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The Birth and Spread of IWRM – A Case Study of Global Policy Diffusion and Translation

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ABSTRACT: How did the idea of IWRM emerge at the global level? Why has IWRM become so popular and so resilient, at least in discourse and policy? What has caused IWRM policies to diffuse across time and space? The principal goal of this article is to identify a set of concepts and mechanisms to study the global diffusion and translation of IWRM through coercion, cooperation, or learning from the ground. The article will also highlight the extent to which this global diffusion was contested and translated into different meanings in terms of policy orientation. Overall, IWRM was a mindset of a particular period where the water policy paradigm was evolving in the same direction as sustainable development and other related paradigms in a post-Rio moment. There were no clear alternatives at the time but now IWRM is being questioned. This IWRM fatigue is leading to other framings and discourses around the water-food-energy nexus and the green economy.

KEYWORDS: IWRM, water, policy process, global diffusion, global translation

INTRODUCTION

The water sector presents an interesting case for studying and understanding global policy diffusion and translation. In political science and international relations, there have been an increasing number of studies on global policy transfers documenting the spread of liberalism and democracy (see for e.g. Simmons et al., 2006 or Simmons et al., 2008). The question of the birth and spread of Integrated Water Resources Management (IWRM) is an interesting additional case.

As discussed in the introduction to this special issue, IWRM[1] became the rallying point for international water policy (Conca, 2006), leading scholars such as Jeffrey and Gearey (2006: 2) to argue that it has become the orthodoxy in water resources management. The World Summit on Sustainable Development in 2002 called for all countries to draft IWRM and water efficiency strategies by the end of 2005. According to Cherlet (2012), over 80% of countries worldwide now have the IWRM principles in their water laws and two-thirds have developed a national IWRM plan. Hassing et al. (2009) reported the findings of a survey done for the 4th World Water Forum in Mexico, which showed that about three-quarters of the 95 countries for which responses were available used IWRM terminology in at least one policy or law, the vast majority of which were created after 2002. The 2012 World Water Development Report reports that more than one hundred countries have implemented IWRM (WWAP, 2012). All these facts and figures show how the concept of IWRM is very popular among governments and international organisations, and within the water expert community.

[1] The most commonly used definitions include the one by the Global Water Partnership 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' (GWP, 2000) (see Mehta et al., this Issue for a further discussion of the multiple meanings of IWRM).

IWRM has become a ubiquitous buzzword, giving rise to reams of analysis and assessments and continuing to hold a firm sway over policy-makers, practitioners and academics (van der Zaag, 2005; Molle, 2008; Mukhtarov, 2009; Srinivasan et al., 2011). Authors such as Cherlet (2012) or Mukhtarov (2014) have shown through the Actor-Network theory or an evolutionary framework how the various mechanisms, connections and assemblages around IWRM have been established. The principal goal of this article is to build and complement these previous studies by going beyond coordinated diffusion mechanisms (including diffusion by learning/emulation or by translation) while at the same time clearly distinguishing between coercion and cooperation as an explanation for the global diffusion of IWRM.

The focus of this paper is on the process of how the concept of IWRM has been diffused and translated. We understand diffusion as a process which can be defined as "the process by which an innovation is communicated through certain channels over time among members of a social system" (Rogers, 1995: 5), while translation refers to the modification of meaning and multiple interpretations of policy ideas within and across different scales (see also the Introduction, this Issue). Of course, there have been many studies on IWRM showing the different meanings, interpretations and contrasting practices emerging as a result of the implementation of the concept as elaborated in the Introduction to this special issue. My focus is on the opposite, namely on how a seemingly common understanding emerged within and across water networks and policy processes at the global scale. Of course, we will need to deconstruct what we mean by the 'international' and who is part of this 'international'. The literature on policy diffusion, as I discuss shortly, offers some interesting lenses to study this phenomenon. The idea of policy diffusion, which focuses on a consensual understanding of policy, needs to be completed with the idea of translation, showing how the ideas and policies begin to become more contested when deliberated in more detail.

This paper is divided into two sections. Firstly, I will elaborate a conceptual framework on global policy diffusion and provide a set of key factors and contending theories that could explain the translation of the IWRM concept. Secondly, I will analyse the diffusion and translation of the concept through a three-step approach: the origins of the concept; the key discourses, and the different networks, experts and institutions linked to the diffusion of the concept.

