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Introduction to the Special Issue – Flows and Practices: The Politics of Integrated Water Resources Management (IWRM) in Southern Africa

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ABSTRACT: For the past two decades, IWRM has been actively promoted by water experts as well as multilateral and bilateral donors who have considered it to be a crucial way to address global water management problems. IWRM has been incorporated into water laws, reforms and policies of southern African nations. This article introduces the special issue 'Flows and Practices: The Politics of IWRM in southern Africa'. It provides a conceptual framework to study: the flow of IWRM as an idea; its translation and articulation into new policies, institutions and allocation mechanisms, and the resulting practices and effects across multiple scales – global, regional, national and local. The empirical findings of the complexities of articulation and implementation of IWRM in South Africa, Zimbabwe, Mozambique, Tanzania and Uganda form the core of this special issue. We demonstrate how Africa has been a laboratory for IWRM experiments, while donors as well as a new cadre of water professionals and students have made IWRM their mission. The case studies reveal that IWRM may have resulted in an unwarranted policy focus on managing water instead of enlarging poor women's and men's access to water. The newly created institutional arrangements tended to centralise the power and control of the State and powerful users over water and failed to address historically rooted inequalities.

KEYWORDS: IWRM, water policies and reform, access to water, donors, southern Africa

INTRODUCTION

For the past two decades, Integrated Water Resources Management (IWRM) has been considered the dominant paradigm in water resources management. It is one of the most influential policy models currently being implemented in river basins globally, including in Africa (GWP and INBO, 2009). Of the countries around the world 80% have included IWRM principles in their water law or policies and two-thirds have developed IWRM plans (see Cherlet, 2012). While this concept has been around for a long time, its current form gained momentum at the International Conference on Water and the Environment (ICWE) in Dublin in January 1992. Since then it has been the flagship project of supranational global bodies such as the Global Water Partnership (GWP), and the World Water Council (see GWP, 2000). It is central to the European Water Framework Directive which emphasises river basins as management units, stakeholder involvement and water as an economic good (European Union, 2000). In its heyday, it was also promoted by multilateral and regional development banks (e.g. the World Bank and African Development Bank) as well as bilateral donor agencies as one of the panaceas to address the water management crisis in the global south.

The promotion by these global players has led to a quasi-global industry around IWRM manifesting itself in various forms such as Master's degrees and short courses, annual symposia such as WaterNet in southern Africa, IWRM toolkits and manuals as well as major water reform programmes and the rewriting of national policies and laws drawing on IWRM principles in a range of countries in the global South. Conca argues that IWRM "combines intuitive reasonableness, an appeal to technical authority, and an all-encompassing character of such great flexibility that it approaches vagueness" (Conca, 2006: 126-127). How such globally defined constructs of flexibility and vagueness translate into diverse political, cultural and social contexts around the world, and how and to what extent they become locally appropriate are thus key questions.

We address these issues in the context of southern Africa which has witnessed a rapid spread of IWRM in the past two decades (see Movik et al., this Issue). African socio-political and environmental conditions differ markedly from temperate regions and countries where IWRM originated. Africa's rivers are larger, more complex and variable, and far more prone to extreme events (Elberier and Babiker, 1998) than those in temperate zones, and there is a dearth of data on both hydrology and usage. Moreover, IWRM also emphasises decentralisation, and efforts to decentralise decision making have led to experimentation with new institutions, new procedures, new accountability standards and new planning processes. However, the capacity of national governments to ensure that these are followed remains problematic (Ribot and Larson, 2005) and often water management policies in the past have tended towards (re-)centralising power (Movik, 2010) and facilitating the rise of expert authority over locally situated knowledges and management practices (Biswas, 2004; Shah and van Koppen, 2006). Furthermore, local customary arrangements matter. African nation-states tend to have plural, overlapping and competing formal and informal legal and customary systems, and most countries in sub-Saharan Africa are characterised by primarily informal water users' practices (Biswas, 2004; Shah and van Koppen, 2006; van Koppen et al., 2005). There are also issues concerning participation, elite capture and the importance of local social, gender and power relations (van Koppen et al., 2007). It is thus important to ask whether donors, state and non-state actors rolling out water reform and IWRM take on board these ecological, socio-political and cultural complexities as well as historical legacies or whether many unintended consequences of development interventions and dominant discourses such as IWRM prevail (cf. Ferguson, 1994).

In this collection, we present findings and conclusions from the research project 'Flows and Practices: The Politics of IWRM in Africa'.[1] The project explored at various levels how ideas of IWRM, as constructed at the global and European level, have been and are being translated and adapted into narratives and practices in the countries of Mozambique, South Africa, Tanzania, Zimbabwe and Uganda.[2] All but Uganda are members of the Southern African Development Community (SADC). Specifically, the special issue addresses the following questions: How has IWRM as an idea travelled from Europe to southern Africa? Who have been the key actors in the varied articulations and translations of IWRM at the global and regional level and in the countries of study? Why has IWRM been so influential in southern Africa? How do abstract ideas of IWRM, which evolved in global institutions, cope with plural, overlapping and competing formal and informal legal and customary systems in Africa? Has IWRM succeeded in addressing issues concerning equity, class, race and gender? How does it contribute (or not) to wider developmental initiatives concerning poverty reduction and equitable allocation?

The 14 original articles in this collection explore the on-the-ground complexities of IWRM implementation, interpretations and adaptations. Grounded in social science theory and research, this special issue demonstrates the importance of politics, political economy, history and culture in shaping water management practices and reform. It demonstrates how Africa has clearly been a laboratory for IWRM in the past two decades. While a new cadre of water professionals and students has made IWRM their mission, we show that poor women and men may not have always benefitted from this. This is because IWRM may have resulted in an unwarranted policy focus on managing water and 'software' issues instead of enlarging access to the resource and developing water resources. In some cases, IWRM has also offered a distraction from more critical issues such as water and land grabs, privatisation, the negative impacts of water permits and a range of institutional ambiguities that prevent water allocations to small and poor water users. By critically examining the interpretations and challenges of IWRM, this special issue also will hopefully contribute to improving water policies and practices and making them more locally appropriate in Africa and beyond. In the rest of this introduction we focus on the conceptual and methodological underpinnings of the special issue and provide some comparative insights from the country studies before concluding.

WHAT IS IWRM?

Contrary to what is commonly assumed, Integrated Water Resources Management (IWRM) is not a new concept. The idea of 'integrated' management has been practised in many forms for decades, if not centuries, and goes back to early ideas of integrated water management in the US and Europe (Mitchell, 1990; Rahaman and Varis, 2005).[3] Conventionally dominant modes of water management have been characterised by sectoral approaches that separate out issues of water and sanitation, as

[1] This Norwegian Research Council funded project was led by the Department of Environment and Development Studies (Noragric), Norwegian University of Life Sciences. Partner organisations included the Institute of Development Studies, UK, Wageningen University, Sokoine Agricultural University, University of Zimbabwe, International Water Management and the Norwegian Institute for Water Research (NIVA).

[2] Uganda was added as a country of focus because it is considered to be one of the pioneers of IWRM in Africa. Even though it is in Eastern Africa, participation from Uganda is encouraged in the WaterNet network.

