The need for a value-reflexive governance of water

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1. Introduction

One of the key challenges of sustainable development is access to and use of (fresh) water. Water relates to most spheres of action that feature centrally in the debate for a (more) sustainable development such as food and agriculture, protection of natural resources, energy, sanitation and health or economic development. Addressing the water issue therefore means addressing also many other connected problem areas at the same time.

One might argue that fresh water is not scarce yet: It is renewable and the global amount of fresh water would suffice to allow all humans to develop their capabilities. However, access to and distribution of water is unequal and unfair. Regional scarcity is a major issue. Against this background, enforcing a basic right to water already constitutes a major task in itself. Climate change puts additional stress on fresh water resources (e.g. by salination, droughts, heavy precipitation).[1] Stress on water adversely affects almost every aspect of human life ranging from food security and agriculture, sanitation and health, energy production to economic development. These fields of action compete for water resources and thereby aggravate the impact of climate change on water (Bals *et al.,* 2008). Measures to cope with climate change and to bring about sustainable development also affect water (Steduto and Kuylenstierna, 2009). Mitigation such as the production of renewable energy needs water for power plant cooling, pump storage hydro power stations or growing bio-energy plants. Adaptation requires water resource management to meet diverse water needs. Because of this central role of water, it can be seen as the starting point to address many sustainability issues and to cope with climate change.

Although the overall problem of depleting and threatened water resources appears straightforward, water governance faces complex global as well as regional and local contexts, where relevant facts are often uncertain and values disputed. In recent years, many promising approaches in the water sciences and management have been developed. Yet, while scientific debates developed steadily and substantially, progress in solving real world problems is still disappointing: Non-sustainable development endures and water problems aggravate and decisions remain urgent (Ingram 2011; Ostrom 2008).

This situation has a lot to do with questions of governance and the role of practical knowledge. Transformation to a more sustainable development is a knowledge-driven search process. Research and education, both play a crucial role. However, many think that it has to be a different science from what we know now. Especially inter- and transdisciplinary as well as participation should play a much greater role (WBGU, 2012; Grunwald and Kopfmüller, 2012; BUND, 2012). It has also become a truism in debates on sustainable development that solutions to be successful need to be designed for and

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1   Impacts of climate change on water cannot be comprehensively discussed within the scope of this paper. Cf. Parry *et al.* (2007): 68; Bals *et al.* (2008).

adjusted to specific contexts. Previous scientific or technological solutions supposed to fit to all problems and not paying attention to a problem's time and space eventually failed. The claim for contextual problem solving encompasses better scientific methods or models, more robust and reliable technologies as well as a more intensive focus on water governance and its political dimension (Ingram, 2011; Wesselink and Hoppe, 2011; Grunwald and Kopfmüller, 2012).

In this paper, we argue for bringing back the politics into water governance. This claim implies different changes to the present practice such as paying more attention to policy implementation or power relations. An essential part of this more politicised water governance is water ethics. Especially with regard to water, value conflicts are likely to happen. As "politics is the means through which to allocate values" and decisions on water are "value based decisions" (Ingram, 2011), water governance needs tools how to deal with values and value conflicts. We hold the view that paying more attention to the value dimension of politics opens up new possibilities. It has been mentioned above that contextual solutions to water problems are necessary: One consequence for water science and governance can be seen in a greater participation of communities in developing water research issues and in implementing possible findings (WBGU, 2012; Ingram, 2011). The main thesis of this paper is that explicit debate on values allows for a low-threshold entrance into ethical debates on sustainable water governance. Therefore, facing the value-ethical dimension is not only vital for successful water governance but also a chance for involving people into ethical debates of water governance and water science. We apply the concept of value-reflexive governance to sustainable water science governance, however, we regard it as a tool that can be used for other issues of sustainable development, too.

While the paper supports the view, that addressing the value-ethical dimension of governance is vital for sustainable development, it wants to discuss premises and conditions for value dialogue. We aim for improving good water governance by addressing its value-ethical dimension and by suggesting a pragmatically justified theory of values and the concept of a value-reflexive governance of water. The paper will firstly sketch both the importance of water for sustainable development and the resulting necessity of water ethics. It goes secondly into failures and shortcomings of previous water governance approaches. Thirdly and finally, it will suggest a pragmatically justified theory of values and discuss preconditions and challenges of a value-reflexive governance of water.