CONCEPTUAL FRAMEWORK

The internationalisation of policies and policy diffusion is gaining the attention of a growing number of scholars in the field of international political economy and comparative public policy (Knill, 2005; Levi-Faur and Jordana, 2005; Simmons et al., 2007; Weyland, 2007). There are many terms associated with diffusion in social science research: convergence (Drezner, 2001); waves (Huntington, 1991); contagion (Midlarsky, 1978); imitation (Jacoby, 2000); emulation (Bennet, 1991); institutional transplantation (de Jong et al., 2002) or policy transfer (Dolowitz and Marsh, 2000). As noted by Mukhtarov (2014), each term refers to subtle differences in approaches; while 'diffusion' presumes privileging structure over agency, 'transfer' may presume the immutability of what is being 'transferred', and 'learning' may presume the cognitively sanctioned process.

There have been many ways to approach policy diffusion and translation.[2] In line with Elkins and Simmons (2005), I distinguish three large conceptual explanations of the phenomenon of policy diffusion (see Table 1), namely:[3]

[2] Dolowitz and Marsh (1996) introduced a continuum of types of policy transfer that includes voluntary, coercive and negotiated forms of transfer. Evans (2009) further suggested three types of explanations to policy transfers: State-centred; transnational-organisations-centred, and policy- networks-centered.

[3] Etkins and Simmons (2005) also included a fourth one on endogenous conditions within countries that lead to similar conditions (economic shock or cultural and institutional similarities).

1. Coercion[4] through soft power (including a Gramscian understanding of ideological hegemony);
2. Cooperation through technical support or epistemic communities; and
3. Uncoordinated diffusion, through learning or emulation.

Coercive diffusion involves power asymmetries where policy preferences are imposed on weaker countries. In soft coercion, dominant actors can influence others through ideational channels without exerting physical power or materially altering costs or benefits (Simmons et al., 2006). By virtue of their central positions in policy networks, more powerful countries may be influential in the framing of policy discussions (Hira, 1998). Without diminishing the importance of material power and dominance over material resources, soft coercive hegemony can be understood in terms of consent and shared beliefs with the establishment within the sphere of the internationalisation of universally accepted values (a Gramscian type of ideological hegemony).

In terms of *cooperation*, Haas's (1980) work has drawn attention to the generation of social knowledge, or "the sum of technical information and of theories about that information which commands sufficient consensus at a given time among interested actors to serve as a guide to public policy designed to achieve some social goal" (Hass, 1980: 367-8). In this approach, policy innovation spreads in the wake of the diffusion of a shared fund of often technical knowledge among elites about what is effective. Epistemic communities, networks of knowledge-based experts, are major actors in the development of social knowledge and are especially influential in the policy-making process and may contribute to the creation and maintenance of social institutions that guide international behaviour (Haas, 1992). These communities are becoming more important as a result of the expansion and professionalisation of bureaucracies and the greater technical nature of problems. These transnational epistemic communities form as a result of the diffusion of community ideas through conferences, journals, research collaborations, and a variety of informal communications and contacts.

In terms of *uncoordinated diffusion*, one has to distinguish between learning and emulation. Learning can be understood as a set of processes characterised by interdependent but uncoordinated decision-making (evidence and best practice), while diffusion is through emulation (theory and rhetoric serve as the basis of decision-making). In terms of emulation, work by Meyer et al. (1977) showed mass schooling expanded to all countries irrespective of political ideology, political system or level of economic development. Whereas theories related to modernisation development suggest that countries will adopt certain programmes when they are developmentally ready for them, world-polity theorists embrace new norms for symbolic reasons, even when they cannot begin to put them into practice. Thomas et al. (1987) for example, have argued that nations mimic their successful peers almost ritualistically.

In terms of learning, the learning process may not be necessarily idealistic. Uncertainties make policy choices difficult and thereby policy-makers may follow the information cascade model, where they may have no other information than the knowledge of whether others have adopted the policy. In this case, individuals may reason that they should take advantage of the accumulated wisdom of decisions of past individuals. Bikhchandani, et al. (1998) developed a model of this process, which demonstrates that choices of an entire sequence of actors can depend exclusively on the decisions of the first two or three actors. This is a typical risk reduction strategy where familiar choices may appear to be safe choices.

Whether through learning or emulation, the process of uncoordinated diffusion rests on a cooperation logic where joining a growing majority of other actors confers a degree of legitimacy (Etkins and Simmons, 2005: 39). The benefits of joining this new group is also linked to the different options in terms of available technical support. This new community of users, preferably one with skills

[4] Coercion entails two sets of assumptions, firstly that there is an intentional motive from powerful countries to coerce weaker ones, and secondly that weaker ones are resisting.

and knowledge, and given the new policy dynamic, will be committed to refine and improve the practice.