[3] For example, the Tennessee Valley Authority, which was established in 1933 in the US, is sometimes considered to be an early example of IWRM in practice as it was set up as a river basin organisation to facilitate multipurpose management to deal with hydroelectricity, water supply, pollution, navigation, flood management and conservation (see Snellen and Schrevel, 2004; Mukhtarov, 2009; Cherlet, 2012). Still, some critical assessments of the TVA model have shown that it is different from IWRM because (1) TVA did *not* entail democratic forms of stakeholder participation; and (2) that the holistic management of natural resources of the Tennessee Valley was only a marginal concern to TVA which was mainly an electricity-generating outfit (see Chandler, 1984; Miller and Reidinger, 1998).

well as water for food, energy, domestic supply, irrigation and floodwater management. The International Decade on Water and Sanitation (the 'Water Decade') was launched in 1981.[4] It was mainly a supply-led and government-focused initiative, in line with the thinking at the time that governments should be in the driving seat (see Nicol et al., 2012). The primary focus was on expanding and universalising coverage of drinking water supply and sanitation. In the 1990s, supply-oriented paradigms gave way to demand-led approaches in the water sector. There was an increasing emphasis on scaling back the government, slimming down public services, as well as deregulation and liberalisation in line with World Bank and International Monetary Fund led Structural Adjustment Programmes. Consequently, the early nineties saw a substantial attention and output by World Bank economists on the necessity of treating water as an economic good and using economic incentives to increase so-called water use efficiency (see World Bank, 1993; Briscoe, 1997). This period also saw the promotion of a holistic approach to water resources management, the reincarnation of IWRM[5] as well as the so-called Dublin Principles which are considered by many as the 'birth' of modern-day IWRM (see Allouche, this Issue).

Out of the Dublin Statement on Water and Sustainable Development (1992) emerged the four Dublin Principles which over time became considered integral to IWRM. They recognise (1) the finite nature of water and its key role in sustaining life, development and the environment (this principle has often been translated into a principle of managing water as per its resource-based boundary – i.e. the river basin); (2) the importance of participatory approaches in water development and management; (3) the central role played by women in the provision, management and safeguarding of water (see Derman and Prabhakaran, this Issue, for a discussion of IWRM and gender), and (4) the economic and competing values of water and the need to recognise water as an economic good (International Conference on Water and the Environment, 1992). Since Dublin, IWRM has gradually emerged as the sanctioned discourse on water resources management in both the global water domain and the national water policies and legislations of SADC and other African states (Allan, 2003; Swatuk, 2005 Conca, 2006; Swatuk, 2008).

The Dublin Principles of 1992 were integrated into Agenda 21 at the United Nations Conference on Environment and Development (UNCED) and Earth Summit in Rio de Janeiro in 1992 which strongly influenced the development of IWRM (cf. Allouche, this Issue and Nicol and Odinga, this Issue). To put the Dublin Principles into practice, concepts such as holistic management and integration, decentralisation, participation and economic and financial sustainability are repeatedly picked up in IWRM plans and reform packages (see GWP, 2000; Xie, 2006). These concepts are of course very broad, and often difficult to implement in practice as the wide literature on IWRM reveals. Similarly, the definitions of IWRM, while very logical and sound, remain abstract even at the theoretical and conceptual level, let alone when unfolded on the ground. Hence it is safe to observe that there is no agreement on the exact definition of IWRM attributes (Molle, 2008). Yet, for the sake of conceptual clarity we will present two of its more commonly used definitions below. The most commonly used definition is the one by the Global Water Partnership (GWP, 2000) which defines it as a "process which promotes the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems". Another definition by the United States Agency for International Development (USAID) says: "IWRM is a participatory planning and implementation process, based on sound science, which brings together stakeholders to determine how to meet society's long-term needs for water and coastal resources while maintaining essential ecological

[4] This was around the same time as the Southern African Development Coordination Conference (SADCC), the forerunner of SADC was being consolidated (see Movik et al., this Issue).

[5] According to Biswas (2004), those who promoted it actively in the 1990s were not aware of its earlier incarnations.

services and economic benefits. (…) IWRM helps to protect the world's environment, foster economic growth and sustainable agricultural development, promote democratic governance, and improve human health" (quoted in Xie, 2006).

Nobody would doubt the value of such processes, definitions and initiatives. Still as several authors such as Molle (2008) and Biswas (2004) have systematically argued, even though these definitions are impressive on face value, in reality, they are often unusable, internally inconsistent and un-implementable in operational terms. Thus, despite the very important aims of holistic and integrated approaches in water management, as the country case studies in this collection show, the concept of IWRM remains ideal-typical and is beset by contradictions, which makes it very difficult to operationalise and implement on the ground. A good case in point is the notion of integration. As Bolding et al. (2000) have argued, there are at least four possible meanings of this term, including (1) the integration of different uses of water (e.g. drinking, irrigation, ecological functions, manufacture, etc); (2) the integration of analytical perspectives and the fact that the organisation of knowledge production tends to be along disciplinary and sectoral lines, making it a challenge to integrate different disciplinary and sectoral approaches; (3) the integration of the different institutions responsible for water resources development and management and the need to break down sectoral compartmentalisation between different ministries (e.g. irrigation, rural water supply, forestry, land and so on); these raise the more general issue of how to organise stakeholder involvement in water and natural resources policy-making, planning, development and management; (4) finally, water management as integrated with ecosystem services, human health, ecological sustainability, economic growth, poverty alleviation, gender equality, employment and other aspects of human development.

Seemingly addressing all these disparate concerns around integration, IWRM provides a common framework within which to discuss water matters. The possibility of actually achieving integration makes it attractive and it has become a focal point for donors and summits, as well as national governments, almost as a 'nirvana concept' (cf. Molle, 2008). However, as Molle admits, the likelihood of achieving nirvana is low. It is thus useful to conceptualise IWRM as a 'boundary term' (Gieryn, 1999) that different actors in scientific and policy worlds interpret and deploy in different ways in accordance with prevailing political interests as well as in different ontological and epistemological points of departure. Such boundary and 'nirvana' terms help galvanise resources and action. But they also obscure the political nature of water resources management and are liable to be hijacked by particular interest groups to advance their own agendas (see the example of water grabbing in Tanzania, van Eeden et al., this Issue).

PROBLEMS WITH INTEGRATION

It is often overlooked that integration is also a political process (Saravanan et al., 2009) and we need to ask who is doing the integrating and whose interests are being represented and how contested interests should be dealt with (Merrey et al., 2005). These political and political economy aspects are often ignored because integration implicitly draws on a normative logic of Habermasian communicative rationality where different members seek to reach a common understanding and cooperative actions by consensus rather than strategic action strictly pursing their own goals (Saravanan et al., 2009). As the different country examples highlight there are often political economy concerns, relating to how to prioritise allocations and weigh trade-offs among different water uses and sectors, but these tend to not come to the fore. As with other popular approaches in development such as Elinor Ostrom's design principles (1990) and adaptive management (Pahl-Wostl et al., 2010) questions concerning power, politics and contestation are often glossed over. The IWRM emphasis on the three E's – equity, efficiency and environmental sustainability – also seems to idealise win/win scenarios and whitewash possible trade-offs and conflicts between these three goals and the resulting conflicts that usually

ensue between a range of water users, decision makers as well as local people (see for example, van Koppen et al., this Issue).