2. Water governance: bringing politics back in

Addressing water issues opens up opportunities to advance sustainable development. In order to achieve this goal, a different water governance is required that next to improved management tools encompasses an ethics of water. The academic literature agrees that water should not be left unmanaged as unmanaged water is seen to be most vulnerable to natural or social influences such as climate change or pollution. Leaving water without regulations poses severe normative challenges. First, poor people in the global South are especially endangered by climate change and its effects on water and they are restricted most in their chance to improve their life. Thus, by referring to the principle of in-

tragenerational justice, Bals *et al.* (2008) call for better water management as a means for long term availability of water. Second, according to the Rio Declaration, sustainability should guarantee peace next to economical development and environmental protection (Rio Declaration 1992, principle 28). As the struggle for water is very likely to become a major trigger for so-called climate wars in the near future, water management is urgently needed (Welzer, 2010; Grunwald and Kopfmüller, 2012). In fact, it can be observed that water is becoming an issue of cooperation between nations (Faeth and Weinthal, 2012). Third, refraining from water management might hand over the field in organisational terms to the 'Iron Law of Oligarchy' predicting "that when left unstructured and unorganised, specific interest – those that can reap selective benefits [...] – inevitably will capture and come to dominate the process" (Pahl-Wostl and Toonen, 2009a). This raises socio-ethical questions with regard to emerging power relationships and path dependent institutional settings as well with regard to the legitimacy of decision-making (Huitema and Meijerink 2007).

Though there are numerous scientific, technological and policy approaches to deal with water issues, actual results seem to be disappointing. Reasons for failure are diverse and cannot be discussed in detail here.[2] We will instead focus on water politics and governance. After being long neglected by water scholars and practitioners, the political dimension must be seen as an indispensable component for sustainable innovations in water science and governance (Ingram, 2008; Pahl-Wostl and Toonen, 2009a; Wesselink and Hoppe, 2011). Within this context, it is reasonable to distinguish between management and governance as much of the previous shortcomings and failures can be traced back to the confusion of both.

According to Pahl-Wostl and Toonen (2009b) management "is about achieving goals, with given means and resources, within given constraints and preferably in a 'cost-effective way'", while governance "is about setting the stage for management, the process of selecting policy options among competing values, translating them into goals, means and processes to be 'managed', evaluating outcomes and accounting externally, and taking responsibility for choices made along the way". Having predominately concentrated on the management and technology side, it is exactly within the water governance dimension where previous approaches to water problems have had their shortcomings. While management strives for effectiveness and efficiency, governance intents to create legitimacy. Making water policies more efficient and effective does not make them more legitimate and socially accepted at the same time when distributional effects or cultural factors are ignored (Ingram, 2011; Ostrom, 2008).

What follows from that insight for academic water scholars and practitioners? Sustainable water governance needs to fulfil several tasks, namely unfolding and settling value differences, finding legitimate policy solutions, dealing with uncertainty and surprise due to climate change and finally finding ways and means for policy implementation. With regard to reforms of water policies, two aspects seem to be undisputed. First, panaceas or universal solutions that are supposed to fit all situations inde-

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2 For an excellent overview, cf. Ingram 2011.

pendently of time and space are deemed to fail. Contextualised solutions are needed (Ingram, 2008; Ostrom, 2007, 2008). Second, many actors on different social levels ranging from the local to global can contribute to counter climate change and to find sustainable solutions to water problems. Their interaction can be steered by different social mechanisms such as competition, hierarchy or cooperation (Ostrom, 2010, 2007; Pahl-Wostl and Toonen, 2009a; Immergut 2011).

Accepting these two aspects, social science studies on sustainable water governance can be improved by both combining the governance approach with insights from policy analysis (Mayntz, 2009) and introducing an 'ethics of water (governance)'. While the governance approach generally looks for institutional settings and social mechanisms, policy analysis focuses possible policy solutions by identifying a political problem. Describing policy problems not only requires singling out relevant actor groups, namely those who cause a problem, those who are affected by the problem and those who can contribute to a problem solution. What is also needed is an analysis of material (resources) and immaterial factors (values, cultural orientations, scientific knowledge). However, describing the problem structure of sustainable water governance can only be a start. Scholars of water governance also have to assess how to implement promising solutions in different social. Central factors for successful implementation are attracting public attention in an area with values at stake, generating engagement and support, engaging social movements, making water governance an issue of politics and not only of expert circles, overcoming (formal and informal) bureaucratic path dependency and finding means for policy implementation contexts (Wesselink and Hoppe, 2011; Huitema and Mejerink, 2007; Ingram, 2011). Finally, it is doubted that more scientific knowledge is needed in water governance. Instead different knowledge, namely one that is more credible, trusted and legitimate is suggested (BUND, 2012; Ingram 2011, Funtowicz and Ravetz, 1993). It follows from the aforementioned that sustainable water governance requires value-ethical reflection on the scientific as well as on the governance side. We understand the approach of a value-reflexive governance of water as a contribution to fill that gap.

