



Review

Conflicts and security in integrated water resources management

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ABSTRACT

Water sector reforms based on the concept of Integrated Water Resources Management (IWRM) are criticized for not considering context, local realities or legitimacy during the implementation of water sector reforms. Universal remedies of IWRM can thus lead to resistance, conflicts and ultimately failures of interventions. This paper examines how conflicts and disharmony can be addressed by IWRM's instruments. It conceptualizes institutional security as a highly relevant issue to be addressed during water management interventions. Further, the paper advocates a reform of the holistic concept of IWRM to incorporate 'peace and security' as a new pillar of water management based on a broad understanding of societal goals that are embedded in the principles of good governance and sustainable development. It also reviews recent criticism of and debates in IWRM and explains the advantages of expanding the normative idea behind it.

1. Introduction: current state of water sector reforms

Water management has been in a state of constant change since the first Rio conference in 1992. Water sectors across many countries have reacted to increasing risks and water crises by adopting new institutional frameworks, decentralizing water resources planning or developing new infrastructures. According to a comprehensive status report by the UN prior to the Rio plus 20 conference in 2012, 82% of the 130 surveyed countries indicated the adoption of reforms to improve an enabling environment for IWRM, 79% changed their water policies, 65% have adopted Integrated Water Resources Management (IWRM) plans, and 71% facilitated water management at the basin level (UN, 2012). Such worldwide wave of restructuring and reforms has left its impact on the water sectors in terms of performance improvements in some countries and the emergence of an array of new water institutions like water ministries, basin agencies or regulatory bodies (Ait Kadi, 2014). While scarcity and crises represented the drivers of reforms, the ideological reasoning and implementation blueprint were provided by celebrated concepts such as water governance and IWRM. Both concepts have generated a great deal of attention and confusion among scientists and practitioners. While water governance in its original meaning was more concerned with 'rules of the game' or the set of principles to ensure 'effective' or 'good' governance, this understanding has been supplanted by or incorporated within IWRM or extended concepts of it emphasizing a principle like inclusiveness or effectiveness (Lautze et al., 2011). In its pure understanding, IWRM, a term influenced by advocacy and literature of Global Water Partnership

(GWP) since 1996, has referred to practical measures to align water management decisions to predefined water governance principles, especially those set in the international consensus of the Dublin Principles of 1992. For many countries, (good) water governance principles and IWRM meant initiating reforms to increase participation, e.g. of women or affected communities, decentralize water management, often to the basin level, introduce economic instruments and commercialize water institutions, and introduce integrated water plans and laws.

Water sector reforms have not, however, been an all-round success nor have they halted the water crisis. IWRM and water governance principles triggered serious changes in terms of policies, laws and institutions. Water management reforms can fail for a multiple of broader socio-economic factors like lack of funding, political instability or the interference of global drivers like trade policies or droughts (e.g. Warner et al., 2015). However, stakeholder engagement and participation in water management institutions and decision are key premises of IWRM, which remain relatively low while the financing of these IWRM institutions, and importantly of water services, remain weak and has not changed significantly (UN, 2012). Criticism regarding the lack of significant, tangible improvements related to IWRM implementation has been around for a while now (Allan, 2003; Biswas, 2004; Blomquist and Schlager, 2005). While IWRM's role in consolidating water management functions and initiating institutional and legislative reforms across countries is undeniable, its implementation did not meet the initial expectation of producing a comprehensive policy solution to national water management challenges. Recent evidence continue to show

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mixed outcomes from IWRM implementation, for example in Bangladesh (Rouillard et al., 2014), Zimbabwe (Derman and Manzungu, 2016) and Tanzania (Van Koppen et al., 2016). Criticism of IWRM is being reiterated recently in the wake of the emergence of new environmental sustainability paradigms like the water, energy, and food nexus (so-called WEF nexus). Some scholars see the Nexus as a chance to alleviate the disappointing outcomes of IWRM, and the Dublin principle (Beck and Villarroel Walker 2013; Perrone and Hornberger, 2014; Benson et al., 2015; Muller, 2015). Within the WEF nexus, which presents an idea propagated by many water scientists (Allouche, 2015), water issues are given a special consideration and a central place (Beck and Villarroel Walker, 2013; Perrone and Hornberger, 2014). The nexus idea follows a similar integrative approach as IWRM and its emergence is directly related to IWRM failures (Al-Saidi and Elagib, 2017). WEF nexus is still heavily debated. Some predict the same fate for the nexus as with IWRM in terms of not resulting in noticeably enhanced policy processes (Wichelns, 2017) or see it as an ‘integrative imaginary’ or a ‘buzzword’ (Cairns and Krzywoszynska, 2016). On the other hand, the nexus is seen a promising concept which can lead to significant reforms that link water to neglected issues in IWRM, like agriculture and trade (Allan, 2015). It must be operationalized via thresholds and data-supported models (Kurian, 2017) and a greater experimentation with tools and institutional arrangements at different levels of the policy-making value chain (Al-Saidi and Elagib, 2017).