The attractiveness of management based on river basins is evident in the European context as well. The European Water Framework Directive (WFD) was created in 2000 as a response to the fragmented legislation relating to water, and also to the mounting concerns among European citizens who perceived water pollution to be an increasing problem (Kaika, 2003). The early versions of the WFD required countries to create river basin institutions, often where none existed. However, Germany vetoed this, and the end result was that the Directive allowed countries wide latitude of discretion in terms of determining how they wished to interpret and implement the Directive. This has resulted in a variety of modes of implementation (Hedin et al., 2007). Moss (2003) has shown how it is up to each member state to set up appropriate administrative arrangements for each river basin and district. He also demonstrates how river basin management as conceptualised at the European level raises questions of 'fit' and 'compatibility' with national and sub-national institutions of water management not arranged around river basins. While river basin management seeks to manage water according to logic of ecosystems rather than political-administrative boundaries, in countries such as Germany there are problems of 'interplay' between water and other institutions (e.g. agriculture) which could be exacerbated through the creation of a different territorial unit for water management. Similar tensions have been noted in southern Africa too. Therefore the WFD has not proven effective and very limited management plans have been produced. Thus Germany is seen to practise a different form of IWRM according to Moss (2003) by choosing to stick with administrative boundaries rather than introducing new boundaries based on hydrological characteristics.

The WFD sought to move away from government 'command-and-control' styles of resources management to a more governance-oriented approach which manifests itself in different ways in different countries. Participation is one of the key principles of IWRM. But even in so-called mature democracies in Europe, public participation has been fraught with problems. Water authorities have adopted a very minimalist interpretation of public participation often taken to encompass information available in journals, newspapers and on the internet (Moss, 2003). The implementation of the WFD and the emphasis on participation has led to a shift from social contestation to consensual governance (Parés, 2011). While civil society and social movements have been able to gain access to policy-making processes, their participation has not challenged existing geometries of power (ibid). Parés (2011) argues that new water governance arrangements are foreclosing the possibility to change the established system leading to increasing managerialism and consensual politics, a sentiment that is echoed in Swyngedouw's work on 'post-democratisation', where he explores the dynamics of de-politisation and the erosion of democracy and shrinking public spheres (Swyngedouw, 2011). A post-democratic form of governance reduces value-laden political issues to technicalities that can best be dealt with by experts.

Elsewhere in the world, Australia is considered to be the model for state-of-the-art water management and is a Mecca for courses on IWRM for officials from countries such as India and South Africa. But even here, even though states were encouraged to have legislation to support IWRM, not all of them have developed the required policies and legislation to empower catchment and watershed groups (Bellamy et al., 2002). This brief discussion in the Western context should highlight that the 'wicked' nature of water management has not been resolved through IWRM, neither in Europe through the WFD, nor in Australia, which all have a long history of engagement with IWRM related practices. If integration is so difficult here, one can imagine that the challenges in an African context are even more wicked. However, this argument might also be inverted – the lack of institutional density in many African countries may offer a wider scope for radical redesign compared to many Western settings, where a lot of institutional resistance is to be expected against any attempt to reform the way things are done. Such at least is suggested by the relatively uncontested passing of new water legislation and policies enshrining IWRM in each of the five African case study countries.

In the African context, it has also been argued that IWRM does not explicitly focus on poverty reduction issues and wider development concerns (see Swatuk, 2005). In fact, in its early years, there was an ideological tussle between those who felt that IWRM (by its focus on 'second generation issues' such as demand management and water re-allocation) could be harmful in a range of African contexts where water resources development is often more necessary than management measures and where agriculture contributes to poverty reduction and livelihood security (Merrey et al., 2005; see also Movik, Mehta and Manzungu, for SADC level debates, Manzungu et al., for Zimbabwe and van Koppen et al., for Tanzania, this Issue).

CONCEPTUAL APPROACH

The 'Flows and Practices' project developed a conceptual framework that builds on three main themes: the flow of IWRM as an idea; the translation and adoption of IWRM, and the practices of IWRM across multiple scales – global, regional, national and local. In constructing such a conceptual framework, we draw on several strands of thought, namely the literature on policy processes, discourse analysis, policy diffusion and theory (flows); translation studies, donor-recipient studies, the anthropology of development (translation and adoption); and legal pluralism, anthropological and sociological analysis of community dynamics and agency (practices). By no means rigid, articles in this collection draw either implicitly or explicitly on elements of this framework. We are fully aware though that ideas and practices reinforce each other in a constant back-and-forth process and use this heuristic to better understand why IWRM as an idea caught on so rapidly, but do not regard the notions of flows and practices as discrete or distinct in nature – rather they overlap, merge and reinforce one another in multidirectional ways. If we are successful in building a conceptual framework that will help understand how concepts travel and are taken up, we hope it will also help understand the emergence of new trends and buzzwords – such as water security, adaptive water governance and the water-energy-food nexus – and the drivers that underpin them (cf. Pahl-Wostl et al., 2010; Hoff, 2011; Cook and Bakker, 2012; Allouche et al., 2015; see also Bolding and Alba, this Issue).

Flows – Studying the emergence and spread of IWRM as an idea

While countless studies have documented the implementation of IWRM in various guises in different country contexts, very few have been done on the spread of IWRM as a set of ideas and how these get adopted and translated. The exceptions are Mitchell, 1990; Mukhtarov, 2008, 2009 and 2014; and Cherlet, 2012. Mukhtarov (2009) emphasises the need to combine studies of policy transfers and global networks, through what he calls Global Policy Transfer Networks, emphasising the role of epistemic communities and global networks. He has used this analysis to study IWRM in Turkey, Azerbaijan and Kazakhstan. Actor-Network Theory (ANT) maps relations that are simultaneously material (between things) and semiotic (between concepts) (Callon and Latour, 1981). Cherlet (2012) used ANT to study IWRM in Mali and showed how the 'success' of IWRM depends more on the strength of the alliance promoting it, rather than the actual paradigm itself. We build on the work of Mukhtarov and Cherlet as well as discourse-theoretic approaches to understand the rise and spread of IWRM as a dominant discourse and how it has been propagated through different networks, channels and policy processes. Allouche (this Issue) complements the ideas of flows with theories of policy diffusion as focusing on three key factors driving diffusion, namely coercion, cooperation, learning and emulation.[6] Our project conceptualises policy as a *process* rather than as an instrumental prescription (cf. Hajer, 1995; Shore

[6] Coercion and cooperation focus on the relationships and negotiation processes between external agents (like bilateral and multilateral donors, lending institutions, and outfits such as the GWP) and national governments whereas learning and emulation relate to existing practices. In this way, theories of policy diffusion encompass the ideas of flow, translation and, to some extent, practices.

and Wright, 1997; Fischer, 2003; Keeley and Scoones, 2003; Wester, 2008). The idea that it is possible to address a particular problem, make a well-informed decision and objectively evaluate the outcome is quite problematic, as it ignores the role of individuals, networks and 'policy entrepreneurs' (Cobb and Elder, 1979; Shore and Wright, 1997).

Useful in the analysis of this process of travel, translation and consolidation is the notion of policy levels. For the purpose of our studies we have focused on *four* policy levels, viz. the *global* policy-making level where organisations like the GWP and World Water Council (WWC) operate; the *regional* level where bodies like the SADC form key nodes informing water-policy directions of member states; the *national* policy level which constitutes the main arena for new water legislation and policy pertaining to individual states and, finally, the *local* level where policies are supposed to meet on the ground, whether this is at district, river basin or provincial scale. Our starting point is that ideas and policies that travel will always be socially constructed and subjected to contingencies and ambiguities in governance and interpretation which takes us to the issue of translations, diffusion, adoptions and transformations.