3. Value-reflexive governance of water

Dealing with the value dimension in water governance seems crucial as "[water] resources inherently involve value conflicts because water has very different meanings to different people in different contexts" (Ingram, 2008). It is therefore necessary to understand the very concept of value, in order to find ethical mechanisms to deal with value conflict and to establish and clarify the concept of "value-reflexive-governance", which transcends "good governance" concepts. In the following, we want to introduce a pragmatically justified theory of values and the concept of value-reflexive governance.

3.1. Concept of value[3]

We regard values as reference points for evaluations; values are emotionally and rationally binding, giving long-term orientation and motivation for action. Accordingly, values work as ideals or criteria

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3   The following chapter draws on Beck *et al.* (2012).

(i.e. reference points) for evaluating actions, persons, institutions, things, attitudes, preferences, norms, etc. as good or bad (Mandry, 2009). They encompass an active and passive respectively rational and emotional element: Following 20th philosophy, values have to be acknowledged actively by valuing individuals and collectives (cf. Bohlken, 2006; Schnädelbach, 1983). In an *active* sense, values are "conscious or unconscious orientating standards [...] that lead individuals or collective action decisions" (Horn, 2002). Only truthful, internalised and action-leading evaluations are regarded as 'values'. Values are strong intrinsic motivators that make actions possible (Joas, 2001). Acting in accordance with one's own values, actors behave in consonance with their own self-conception, in a way they want to see themselves. In a *passive* manner, individuals and groups feel bound to their values; they do not simply change values because of calculation, preachments or objections. Values are comparatively stable, without being unchangeable over time (Joas, 2008). The inevitable *emotional* component can be seen when a value is challenged by non-complying action. If we witness the violation of a value, we do not simply state it soberly, but we have strong moral feelings such as outrage or shame (Joas, 2005). According to the *rational* component, reference to values allows for ethical consideration such as argumentation, reflectivity and eventually justification. A value expressing subject can give reasons for being bound to this certain value. We disagree with Siep (2004), who holds that values are accepted 'on their own' as non-justifiable normative standards instead of being necessarily justified by reasons. In contrast, we argue that values can be justified: We might have good reasons for their acceptance – not in the sense of 'ultimate justification' ('Letztbegründung') but in the sense of explicitly reason giving and reason taking in a rational discourse. If the end of justification is to convince an addressee by arguments, the justification process has to be adjusted to situational requirements and to the accepted kinds of reasons (Ott, 2005).

In this vein, we aim at a pragmatically justified theory of values.[4] Pragmatists regard beliefs, concepts, guiding rules, etc. as habits or dispositions of action, in order to solve contextual problems (Anderson, 2010). In this sense, action guiding values are instruments to resolve our practical problems. Doubt arises when certain habits are challenged by new problems, when normal course of activity on them is not possible or yields unsatisfactory consequences. Then, the contents of beliefs and guiding rules should be clarified by inquiry and approved by their 'practical consequences' as the criterion for validity. Further pragmatic developments brought that beliefs, concepts and hypothesis are not only challenged by practical use (J. Dewey); their validity is mainly dependent from intersubjective, 'symbolic interactions' (G.H. Mead). Connected to our emotional and rational situation, we make single experiences, in which we appreciate objects, properties, states of affairs, facts, etc. evidently and effectively as 'good'. If repeated individual value experiences are articulated to and accepted by other, these

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4   By using the paraphrase 'pragmatically justified', we are aware that pragmatism is an opaque concept. In general, at least two meanings of pragmatism can be distinguished (Schurz, 1998): For many people pragmatism characterises knowledge and its rationality in terms of its relation to the subjective purposes of the user (practicability); others ascribe knowledge as pragmatically justified in terms of its general functioning for anyone in its context. We use the term in the later meaning, which is traced back to the philosophical school of American pragmatism.

experience-based evaluations (or 'valuings') might become socially intermediated 'values' in a proper sense. Thus, values can be regarded as results from evaluation processes eventually constituting reference points in a dialectical process.

