriculture, environment, energy production, public health). In that game, each sector speaks its own language and is sustained by its own administrative structures (Sabatier and Jenkins-Smith 1993 talk about policy subsystems). Some are likely to be dominant while others will appear more isolated. In this regard, integration is not self-evident and intersectoral dynamics may reveal, on the ground, more trade-offs (with winners and losers) than synergies (win-win situations). The complexities and cross-cutting dimension of water-related problems only increase such governability issues. Moving towards integration will, hence, require more than discourses and good will. Based on existing belief systems, administrative structures and power relations, the prospect of integration (or even coordination) will appear impossible on certain topics ("no-go" configurations), while other areas will offer greater potential ("go" configurations). The exploration of the mechanisms leading to such configurations represents thrilling avenues for more informed and focalized policy and research (Gallagher et al. 2016).

3.2.2 Levels of Government

Water issues are scale sensitive. They stretch across multiple levels, increasing the need for coordination and articulation (Moss and Newig 2010). At the same time, however, their governance remains strongly influenced by the distribution of competencies as determined by domestic institutional structures. In Switzerland, for instance, constitutional principles such as subsidiarity (the idea that decisions should be devolved to the lowest appropriate level), federalism of execution (giving the main implementation competencies to cantons) and municipal autonomy strongly influence the level at which environmental problems are dealt with. A redistribution of competencies represents a political stake in the face of which narratives—as convincing as they may be—will not suffice. In that respect, and as shown by Emilie Dupuits in her contribution (Chap. 5), multi-level challenges and rescaling processes should not be seen as a matter of finding the best level at which to address water issues, but rather as an object of political strategies to overcome or reinforce structural constraints.

3.2.3 Institutional Territories

While functionalist perspectives argue that sustainable water management should be based on specific and presented as "natural" territories of regulation (e.g., the river basins), the concrete implementation of such spaces is very likely to meet strong obstacles related to existing administrative and political boundaries. Indeed, water management cuts across different institutional territories that are characterized by specific rules and authorities. As shown by Arnaud Buchs (Chap. 3), the implementation of the river basin as a relevant space of regulation will not only depend on the functionalist will to adopt "natural" perimeters, but also on political compromises between this objective and existing administrative, technical and social boundaries. These will explain, in the end, the discrepancies between the "natural" and the "institutionally defined" perimeters. In addition, the coordination between different institutional territories does not come without difficulties and depends on multiple operational procedures, distribution of competencies and institutional and legal frameworks. Transboundary water management is not only a matter of coordination, but also of political relations, social interactions and institutional compromises (Chap. 4). In this regard, institutional territories should be considered as the relevant analytical entry point in order to understand the processes leading to the definition of water management boundaries.

3.3 Power Relations and Social Interactions Between Actors

Finally, the implementation of global norms appears strongly influenced by the political games that their transcoding processes involve. What global norms, nirvanas and management trends are about is, as we have seen, policy changes and innovation: they identify governance weaknesses and promote alternatives (again, see the narratives in Table 11.1). These changes and innovations are very unlikely to stem from naturally occurring and apolitical activities. To the contrary, they result from an "inherently disruptive process […] that challenges incumbent interests and status quo defenders," as Jordan and Huitema (2014, 909) have nicely

put it. (Water) governance shifts are contested, easily hijacked and potentially conflictive. They gather actors with diverging interests, beliefs and capacities for action.

The different contributions in this volume provide sound empirical evidence to back up this claim. Christian Bréthaut (Chap. 4), for instance, emphasizes how the transboundary management of the Rhône River reveals—and somehow constitutes a result of—power relations and strategies to secure water needs. He underlines the relevance of a perspective that is not limited to legal framework analyses but also integrates the power struggles between non-state actors, as well as the evolving roles played by central states. We can find similar reasoning in several other chapters that are transcended by pleas to redirect attention to "who gets what" and to give more room to the political choices involved by "nexused" thinking (Chap. 10), to consider IWRM as a regionalized institutional compromise (Chap. 3), to analyze LCG as embedded in a set of more or less formal arrangements that are reached within an heterogeneous community (Chap. 2), or to highlight the power relations and socio-political interactions related to rescaling processes (Chap. 5).