Translations, adoptions and transformations

Because (water-related) policy processes are messy, involving different sets of networks of policy actors, powerful discourses as well as politics and interests at different scales, they will always be modified and interpreted in multiple ways. The case studies (for example, Mozambique and Zimbabwe) explicitly focus on policy articulation which is the process by which "policy actors support, modify, displace and translate a policy idea as outcome that a policy or reform package becomes less or more 'real'" (Wester, 2008: 22). A "successful" policy often emanates from an unstable trajectory in which it becomes more articulated and dominant, through the enrolment of the necessary actors (cf. Latour, 1987). Intended translation occurs when there is a conscious effort to take up an idea and convert it into a form appropriate for the particular local context (see also Rørvik, 2007). For Latour, translation is the "spread in time or place of anything – claims, artefacts, goods". (Latour, 1987: 267). Policy translation has been put forward by Merry (2006), Lendvai and Stubbs (2007), Freeman (2009) and Mukhtarov (2014) as a way to look at how policies and their accompanying technologies change travel. Seen in this light, translations allow for bringing together global and local realities in understanding how ideas are adopted and implemented. Regarding the question of who is doing the translation, we need to take account of the role of donors and how national governments and donors interact. The study draws on insights from Whitfield (2009) and Whitfield and Fraser (2009) on donor-recipient relations to ask: How do current processes of negotiation between donors and recipient governments play out against the backdrop of specific historical trajectories? Rather than statist models looking at, for example, institutional fit and scale (e.g. Galaz et al., 2008) or approaches that highlight the enduring influence of 'rational-actor' models that draw on new institutional economics and game theory to explain and model client-patron relationships (see Gibson et al., 2005, for an example), we have tried to provide an account of how the ideas promoted at the global level, say in water summits, are picked up by donors and powerful state actors and negotiated in government offices and boardrooms. In several articles in this collection, we thus explore the extent to which national governments and regional actors can exert influence and 'ownership' over these policy ideas and the processes of implementation.

Our case studies focus on the structural conditions and the economic, political and ideological factors that affect negotiating capacities of donors and recipients. As we demonstrate in Zimbabwe, Tanzania, Uganda and Mozambique, donors are key in the emergence and consolidation of the concept, as well as in the practical implementation phase, even if they may have to sometimes prematurely leave due to political reasons (as in Zimbabwe, see Derman et al., this Issue; Manzungu et al., this Issue). While the Foucauldian understanding of discourse risks viewing state bureaucracies, river basin officials, etc. as monoliths and absolving actors of agency and intentionality, the notion of translation also helps highlight the different ways in which national and local actors adapt, adopt and subsequently

benefit from dominant discourses and interventions. This interplay of agency and structure only becomes visible through a historical sociology (Abrams, 1982) and a path dependency that we, for example, trace with respect to how IWRM became so popular in SADC (see Movik et al., this Issue).

Practices – Studying the implementation of IWRM in local contexts

The actual implementation or IWRM practices on the ground will be profoundly shaped by particular local histories, the donor/state negotiations discussed above as well as the prevailing social, gender and power relations. Thus, the country studies have asked: How are IWRM policies and programmes reproduced and by whom? Which historical conditions have led to diverse articulations and interpretations of IWRM? How is IWRM resisted or adapted and what changes are accepted or rejected by those organisations and institutions most vested in the promotion of IWRM? How are these shaped by issues concerning politics and political economy?

For example, while IWRM emphasises decentralisation, new accountability standards and planning processes, the capacity of national governments to ensure that these are followed often remains problematic (see South Africa cases, this Issue). Water bureaucracies have been particularly resourceful in maintaining their command-and-control orientation under the guise of apparently drastic institutional reforms (cf. Ferguson, 1994; McCool, 1994; Rap et al., 2004; see Mozambique and South African examples, this Issue). IWRM is largely made out to be apolitical and technical (cf. Derman et al., this Issue) but as several articles in this collection show, newly created IWRM-related institutions such as water user groups are usually power-laden, gendered and beset with conflict and factional divisions. These can thus often reproduce historically moulded axes of inequality and heterogeneous patterns of resource use based on dominance and dependence. But these issues are rarely acknowledged in the dominant IWRM literature, though fairly standard in the wider water politics literature (e.g. Mosse, 2003; Mehta, 2005; Cleaver, 2012). Finally, within the African context in particular, it is important to pay attention to the importance of customary institutions in natural resources management, and the complex matrix of institutions in which both people's lives and water management systems are located. It is also wrong to presuppose a noninteractive divide between state and customary institutions. This assumption fails to capture empirical realities in which interrelationships and overlaps link various institutional domains. In this 'messy middle', institutional arrangements may be highly contested, and beset by ambiguity and openness to divergent interpretations (Mehta et al., 1999; Cleaver, 2012). Here the study of legal pluralism especially in the water domain (Meinzen-Dick and Pradhan, 2001; van Koppen et al., 2007) will be necessary to study how IWRM will necessarily coexist with a range of pre-existing (but often invisible) customary arrangements and how diverse institutions and property regimes create different sets of cultural practices and discourses.

METHODOLOGICAL CONSIDERATIONS

We used a multi-sited ethnographic approach to understand how IWRM plays out in different arenas (from local to global and across bureaucracies in Europe and Africa as well as in river basins and communities). In our research we also sought to bring the global to the local and the local to the global through our interrogation of the diverse meanings, interpretations and understandings of IWRM in Europe, at the regional level and in-country studies which are presented in detail in this special issue. Hence our study spanned different research sites ranging from water meetings in Europe to WaterNet in southern Africa, to interviews with donors and supranational bodies in Europe and southern Africa to regional and national ministries in the countries of study to basin-level officials as well as village-level work. Multi-sited ethnography also meant following and interviewing actors/people at different levels – the people who formulated policies and have moved on; those participating in the summits, and actors in various donor organisations, government and basin officials, members of water user groups and catchment councils as well as local women and men. We also sought to trace, cross-

check and triangulate key processes and events, and to analyse how particular ideas and values have carried over or been transformed in the process of translation. We also looked at key documents from various agencies, proceedings from workshops, water policies as well as grey literature were also engaged with the relevant academic literature on the topic.

We used a combination of reconstruction via historical analyses and deconstruction (e.g. policy agendas and popular narratives) whilst locating actors within both macro and micro realms. Though largely based on qualitative data, quantitative data concerning water use, extraction, withdrawals, etc. were also analysed. Additionally, the study deployed historical sources and qualitative approaches for fieldwork at the village level (e.g. ethnographic studies, semi-structured interviews, focus group discussions, participant observation). We also 'studied up' key policy actors and networks that were involved in development cooperation projects that supported the reform of water policies and the adaptation of IWRM. We also discussed our preliminary findings at national dialogues, for example in South Africa, hosted by the Water Research Commission. Finally, we were explicitly reflexive, resulting in our consortium critically engaging with our own encounters and experiences with IWRM and how these changed over time which is outlined in the article by Bolding and Alba, this Issue.

Our research was comparative. It focused on global actors and institutions in Mozambique, South Africa, Tanzania, Zimbabwe and Uganda with an aim to rise to Wescoat's (2009) challenge to address critical water issues in the 21st century through comparative analyses, drawing on historical experiences and geographical contexts, bringing together comparisons of analyses and case studies (see also Mollinga and Gondhalekar, 2012). The case study countries were selected to complement each other and build on existing research work and familiarity. They allowed for sufficient depth and breadth of focus of the research themes across key basins, in particular around intersections between global, regional, national and local processes around conflict/hot spots. They also allowed us to investigate IWRM (and perhaps IWRM fatigue) at different stages. Four key variables were identified to guide the comparative research process: These include (1) The in-country context; (2) Water reform and policy processes/flows; (3) Uptake of IWRM at the national/regional level: translations/adoption/ transformation; and (4) IWRM practices at the basin and local level. Some key empirical findings are provided below on each of these issues which form the foundations for our conclusions. They are not a substitute for reading the rich articles in this collection that provide the contexts, depth and findings from the primary research as well as detailed accounts of how IWRM has been framed and implemented in specific river basins and at the regional level.