From contemporary pragmatic value theories, Hans Joas' idea of the genesis of values is a promising approach (Joas, 2001). According to Joas, value binding originate in 'experiences of self-formation and self-transcendence': Referring to the fundamental assumptions of Mead, individuals are conceived as beings forming their Self through dialogical experiences with the Other as parts of a larger discourse community. As the process of the self-formation is based on interactions in childhood and adolescence, individuals get used to value bindings through dialogical experiences with their social surrounding (e.g. family, groups). This constitutes a value system that is not fixed, but open to change. Change can occur in extra-ordinary experiences of self-transcendence in which individuals cross their individual borders and make experiences that lead to new value bindings. Possible experiences of self-transcendence are collective ecstasy, prayers, especially intensive experiences of agony, fear or violence.

A pragmatically justified theory of values has several advantages: First, it takes into account that actors already have concrete and strong beliefs about 'values' they feel bound to. The pragmatic value concept is applicable by persons with different moral background in different contexts. Second, it takes seriously the situation of several and heterogeneous accepted values within a value community (i.e. freedom, wealth, etc.). Descriptions of a pluralistic society with a plurality of values are empirically undeniable and broadly accepted. Third, it offers a value theory neither claiming the eternal existence of fixed values independent of time and space nor paving the way for value relativist or value subjectivist positions. Instead, historically contingent values can be employed as valid and binding – not for eternity but for a certain given time or at least for certain societies. Even if in pluralistic backgrounds, the acceptance of certain justification models is difficult, one must not underestimate the consensual acceptance of basic values, which gain a quasi-objective status. But, as values are generated in dynamical interactions between individuals and society, the question arises if it is possible to reconstruct a substantial axiology of a social group. This would be necessary if we want to solve the problem of competing values in a certain context.

3.2. Values and ethics

Ethics, that is aware of a plurality of values within and between societies, can develop mechanisms that allow citizens to bring their values into ethical debates and thereby to participate in the finding of socially robust innovations (cf. Funtowicz and Ravetz, 1993, 1999). While affirming this view, we want to pay attention on two value-ethical claims:

(1) Values can be regarded as low-threshold entry to ethical debates. Including the value dimension in coping with situations of high uncertainties and values allows to better address citizens and stakeholders, which have to and want to understand, support, endure and participate consciously and delib-

erately in governance processes such as water governance. It can be expected that value dialogue contributes to a more political water governance as water issues get more easily on the political agenda, stakeholders can be better mobilised and more intensively included in policy making (Ingram, 2011; Huitema and Mejerink, 2007).

(2) Ethical debates cannot be restricted to mere value talk. Value debates need an ethical framing that enables both participation as well as a philosophically sound reflection on (conflicting) values. The concept of value-reflexive governance has three aims. It wants first to contribute to a democratisation of sciences, second to make explicit implicit value commitments and third to allow for rational discourses on values. The last point is important as there are strands in moral philosophy that regard values as purely subjective and non-argumentative. The value-ethical core of a value-reflexive governance therefore does not only take stock of the values involved but also develops philosophical mechanisms to deal with value conflicts and participatory mechanisms to deal with value conflicts in social contexts.

By and large, we expect ethics to play multiple roles in solving value conflicts. First, ethics contributes to the understanding of what is actually meant by a given value as there are very often different and conflicting interpretations of the same value. Ethics might as well check different value interpretations with regard to their moral rightness or goodness. Second, ethics helps to handle conflict between different values. As mentioned earlier, water is an issue where many different values are at stake and where value conflict seems likely. An ethics of values offers philosophical frames to deal with conflicting values. Value-reflexive governance also addresses the need to set up norms and regulations. This is especially required with regard to sustainable development, when value conflicts have to be settled within specific normative prerequisites: Sustainable water governance wants to further the possibilities for people today and tomorrow to develop their capabilities (cf. Ott and Döring, 2008; von Egan-Krieger *et al.*, 2009).