Table 1 links existing theories about IWRM with those of policy diffusion. Of course, these are 'ideal-types' and some of the authors referred below on IWRM have worked across these types of diffusion and translation. In fact, these categorisations may prove to be useful to clarify and reinvigorate debates over IWRM diffusion as many of the work has moved from cooperation to coercion without much distinction. This categorisation also helps highlight how uncoordinated type of diffusion around IWRM has been neglected in current academic debates about IWRM global diffusion and translation.

Table 1. Mapping IWRM theories with theories for policy diffusion and translation.

Types	*Diffusion*			*Translation*
	Coordinated diffusion		*Uncoordinated diffusion*	
Mechanism	*Coercion*	*Cooperation/ Adapting*	*Learning/ Emulation*	*Contestation*
Key Features	*Gramscian ideological hegemony*	*Cultural norms, reputational benefits (e.g. legitimacy), technical support (community of users), epistemic communities/IOs*	*Knowledge, or imperfect knowledge (information cascade)*	*Contestation and modification of meaning and multiple interpretations of policy ideas*
IWRM is …	*a sanctioned hegemonic discourse (Allan, 2003)* *as a neo-Gramscian hegemony (Mukhtarov and Cherp, 2014). See also Cherlet (2012)*	*the formation of a global epistemic community and global policy standardisation and formulation (Mukhtarov, 2008)*	*a scientific approach and the uncoordinated spread of innovation (Wescoat, 2005)*	*"a house that is already in the process of deconstruction before building has been completed" (Mollinga, 2006)*
	a nirvana concept so vague that it has a bit for everyone (Molle, 2005), see also (Conca, 2006; Mukhtarov, 2008)			

These three sets of explanation capture the structural or agency bias in explaining policy diffusion. While coercion and cooperation require some sort of coordination, diffusion through learning, entails that, "governments are independent in the sense that they make their own decisions without cooperation or coercion but interdependent in the sense that they factor in the choices of other governments" (Elkins and Simmons, 2005: 35). Diffusion through learning therefore entails a degree of agency of national policy-makers.

The other key debate is between the idea of diffusion versus the idea of translation. 'Translation' scholars, very much in line with constructivism, consider that policy diffusion theories follow a positivist stance, by assuming the stability of policy ideas in the process of their travel. The focus of policy diffusion literature to try and explain how actors reach, through consensus building, a common understanding of the problems and the desired action (Mehta et al., 2007; Saravanan et al., 2009), has ignored the modification of meaning and multiple interpretations of policy ideas within and across

different scales. A new constructivist school of thought has therefore emerged in relation to the concept of policy translation. As explained by Lendvai and Stubbs (2007: 15),

> policy transfer process should be seen as one of continuous transformation, negotiation, and enactment on the one hand, and as a politically infused process of dislocation and displacement ('unfit to fit'), on the other hand… Policy translation suggests the need to pay greater attention to the ways in which policies and their schemes, content, technologies and instruments are constantly changing according to sites, meaning and agencies.

Let us then examine how policy diffusion and policy translation theories provide an interesting way to study the spread of IWRM.

THE GLOBAL DIFFUSION AND TRANSLATION OF IWRM

Very few studies have been done on the spread of IWRM as a set of ideas and how these get morphed, translated and obfuscated through processes of negotiation and transformation at the global, national and local levels (exceptions are the various pieces by Mukhtarov and Cherlet, respectively; see for example, Mukhtarov and Cherp, 2014; Mukhtarov, 2014) Mukhtarov 2008; Mukhtarov, 2009; Cherlet 2012). Farhad Mukhtarov (2008: 175) for instance provides an interesting evolutionary framework about the IWRM discourse, from bottom knowledge generation to policy standardisation and formulation at the international level to top-down diffusion. There are, of course, limits to an evolutionary theory as one could argue for the coexistence and reinforcement of these different processes. Jan Cherlet (2012) draws on Actor-Network Theory to understand how a range of actors (academics, donors, INGOs and local officials) build various alliances to support IWRM, distinguishing mediators, champions, intermediaries and larger networks (or nonhuman devices) such as the Dublin principles, and organisations such as the Global Water Partnership and the World Water Council. He thus charts how a range of actors established various connections and assemblages around IWRM. Building on and complementing these studies with additional empirical insights, this article aims to provide a broader range of explanations for the global diffusion of IWRM by considering diffusion by learning/emulation or by translation. Indeed, much of the preceding work focused on coordinated diffusion, and navigated between coercion and cooperation without clearly distinguishing them. Furthermore, the idea of translation was mostly applied to country case studies (e.g. Mukhtarov, 2009) rather than at the global level.