THE COUNTRIES OF STUDY

The contemporary southern African region was produced and consolidated through several hundred years of imperialism, colonialism, mining exploitation, racism, state building, apartheid, antiapartheid struggles, non-racialism and black nationalism (see Movik et al., this Issue). Our country studies reveal that in all the five countries studied, a colonial and racial history produced a divided society with the majority black population suffering alienation from water and land resources, and other resources such as minerals, at the hands of a minority white population. The alienation, which started in the late 18th to the turn of the 19th century, had, however, important differences because of the particular political dynamics in each country that produced intended and unintended consequences, which have had material effects on the transition to more equitable hydro society.

For example, both colonial and apartheid policies in South Africa confined the vast majority of the black population to 13% of the land and denied citizenship to blacks. The inequality of access to land and water has resulted in several challenges to the implementation of fairer systems of water governance and management (see Denby et al., this Issue; Movik et al., this Issue). The challenge of water redistribution is made complicated by the fact that South Africa is considered to be a dry and water-scarce country. Unlike the other countries in the region, it has a highly developed water

infrastructure which holds and supplies water to urban, agricultural, mining and industrial uses. In Zimbabwe (previously known as Rhodesia) too, land and water rights were overwhelmingly in white hands (see Hove et al., this Issue). Even after independence from the British in 1980, 85% of the country's water resources continued to be used by 4500 white large-scale commercial farmers (see Manzungu and Derman in this Issue). Zimbabwe is a semiarid country with limited surface water and groundwater resources which have been poorly managed because of financial, human, and material challenges (see Manzungu et al., this Issue). The fast track land reform dramatically changed water use patterns in the country, leading to a reduction in irrigation (see Zimbabwe articles, this Issue).

Mozambique achieved independence in 1975 through a combination of an armed revolution by FRELIMO and a revolutionary army coup in Portugal itself. The desire to establish a socialist nation (without a strong economic base), resulted in the nationalisation of land and water resources and a long-drawn civil war. Because of the war an indebted state sought a series of structural adjustment programmes to maintain itself from 1987 onwards. As part of the peace agreement Mozambique shifted to a formal multiparty democracy and a development strategy rooted in foreign direct investment leading to extensive land and associated water grabs. Mozambique as *a* downstream country, has had to enter into delicate bilateral negotiations with upstream countries, particularly South Africa, and multilateral negotiations at the regional (SADC) level. Apart from the Limpopo and Inkomati basins, water resources are abundant (see Mozambique articles, this Issue). However, Mozambique tends to be negatively affected by floods, because of its downstream location, and also because it has fewer dams compared to South Africa and Zimbabwe.

Tanzania became independent in 1961 and proceeded to establish a socialist state under its founding president, Julius Nyerere. The country inherited a poorly developed agrarian economy with limited developed water resources. As all other countries studied, Tanzania nationalised her waters and land resources a few years after independence and this has given substantial leeway to the government to allocate water resources. In recent years, Tanzania has been attempting an agriculture-led economic growth strategy based upon foreign direct investment raising concerns about land and water grabbing (see van Eeden et al., this Issue). Tanzania has highly varied rainfall regimes and is also considered to be semiarid with highly seasonal river flows. Still, unlike other countries in the region, it has abundant water resources that are largely unexploited. Customary land tenure, including matrilineal systems, prevail and small-scale farmers utilise approximately 80% of the current water used (see van Koppen et al., this Issue). Like Mozambique, Uganda experienced a period of internal turmoil (in the 1980s) after the establishment of dictatorial rule by Idi Amin after it became independent from the British in 1962. Currently, the National Resistance Movement, the ruling party, has come to dominate the electoral cycle amid claims of vote-rigging and voter intimidation. The country has relatively abundant water resources and a land production system largely reliant on rain-fed farming and/or use of wetland areas although overall development has shifted from agriculture to hydrocarbons.

FLOWS: WATER REFORM AND POLICY PROCESSES

In each of the country case studies, IWRM adoption usually accompanies a water reform process where a new water policy, water law and regulatory framework are introduced, often with donor influence. In fact, the Global Water Partnership (2000) recognises policy and legal reforms as a precondition for creating an "enabling" environment for IWRM roll-out. Our country articles analyse in detail the state of IWRM policy formulation in each country, focusing on the role of key actors such the role of the state, various government agencies and donors in the reform process and IWRM roll-out.

The State in South Africa has historically played a strong role in water resources management and continues to have formal power. South Africa is often regarded to be at the forefront of water reform with the most progressive water policies (see South African articles, this issue). The arrival of democracy in South Africa 1994 set in motion a large number of laws, policies and practices to undo

apartheid with the National Water Act (NWA) of 1998 being the most significant. The progressive post-apartheid National Water Act (NWA) is the principal legal instrument related to water governance which has broadly embraced the principles of IWRM. While South Africa sought to draw on experiences from abroad when drawing up its new legislation, the seeds of IWRM were already present since the 1970s. Despite the presence of many donors (see below), South Africa has determined its own water policies and practices with a highly developed bureaucracy. The process of drafting the NWA was a highly consultative affair with South Africa inviting in foreign advisers and also facilitating an exchange of experiences with other middle- or high-income countries such as Australia. South Africa's unique Water Research Commission (WRC) investigated a variety of institutional set-ups. A strong lobby of South African environmentalists pushed the idea of Catchment Management Agencies and the ecological reserve (see Movik et al., this Issue; van Koppen, this Issue). In terms of donors who supported South Africa's water policies, the UK's Department for International Development (DFID) was a strategic partner in the process of drafting the water laws and the creation of the first water allocation reform. Other donors including Danish Danida and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) have been involved in IWRM experiments in particular catchments. Danida attempted a bottom-up livelihood approach in three provinces (see Movik et al., this Issue; van Koppen, this Issue). IWRM was a global discourse that allowed South Africa to profile itself proudly in water worlds in order to overcome its pre-1994 pariah status. However, from the very start, implementation issues and internal power struggles have been delaying the redistributive effect of the reforms. The then Department of Water Affairs and Forestry suffered from a lack of qualified staff with many qualified staff setting up shop as consultants. Facing crippling delays in the establishment of the institutional implementation vehicles (see below) and a progressive interpretation of the water use authorisation system, the Department at times struggled with even the most basic of procedures.

As the articles by Manzungu et al., Derman et al., and Hove et al., all in this Issue show, in Zimbabwe, debates about equitable access to water between and within sectors, and between different races, and to some extent classes, have dominated the Zimbabwean waterscape. While Zimbabwe gained its independence in 1980, the water sector was left untouched until the mid-1990s. The belated reforms culminated in the promulgation in 1998 of the Water Act and the Zimbabwe National Water Authority (ZINWA) Act. The Water and ZINWA Acts were developed with the support of such donors as the World Bank, the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) now known as GIZ as well as Dutch, Norwegian and British donors. The principles underlying the new acts were consistent with IWRM: user pays; decentralisation of management to Catchment and Subcatchment Councils; ensuring water for the environment and diminishing pollution. Water was to be 'owned' by the President of Zimbabwe and managed by the appropriate authorities. The country was divided into seven catchments on the basis of hydrological boundaries. Various donors undertook the funding for the catchment councils while the Dutch government and others funded the Water Resources Management Strategy team to develop the policies underlying the new water strategy. For example, the Dutch funded the formation of the Mupfure (leading to the Sanyati); the Germans the Mazowe and the Manyame Catchments; and the Swedish government the Save. Consultants from GTZ sat in the offices of the Department of Water and ZINWA to design and oversee the creation of ZINWA. ZINWA became the organisational face of user pays while the Department of Water was downsized. Permits were required to access water and expensive applications needed to be made to the catchment council. The radical land reform programme, however, led to most white landowners been forced from their farms and the donors leaving due to human rights violations. This led ZINWA and the Catchments to lose most of their funding and to struggle for survival until the present.