Water scientists are deliberating the concept of water governance in light of the mentioned failures. Gupta et al. (2013) highlighted the need for a “normative framework” to enhance coherence between different levels of water governance that should be supported by policies, instruments and organizational frameworks. Wiek and Larson (2012) categorized (normative) guidelines for natural resources governance according to whether the analysis perspective focuses on socio-ecological systems, actors, values and goals or on comprehensive principles for water sustainability. They proposed an analytical framework for water governance interventions by focusing on what actors do and the outcomes of such activities on various components of the social-ecological system in clearly delineated areas. This framework is complemented by a set of principles for sustainable water governance, which include “hard” measures like integrity, efficiency, sufficiency, precaution and interconnectivity. Such principles entail an array of demands on water managers to adhere to boundaries, flows, qualities and abstraction rates, reduce inefficiencies or negative impacts and deal with uncertainty. “Soft” principles like civility and equity represent outcomes of processes to ensure stakeholder participation, justice and fair representation. The sustainability criteria by Wiek and Larson (2012) represent a compilation of various normative principles proposed by other authors that can be systematically used to generate to identify water governance gaps (e.g. application for Costa Rica by Kuzdas et al., 2014). Similarly, Pahl-Wostl et al. (2013a) assessed the state of knowledge on water governance- and identified two gaps: missing or “weak properties” of leadership, legitimacy, representativeness or comprehensiveness; and missing links between elements which reduce the effectiveness of water governance. While the mentioned WEF nexus paradigm might address some issues in the second gap of water governance identified by Pahl-Wostl et al., this paper argues that the first gap can be mitigated by extending the normative principles that underlie the designing of the IWRM concept. This paper sees an opportunity to use some extensions of sustainable development understanding with four instead of three pillars: efficiency, sustainability, and equity, alongside ‘peace and security’, as an opportunity to introduce conflicts, security and peace as a central issue into the IWRM framework. The failure of IWRM to address water governance principles like those identified by Pahl-Wostl et al. (2013a) as weak prosperities or some key sustainability criteria put forward by Wiek and Larson (2012) results in reform resistance and stalemates, short-sighted measures and institutional conflicts and can lead to failures of measures or even to violent outcomes. IWRM does not provide solutions to these problems

nor does it incorporate the issues related to security adequately. The paper outlines the arguments for addressing these issues within IWRM and highlights the benefits in terms of achieving key water governance principles such as contextuality, legitimacy, representativeness and ownership.

2. Merits and reform needs Of IWRM

2.1. Conflict and resistance as key restraints for water sector reforms

The implementation of IWRM in many developing countries has met serious resistance not only of the powerful agricultural interests related to the ‘old’ water resources development paradigm, but also among water sector practitioners. Evidence of such resistance can be retracted from a growing criticism of IWRM in the last years and documented cases of failures due to low participation and the missing perception of ownership – e.g. South Africa (Swatuk, 2005); India (Shah and van Koppen, 2006); and Sri Lanka (Samad, 2005). Resistance to reforms can lead to institutional conflicts and power games hindering reforms. Yet, what are the drivers of conflict in adopting IWRM reforms that can produce failures? In literature, one finds two main and interrelated explanations: lack of contextuality and the perception of illegitimacy. These two broad reasons are consequences of the reforms’ failure to implement key good governance principles like adaptability and institutional fit, participation, accountability, transparency, representativeness or ownership.

Regarding the first explanation, IWRM in many cases did not consider the political and institutional realities of developing countries. Such criticism is largely based on the notion that IWRM is more suited to the needs of developed rather developing countries. Allan (2003) argued that water policies in the global south follow a more political and discursive process than the technical (demand management, basin management, rights etc.) procedures of the north. This notion has been reiterated by Butterworth et al. (2010), who criticized IWRM of not considering the local reality by using the same IWRM remedies and of neglecting the political context (“depoliticising”). Research shows that water management issues and priorities are different in developing and developed countries (Hooper, 2006). Similarly, Beveridge and Monsees (2012) explained that IWRM ignored development politics in southern countries and lacked sensitivity to traditional and informal institutions. Another aspect of weak contextuality is the lack of institutional fit in implementing IWRM. As evident in cases in South Africa, reforms are not considering existing laws and institutions. This leads to institutional interplay and problems of coordination (ibid.). The second explanation for IWRM failures is with regard to the perception of illegitimacy reforms. This arises from the failures of IWRM to rally crucial stakeholders behind the integrated management idea. Case studies in Asia and Africa show that local stakeholders lack genuine interest in involvement in IWRM reforms such as basin management (Bandaragoda and Babel, 2010). Such reforms can be highly influenced by translation and perception and also placed in a complex setting with overlaps between formal and informal actors (Mehta and Movik, 2014). Stakeholders might often develop ‘negativism’ toward project-based reforms and are rather concerned with issues like fighting corruption and nepotism. In fact, the short-terminality and project-thinking are important constraints on water reforms and management and might delegitimize reforms. Allan (2012) concluded in the case of Australia that ‘projects’ can encourage short-term planning, risk-avoidance and power asymmetries as they are tied to financial and political cycles. One reason for this is the fact that IWRM, the birth-child of ecologists and practitioners, is thus not people-centered, and fails to integrate the interests of utilitarian use (e.g. agriculture and water suppliers) (Butterworth et al., 2010). It thus pays lip service to people and participation of all stakeholders (ibid.) and leads to misrepresentation, especially of local communities through opportunistic NGOs, missing accountability and inequities (Beveridge and Monsees, 2012).

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