3.3. Toward a value-reflexive governance: More than good governance
When suggesting the concept of value-reflexive governance, one has to clarify the relationship to the concept of good governance as on the surface, both concepts might appear identical. The idea of good governance first evolved within the (value) context of the World Bank which wanted to develop principles that could determine the allocation of loans to developing countries and that had a strong anti-corruption bias. The genesis of good governance conceptions within the context of an international economic institution does not delegitimise the concept as such. However, it has to be carefully assessed if good governance concepts encourage hidden forms of paternalism when introduced top-down.

Building on UNESCAP, Pahl-Wostl and Toonen define good water governance as "participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and [… following] the rule of law" (Pahl-Wostl and Toonen, 2009a UNESCAP, 2012). This defin-

ition names norms such as transparency, accountability or participation are central cornerstones for a more legitimate and just ("good") governance. While the concept of good governance is mainly concerned with norms that are meant to guide governance processes, it remains unclear and merely implicit which values are at play – if not largely insensitive for values hold by governance participants. This observation leads to two main further questions to be addressed in the processes of water governance: 1) which values form the basis of normative statements about how "good water governance" should be? 2) Whose values are meant to guide governance?

Thus, we introduce the concept of "value-reflexive governance", which (i.) makes explicit underlying values of good governance norms, whose values formed their basis and the processes by which they became guiding imperatives and (ii.) offers solutions that open, transparent and more inclusive governance not only allows more social actors to express their values but also ensures that those values can be translated into policy programs. In contrast to the broad concept of good governance, the concept of value-reflexive governance stresses the point of sensitivity in regard to participants' values in governance processes. Ensuring that the values of all stakeholders might be voiced and heard within governance process does not say anything about how to deal with values, let alone value conflicts. It even might appear that value-reflexive governance leads to more value dissent as more stakeholders are involved.

Making transparent underlying values and asking whose values are or should be included in water governance can contribute to bring about institutional change. It has been mentioned that addressing the value dimension of politics can mobilise people for an issue. Yet, there is more to gain. The evolutions of institutions that regulate water governance might be path dependent and informal institutions such as good governance concepts enshrine values of a dominant group at the cost of others. By making explicit the underlying values and thereby questioning the taken-for-grantedness of a political order, value-reflexive governance can destabilise legitimacy and contribute to institutional reform (Beyer 2010; Mahoney 2000).

What does this mean for water governance and the water sciences? What are the values that guide governance of water and water sciences? Water science is a highly self-regulating social system. However, politics and business play an important role in shaping it. Both spheres interact. A value-reflexive governance of water opens up dialogue on underlying values. At the same time, water sciences take part in solving social problems and are therefore actors in governance processes. While traditionally the sciences have been assigned with the role of contributing a standing knowledge to deal with concrete problems, this (self-) perception changed. Fixed all-cure solutions failed in concrete social contexts because governance processes overlooked value dimensions of people affected by political and technical solutions. In value-reflexive governance, water sciences and practitioners do not contribute to societal requests by providing fixed knowledge but by developing specific solutions to problems with a specific time-space dimension. This requires an understanding of values involved and sugges-

tions how to deal with value conflicts. In that sense, value-based governance needs, among others, conceptual clarification as well as extensive deliberation on the ethical norms and decisions to be made in water governance.

4. Conclusion

The paper started from two observations: first, (fresh) water and the issue of sustainable development are closely interlinked and second, water governance is much needed to deal with the effects of non-sustainable development (pollution, climate change, inadequate access to resources etc.). So far, the record of water regulation is mixed, which can, among others, be traced back to the neglect of the political dimension of water. Finding solutions to water problems is not only about technology to be applied by experts, it is also a highly normative undertaking with values at stake. The paper suggested the concept of value-reflexive governance as a response to the present shortcomings in water governance. The proposed approach intends to make values visible and accessible for rational discourse and at the same time suggests value discourses as a low-threshold entry for stakeholders to ethical debates of water governance. So far, the approach raises important points for more sustainable water governance. They still have to be elaborated: It does neither provide detailed suggestions for policy implementation nor for philosophical tools that guide value discourses and fit to diverse social and institutional contexts. Both have still to be developed. What is hoped for is (more) sustainable water governance by generating political procedures and solutions and scientific knowledge that are more credible, trusted and legitimate, based on deliberation on the underlying value dimensions.

Acknowledgements

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