Like South Africa, Mozambique also legally enshrined elements of IWRM before the Dublin Principles were written and disseminated (see Alba and Bolding, this Issue). The 1991 Water Act promotes the role of the State in water resources management by declaring all water resources public- and state-

owned. The act stresses the role of state institutions in water resources management. International agencies such as the United Nations Development Programmes (UNDP), Food and Agriculture Organisation of the United Nations (FAO) supported the formulation of the Water Act. River basin management was embraced by domestic actors due to Mozambique being a downstream nation having a strategic interest in managing water across borders at the scale of the river basin. During the 1990s, the World Bank entered the water sector and soon played a key role in shifting attention from water resources development to drinking water supply, according to neoliberal principles seeking to roll back the State. The articulation of both the 1995 and 2007 National Water Policies was supported by World Bank funds. The introduction of the IWRM policy package was further promoted by other (bilateral) donor agencies with projects such as the Pungwe River Basin project. A rather small network of Mozambican policy actors were involved in the policy reform. They were partly trained in Delft and Wageningen, the Netherlands, and were exposed to some extent to prevalent international policy ideas emanating from the Dublin and Rio conferences. This network has occupied key positions in public (water) agencies and have, more recently, established their own consultancy agencies.

In Tanzania too we see strong donor influences and also a key role played by the World Bank. In 1981, Tanzania was divided into nine river basins for development and planning purposes. From the mid-1990s onwards, the World Bank and other donors initiated new programmes on Tanzania's water resources and their management (see van Koppen et al., this Issue). The discourse and policy shifted from water for development to allocation of scarce water to competing users. This led to new emphases upon cost recovery, water as an economic good and an emphasis upon water scarcity. River Basin Organisations were formed in the Pangani, Rufiji and the Wami-Ruvu. Donors such as the Norwegians promoted hydropower in the Pangani and the Japanese JICA operated in the Wami-Ruvu. Tanzania's water resources management following IWRM is organised around participatory and representative forums that extend from the national level to the basin and subbasin level (ibid). There are five levels of water management; the nation, the basin, the catchment, the district and the community or water association level, creating uncertainties for decision-making.

Unlike the other four nations with their greater focus on irrigation, water scarcity and the legacies of settler colonialism, Uganda's water issues have revolved more around ecological issues (see Nicol and Odinga, this Issue). Uganda depends heavily on its lakes and their fisheries and its wetlands. The Lake Victoria environmental programmes funded by multiple donors led by the World Bank and Nordic donors helped push IWRM and also funded a large numbers of students in relevant sciences. Technical and financial support from Danida resulted in Uganda embarking upon the world's first National Water Resources Water Action Plan (WAP) from 1993 to 1994. Uganda is considered to be an early adopter of IWRM and one of the pioneers of IWRM in Africa, not least due to the energetic efforts of Danida and policy 'entrepreneur' Torkil Jønch-Clausen from Denmark. Yet, as argued by Nicol and Odinga, several issues, including the complexities of the decentralisation process and political economy, have made IWRM to roll-out a very long and slow process.

TRANSLATIONS AND ADOPTION OF IWRM[7]

The specific historical context and water reforms undertaken in each country (see above) significantly influenced the translation/adoption and transformation of IWRM in each country as demonstrated by the various country papers. In all cases, we see clear trends in efforts towards decentralisation and the

[7] Our study consciously decided against going with one set understanding of IWRM. Instead, we sought out in the different research sites, diverse understandings and interpretations of IWRM. Also we consciously decided against just focusing on a small set of aspects of IWRM (e.g. participation or water as an economic good). We are aware that the 'anything goes' character of IWRM can pose some methodological challenges – still we believe that taking this broad approach provided the best way to study the three components of the study (flows, translations/adoption/transformations and practices).

creation of new institutions, cost recovery and permit systems, often initiated by donors and the World Bank and usually very difficult to roll-out. All of those covered up the implications of the structural adjustment programmes and roll-back of the state as investor in infrastructure, in favour of 'market-led' neoliberalism. As we describe later, most of these initiatives have not led to favourable outcomes for smallholder water and land users.

In South Africa, IWRM centred primarily on the institutional architecture and the goal of creating 19 decentralised catchment agencies based on hydrological boundaries with Water User Associations. As demonstrated by Movik et al., van Koppen, and Denby et al., all of this Issue, the process of establishing the CMAs has been riddled with problems, and despite its alleged importance only two have been fully established. The democratisation of the mostly white Irrigation Boards (which were to be subsumed into the new Water User Associations) has not happened because many of them have not seen any advantage in this conversion. In a major change the original 19 CMAs were reduced to nine. These nine water management areas follow river basin boundaries but are linked to regional offices of the department of water that follow existing administrative provincial boundaries. There have been a lot of problems with institutional realignment and fragmentation; also, lack of coordination and institutional overlaps are trenchant problems. There have also been lively debates in South Africa regarding whether IWRM focuses sufficiently on local livelihoods and also on infrastructure development, so badly needed to redress historical inequities around land and water.

In Zimbabwe, like in South Africa, IWRM was initially welcomed by policy-makers but for different reasons. The adoption of IWRM was part of a package of reforms aimed at introducing market principles in the Zimbabwean social and economic space to remedy problems that had been created by the social state established at independence in 1980. From the outset major donors such as the World Bank (and IMF because water reforms were informed by Structural Adjustment Programmes), and other Western donors as well as GWP supported the introduction and implementation of IWRM. The only contestation of IWRM was from academics who criticised some of its elements mainly focusing on the limited participation of smallholder farmers in the new IWRM institutions. Other stakeholders dragged their feet; local authorities and the mining sector were unwilling participants. From 2001 until 2011 IWRM implementation entered a hiatus because of a changed political situation, epitomised by the fast-track land reform programme that reduced water revenues and disturbed the operations of water institutions. In 2011 IWRM was reinstated by the World Bank as part of Zimbabwe's reengagement with the international community. This culminated in the adoption of a new Water Policy in 2013, which, however, has not seen the revival of IWRM because of focus on water supply (see Manzungu and Derman in this Issue).

In Mozambique, IWRM was seen to encompass (1) shared river basins as units of governance and management, and (2) decentralised agencies that operate on principles of cost recovery. The 1991 Water Act sought to regulate and organise management of water resources based on decentralised Regional Water Administrations known as ARAs. Despite the drive for decentralisation, very limited decision-making power has devolved to lower levels. Also decentralisation has largely failed because ARAs are too large and far removed politically and administratively from most users. The State has also dominated decisions involving issuing water permits, and has tended to favour large-scale investors and decisions about major water allocations to private investors. There has been very limited stakeholder participation in the river basin committees that have only an advisory status within ARAs. Thus institutionally the water reforms have led to the reproduction of late colonial templates, reflecting a preference for hierarchical, centralised agencies which cede little say to actual users (see Alba et al., this Issue).