In conducting this research (through a literature review and interviews with 16 globally renowned water policy-makers and academics – see Annex), three different pathways in terms of policy diffusion with respect to IWRM were identified. For each of these pathways, we have looked at the origins of the concept and discursive shifts, and the principles and institutions in the making. The origin of concepts has not received much attention in policy diffusion debates. However, the initial understanding of how the concept emerges helps us to understand the trajectory and networks involved in policy diffusion. It also broadens the scope and understanding of what is meant by policy diffusion.

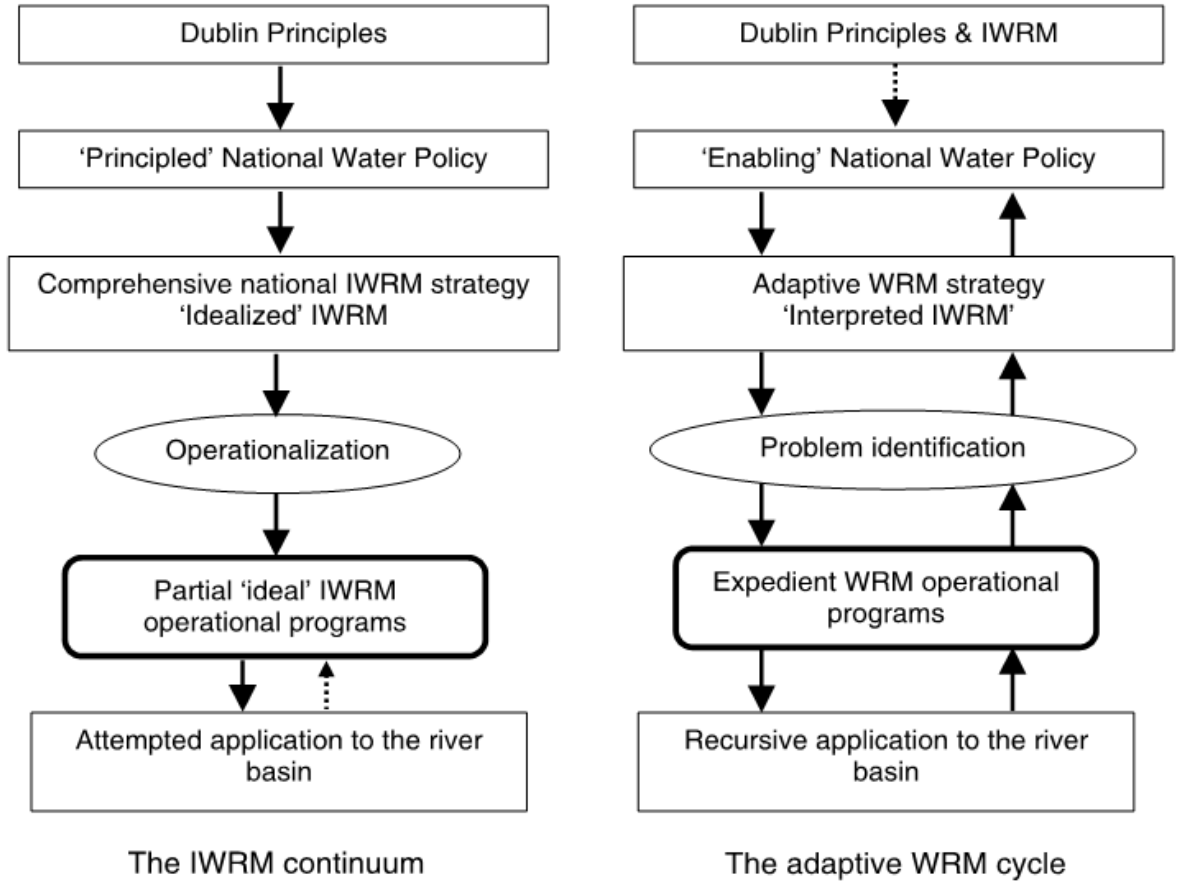
Coercion

IWRM has often been described as the sanctioned hegemonic discourse, following Allan's (2003) analysis. From this perspective, global policy diffusion occurred through a hegemonic Northern-led process imposed by the World Bank through its auxiliary, the Global Water Partnership.