Political dimensions are also very present in other contributions. In her chapter, Eva Lieberherr underlines the trade-offs related to *democratic (or input) legitimacy* (Scharpf 1999), measured based on citizens' ability to influence decision-making, and *efficiency*, which is often seen as requiring less democratic control and more freedom of choice to improve operational performance. The arbitration between these two objectives is complex and depends on political compromises. In the end, organizational forms are numerous and their implications in terms of democratic legitimacy not linear, and sometime surprising. Florence Metz and Philip Leifeld focus, for their part, on *policy preferences*. Those are crucial when it comes to implementation processes because they strongly influence the political acceptance of one or another instrument. In that respect, policy instrument mixes are presented as crucial not only because they are preferred by actors, but also because they are seen as better equipped to generate compromise.

Irrespective of their scales of analysis (transnational negotiations, national policymaking, cantonal legislative processes, local issues), the chapters emphasize the importance of the *politics* of water governance,

i.e., of the way political interactions, actors' strategies and resources of action are constitutive of water governance and strongly influence its declinations on the ground. They highlight the role of a wide range of actors, from public authorities and private actors from different sectors, to international organizations, environmental NGOs or local communities.

4 Conclusion: Beyond Narratives and Nirvanas

The contributions collected in this volume have provided sound empirical evidence confirming findings from several previous studies. They have emphasized the need to consider water crises as crises of governance while, at the same time, urging for caution regarding international water management trends promoted as universally applicable and easily transferable. To some extent, the governance shifts and promises associated with international water management trends have been relativized. Water governance is complex and diverse, it involves many actors and instruments, and is hardly reducible to simplistic narratives.

Calls to move beyond panaceas (Meinzen-Dick 2007) or universal remedies (Ingram 2008) were, in addition, largely echoed and reflected upon. Because of path dependency dynamics, of the strong structuring role of domestic institutional regimes, of the weight of sectoral, scalar and territorial divisions, and of the specific configurations of actors and political games that intervene during implementation processes, "no two circumstances are identical" (Nature 2016a, 170). Water governance would thus better be seen as an open and site-specific process that is "frequently distorted by lopsided power relations and traversed by frontal, and sometimes uncompromising, oppositions of viewpoints and ideologies" (Molle et al. 2008, 3).

Everything is, in sum, political about water governance. In fact, "even the definition of water governance is political" (Nature 2016a, 170). This holds true both during policy formulation and implementation. Power struggles intervene at the global level, where international management trends are developed, promoted and diffused, as well as during their

domestic transcoding processes. "Questions over who governs, whose system framings count, and whose sustainability gets prioritized are [thus] all pertinent" (Smith and Stirling 2010, 1) and should be put back at the centre of water governance analysis in at least two ways.

First, *one should enrich the analysis of international water management trends with frameworks pointing to institutional, political and social dimensions*. We argue that, "like the most distant stars, [nirvana] is best viewed only with peripheral vision: we can see it's there, but we shouldn't focus our gaze directly on it lest its true nature slips from view" (Nature 2016b, 140). Analyses should rather focus on the institutional dynamics promoting or hindering social changes, on the ideological objectives that are targeted behind global norms and international management trends, on comparative explorations of their transcoding processes, on highlighting patterns in actors' configuration, power relations or strategies, on identifying "go" and "no-go" configurations. Rather than being obscured, "the reality of the (hard) choices and trade-offs that have to be made" (Molle et al. 2008, 4) when governing water should be made explicit.

Second, when dealing with water governance—but this is certainly the same with governance issues in general—*one should put analysis at the service of prescriptive statements rather than the other way around*. Rather than being conflated, analytical and normative dimensions should clearly be distinguished. This implies that analyses "of" policies should prevail over analyses "for" policies (Botterill and Fenna 2013). That does not mean that scientists cannot develop recommendations, but that these recommendations must be based on a strong understanding of what is actually happening rather than on pre-conceived orientations. Narratives, as influential as they are, should be treated as the object rather than as the rationale of analysis; purely instrumental approaches to institutions should be avoided; and the inherently political nature of water governance should be recognized. Such perspectives will only reinforce and encourage science-policy interplays.

These findings and recommendations underline, in our view, the crucial role of social sciences in engaging with analytical (and sometime also critical) endeavours of international water management trends. The challenges of governing water sustainably will most certainly not be addressed through technocratic and depoliticized management (Gupta et al. 2013)

but require, in addition, a sound understanding of political dynamics, institutional constraints and opportunities, and social dimensions. A great diversity of social science disciplines and analytical approaches (from political science to anthropology, economy or political geography) can help in that quest.

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