In Tanzania IWRM has tended to mean halting infrastructure development and, instead, introducing self-financed basin institutions, permits/fees, environmental flows (and transboundary water management) (van Koppen et al., in this Issue). However, the capacity of the State to ensure implementation of these is weak as reflected by large poorly manned and financially under-resourced

basin offices. Implementation of IWRM also faces challenges from the country's drive towards 'modernising' the economy which has resulted in land- and water-grabbing and elites using IWRM-designated institutions for their own interest (see van Eeden et al., this Issue). Tanzania opted to transform the dormant colonial permit system into a taxation tool and implement this. This has meant that aside from water for domestic purposes, all water use requires a water permit. The Water Resources Management Act of 2009 required that all unrecorded rights be registered within two years of the act coming into force (August 1, 2009). Failure to register can result in the loss of rights and possible imprisonment. However, this part of the law has not been implemented and certainly most unrecorded rights have not been registered. By the mid-2000s, the development of the country's abundant water resources was articulated again as the primary goal. The 'D' of 'Development' was added to form Integrated Water Resource Management and Development (IWRMD). The World Bank and donors also returned to supporting irrigation development but now with stronger private-sector participation. Indeed, the private-sector's investors in large-scale land- and water-deals were the main agents to take irrigation development forward.

As discussed by Nicol and Odinga, this Issue, Uganda's experiment became an important part of the early reflexive development of the IWRM concept. By 2005, Uganda had published its Water Sector Reform Studies leading to a Strategic Investment Plan (ibid). Shortly afterwards the Directorate of Water Resources Management was established with responsibility for developing and maintaining national water laws, policies and regulations. However, the enabling policy and legislative environment did not find an enabling 'development' environment, particularly locally, hence the slow pace of uptake and reform in practice. The process received initial push from donors, support through engagement at an international level in the wider 'knowledge environment' associated with IWRM (e.g. Uganda's pivotal role in establishing a river-basin-wide initiative on the Nile from 1999 onwards, in which there was a heavy focus on IWRM). The lack of funds to continue funding IWRM as well as the discovery of oil are likely to detract attention from IWRM. We now turn to looking at basin- and local-level impacts of IWRM practices.

IWRM PRACTICES AT THE BASIN AND LOCAL LEVEL

IWRM practices at the basin and local scales mirror the extent to which countries have managed to articulate the IWRM-based water reforms through a process that embraces broader political, social and economic challenges. There are many variations on the theme, but largely it is a story of huge gaps between IWRM rhetoric and reality.

The translation of IWRM into the South African context and, in particular, the integration of institutions related to land and water have faced many challenges due to the political nature of water and land reforms, and the tendency of governmental departments to work in silos. Denby et al., this Issue, explore the dynamics surrounding the implementation of IWRM in the Inkomati Water Management Area, the degree of integration between the parallel land and water reform processes and what the reforms mean to black farmers' access to water for their sugar cane crops at the (basin) and local levels. The empirical material highlights the discrepancies between a progressive IWRM-influenced policy on paper and the actual realities on the ground. The progressive policies and plans have failed to recognise the complex historical context, and the underlying inequalities in access to knowledge, power and resources. While there has been major progress with respect to urban water supply much less has been accomplished in providing water to black South Africans in rural areas.

One of the most pertinent local issues as far as IWRM in Zimbabwe is concerned relates to implementation of water use for domestic purposes (often known as primary water use). This does not require a permit and fits with the customary practices that no one should be denied drinking water. There is no legal protection for primary water use in this country because documentation of water use applies to commercial water use. Hence the poor 'invisible' primary water users have tended to be

disenfranchised (see Hove et al., in this Issue). This has tended to negatively affect women who rely on primary water use to irrigate gardens. Besides, very few women are in leadership positions in water institutions except in village borehole committees. The lack of IWRM at basin scale is illustrated by dysfunctional institutions as a consequence of challenges posed by the fast-track land reform programme (see Manzungu and Derman; Derman and Manzungu; and Hove et al., all in this Issue). Land and water reform did not go hand in hand and, in fact, water use and irrigation cover have declined. Cost recovery has been difficult to implement and the Zimbabwe National Water Authority (ZINWA) has massive debts and has difficulty meeting its basic functions of water management.

The impact of the permit system on customary users is also a major issue in Tanzania (see van Koppen et al., this Issue). Aside from water for domestic purposes, all water use requires a water permit. But this law has not been implemented and certainly most local rights have not been registered because of the difficulties associated with the application process in a large basin with a small number of offices. The permit system, if implemented, is likely to be harmful to local and customary sharing arrangements as well as increasing the cost of engaging in small-scale agriculture. Moreover, permits are tradeable and provide an incentive to speculate and apply for as much water as possible. Because large-scale users usually have access to more resources and can succeed in the formal process of obtaining permits they can appropriate large amounts of water. The basin officials themselves depend on fee payments from permits. Thus they have the incentive to give out permits for as much water as possible with a strong preference to big payers. They are also biased to large users of land and water (see van Eeden et al., this Issue) and IWRM has inadvertently facilitated water grabs and the marginalisation of small-scale water users.

In Mozambique the 1991 Act makes a distinction between common use (*uso comun*) and private use (*uso privativo*). The former refers to the use of water for primary requirements including domestic needs, watering livestock and small-scale irrigation of up to 1 hectare of land without the use of siphoning or mechanical instruments while *uso privativo* incorporates all other uses and requires payment (Veldwisch et al., 2013). However, the multiple and widespread customary law systems that acknowledge, protect and legitimise water use at the village or local levels, are only viable through the legal construction of using water for common use purposes, and remain invisible to the State, that allocates water in favour of large-scale water users. As the Mozambique articles argue, the winners tend to be the usual suspects, namely foreign investors and politically connected individuals. An increased presence of the State in the waterscape has not led to increased protection of access to water by smallholders. Rather, invisible water users threaten to lose their access through dispossession and issuing of water to large-scale users. This may produce detrimental effects for productivity and equity. Similarly, in Uganda the Water User Associations have tended to be dominated by politicians and civil servants. The intricacies of the decentralisation process have also delayed IWRM implementation on the ground (see Nicol and Odinga, this Issue). It is also paradoxical that even in water-rich Uganda, the focus was on regulating water and introducing neoliberal reform, rather than on (re)allocating water to those who needed it the most.

CONCLUDING REMARKS

We return to one of the key questions raised in this special issue: Why has IWRM become so popular and so resilient? Why, for example, is IWRM included again in the Sustainable Development Goal 6 on water? One possible answer is that IWRM has 'something for everyone'. As it is so vague; it allows ample space for interpretation within the water sector and also unites all water professionals in negotiations with those outside the sector. Even though it means different things to different people, everybody from river-basin officials, donors and government agencies can say they are doing IWRM whilst getting on with whatever they happen to be doing at the time. Despite the problems with IWRM outlined in the previous sections it has become a ubiquitous buzzword in southern Africa spawning a

massive amount of output in terms of new legislation passed, policies articulated and institutions crafted, and giving rise to reams of analysis and assessments that continue to hold a firm sway over policy-makers, practitioners and academics (see van der Zaag 2005). In the following concluding remarks, we will address various dimensions of the travel of IWRM across the five African case study countries, such as the specific timeframe in which IWRM spread, the specificity of the water sector that facilitated its travel, the pros and cons of its travel in terms of missed opportunities, costs and access to water by particular groups in society. We end with a plea for more realistic water policies that provide renewed emphasis on water development, creating access to water for more groups in society.

The article by Allouche, this Issue, shows how, at the global level, IWRM spread from the late 1990s due to a mix of coercion on the part of donors who encouraged water reform processes around the world, as well as cooperation and learning. It was also done at a time when dams were very controversial on the international scene and global focus turned to 'soft' management issues instead of infrastructure development, which is still badly needed in southern Africa. The article on IWRM in SADC (see Movik et al., this Issue) highlights the importance of historical path dependency. It shows how the idea was picked up in SADC due to the prevalence of transboundary rivers and a long history of colonial water infrastructure development. Thus, water could be galvanised as an arena of cooperation, instead of one of conflict. Moreover, the region had strong existing institutions and donor networks mobilised for the antiapartheid struggle, on which water-related programmes and activities could be built by the Swedes, Dutch, Germans and Danes. These networks and alliances also coincided, in part, with national interests (for example, around river-basin development; ibid). Donors were often seconded to water departments (for example, in Zimbabwe and Mozambique) and also struggled with changing fads and politics (ibid). Yet, IWRM often served as a policy concept that allowed problems to be addressed by donors and the powerful, often corporate, interests behind them at a transboundary scale rather than at the scale of a single project or issue. The sheer scale and coordination challenge contained in a concept like IWRM provides donors and associated companies with a virtual 'carte blanche' to propose interventions and a limitless horizon of operations. Hence with hindsight, one can observe that some bilateral initiatives at making IWRM happen in, for instance, the Pungwe River in Mozambique was more interesting than proposing to build a single reservoir on a free-flowing, 'undeveloped' river (see article by Alba et al., this Issue).

The Global Water Partnership and WaterNet are two successful networks that, over time, became the driving factor of IWRM in the region, linking different policy levels both in terms of policy discourse and practical push during conferences and capacity-building initiatives. These alliances of donors and dominant regional and national actors have a self-interest in sustaining themselves. When comparing the activities of such transnational lobby networks with similar organisations in different sectors, some of the specificities of the water world are borne out. Both GWP and WaterNet are networks that are dominated by actors from the sector itself rather than representatives from 'civil society'. The latter phenomenon might explain to some extent why IWRM met so little resistance, despite its contested features. While, for instance, in the environmental sector many alternative 'voices' can be heard in the shape of big transnational NGOs (e.g. Greenpeace) few such voices are rallied around a concept like IWRM. (In the water sector, civil society organises itself more around service delivery in urban areas and boreholes in rural areas.) The water world is (still?) dominated by a closely knit elite community of engineers that know each other pretty well from a limited number of grooming grounds across the globe (e.g. Alba et al., this Issue, report on the network of Delft-trained water engineers in Mozambique). Thus key movers across the four policy levels we distinguished for our studies, know each other well, and may even occupy various key nodes of the network during their careers. This closely-knit epistemic community of engineers forming a policy elite may warrant further study and comparison with other sectors to assess how dominant policy concepts travel. Unfortunately, such comparative perspectives are beyond the scope of this special issue.

IWRM as an approach has led to many important improvements in the countries studied and also in SADC. These include the need to move away from silos in the water sector, taking participation seriously and also integrating environmental, management and supply issues. It has also created a huge buzz in SADC. But it would also be fair to say that Africa has been a laboratory for IWRM in the post-cold-war world where neoliberal discourses began to reign supreme in the water sector due to influences of the World Bank and IMF that sought to privatise water services and introduce cost recovery mechanisms. While this largely took place in the domestic sector, the studies in this special issue show how the introduction of pricing systems and permits allowed wealthy and powerful water users to take advantage of users without permits. As discussed earlier in this article, due to the light formal institutional frameworks in place (unlike in Europe), it was easier to create things from scratch, reinforcing the 'soft' management aspects of IWRM, as opposed to extending water infrastructure and access.

But this has come at some costs. In many parts of southern Africa, IWRM has stifled the water development agenda by shifting focus to the allocation of what was supposed to be a finite scarce resource when in countries such as Uganda and Tanzania this was far from the case. The focus on management tended to lose sight of the need to enlarge access to water for poor people for a range of productive purposes. Instead, much attention was directed to creating new complex institutional arrangements that largely lacked accountability and legitimacy, were prone to elite capture and tended to centralise the power and control of the State and powerful users (and the IWRM industry) over water resources. Smallholders have been made out to be 'wasteful' and 'uneconomic water users', resulting in widening inequalities and unequal power and social relations. Given the importance and numbers of smaller-scale farmers we suggest that their access to water be better protected. In our view, smallholders' own investments in water infrastructure and local water-sharing arrangements should and could be respected, protected and supported as important contributions to poverty alleviation. There should also be greater attention to socioeconomic human rights like the right to livelihood which are inextricably linked to access to water (Derman and Hellum, 2007). Where regulation is really needed in terms of pollution, then a priority entitlement would assist in conflicts over use by large-scale users.

Our studies have also shown that neoliberal trends such as water pricing and the associated introduction of permit systems have led to a bias in favour of large-scale users who require relatively large amounts of water and have the ability and the networks to apply and pay for the appropriate permits. Some of these actions have led to water grabs as discussed by van Eeden, this issue (see also Mehta et al., 2012). The acquisition of large quantities of water raises the issue of whether or not such actions (real or potential) align with the broader social and anti-poverty goals that are prioritised in southern Africa. We believe there needs to be far more emphases on the issue of redress and facilitating a more equitable redistribution of water resources to support rural livelihoods. There is a need to engage local stakeholders much more effectively than has been done. One option could be to engage with long-established rural district institutions that are administratively defined rather than hydrologically. Such an approach may be more effective in redressing access to water to the marginalised.

Across the region, women's rights, that were at least partially enshrined in customary and informal arrangements, have tended to be compromised. Permits are likely to be written in the name of the male household head and often participation in water user associations by women has been largely tokenistic. As Derman and Prabhakaran, this Issue, have argued IWRM implementation and roll-out such as permits, user pays principle, commodification of water and decentralisation do not address the structural and economic vulnerabilities of women. In not assessing women's specific and diverse engagements with water, Dublin Principle 3 which focuses on women has not been followed. In our research, we found it was just lumped into participation without attention to the gender implications and consequences of IWRM.

In hindsight, the focus should have been on building capacity in existing institutions and being realistic of the capacity to implement IWRM; integrating land and water reform; and integrating the rights to land, water, food and livelihoods. Future water management and development in the region thus need to respect customary arrangements and direct attention to 'primary water' for multiple uses so crucial for livelihoods and subsistence (agriculture, livestock watering, domestic supplies). Also there is the pressing need to develop water resources and create storage facilities to withstand uncertainties due to drought and increased seasonal variability. Perhaps, it is also time to just tax and monitor the large users and polluters of water, rather than getting bogged down with registering and taxing smaller informal users. Rather than recommending a uniform and bland approach to such issues we would advocate a diversified approach where every country or locality articulates its own key priorities and responds to these according to the capacity and resources available whilst developing strategies emphasising the political nature of water, linking water policies to antipoverty strategies and countering the dangers of capture on the part of powerful players.

It is interesting to note that there are signs of IWRM fatigue in Europe where dominant discourses largely focus on water and climate change, water security and the nexus between water, food and energy. Yet, IWRM has acquired a life of its own in southern Africa and is kept alive through IWRM meetings, Master's programmes as well as the activities of several generations of IWRM policy-makers, practitioners, students and consultants engaged with IWRM-related institutional and policy reforms and data-gathering exercises. How are these emerging buzzwords shaping thinking on water governance, and what will be the implications? Will these approaches supplement or be superimposed on current practices, or will they usher in whole new sets of approaches and paradigms that will eventually replace the current hegemony of IWRM as an idea? What are the implications for deeper issues of development and democracy? For instance, there is also an emerging focus on developmental water management that puts emphasis on the role of the 'developmental state' and highlights the need to move away from management to focusing on meeting people's livelihood needs, including infrastructure (van Koppen and Schreiner, 2014). We hope that our research may be drawn on to aid further investigation and study of how concepts evolve and mutate and are absorbed as well as their impacts on more deep-seated concerns of development and justice in resource distribution.

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