Lankford et al. (2007) shows through Figure 1 how IWRM was very much a top-down process in which they describe the IWRM continuum linking the Dublin principles to a national water policy and strategy. IWRM is seen as a form of coercion as it imposes a set of principles and tools to be followed. In their Working Paper, Lankford et al. (2007) proposed an alternative approach to IWRM which would focus on 'problems' on the ground rather than on IWRM principles to be articulated as it "is largely

understood amongst most informed scientists; in large river basins, the constraints associated with scale, data availability, policing, knowledge, logistics, variability and systemic interfaces invalidate the pursuit of a complete 'Integrated Water Resources Management' as defined by the Global Water Partnership". (Lankford et al., 2007: 2).

Figure 1. IWRM: A top-down approach? (Lankford et al., 2007: 2).



The World Bank was the most active organisation promoting IWRM following the Dublin Conference and the Rio Summit (Allouche and Finger, 2001) and was key in the creation of GWP (this enthusiasm started to change in the late 1990s). Coercion was not a classical soft coercion style linked to conditionalities but rather a structural hegemonic thought pattern where no alternatives were feasible or discussed (other alternative pathways to sustainability were closed down as a policy option; see Leach et al., 2010 on pathways and closing down).

The key moment in the development of the IWRM approach was undoubtedly the Dublin principles, which some interviewees called the 'masterpiece'.[5] One can see different agendas converging at this event. On the one hand, there were a number of earlier conferences, and in particular Copenhagen, which set the tone for including economic and participatory principles. At the time, donor agencies, especially in Nordic countries and also the Netherlands and Canada, were pushing the environmental

[5] See Annex

agenda in resource management. On the Canadian side, the federal and provincial governments were very much influenced by the Ontario State experience with its Conservation Authorities and by people like Jim Bruce or Frank Quinn (both from the federal civil service in Ottawa).[6] On the Dutch side, some interviews mentioned the name of Hubert Savenije (at the time International Institute for Hydraulic and Environmental Engineering, IHE – Netherlands). On the Scandinavian side, Torkil Jønch-Clausen (who sat on the Advisory Committee of the Dublin Conference) was also very active. All were advocating some of the key principles, especially in relation to finite resources, economic good and participatory forms of governance. The gender dimension was added due to pressure from civil society organisations and United Nations agency but was not central to the agenda.[7]

This shift from supply to demand management in water occurred through the World Bank's leading role in creating a new discourse around water management. Hajer (1993: 47) defines discourse coalitions as "the ensemble of a set of story lines, the actors that utter these story lines, and the practices that conform to these story lines, all organised around a discourse". In this analysis, we expand the concept of discourse coalition as a way to reflect how various discourses converge into a single agenda. One can indeed identify four key discourses in the promotion of IWRM according to those interviewed:

1. A technical solution to the imminent water-scarcity crisis,
2. An economic solution to our modern economic-growth-oriented urban society,
3. An ecosystem solution to the limits of the hydraulic mission, and
4. A social solution to the limits of not engaging communities and stakeholders.

This discourse coalition, which was omnipresent in key international water conferences in the early 1990s, managed to create a new consensus. As one of my interviewees mentioned, there were plenty of conferences talking about water scarcity and the imminent crisis and that a new solution was urgently needed, from being a water supply to a water demand-driven approach.[8] And the consensus emerged, as there was recognition at the time by water specialists that current approaches were not successful and there was an urgent need for new action as a result of increasing water scarcity.

The United Nations Committee on Natural Resources (UNCNR, 1994: 73) mentions this crisis narrative in international meetings.

> Recent international forums dealing with water resources issues have all brought about an increasing awareness of the global magnitude of a water crisis…. Although these expressions of concern may be deemed by many to be insufficient, there is a growing consensus among experts in the water resources field as to the seriousness of the situation. However, the spectre of a global water crisis has been overshadowed by concerns about other issues of manifest global proportions, such as the ozone layer, tropical forests and climate change. Internationally, the seriousness of water problems has not as yet received the recognition that warranted the situation.

Water was believed to be misused and the chief culprit was the irrigation sector. The problem was not drinking water supply (Postel, 1992; Winpenny, 1994). A new alliance of hydrologists, environmentalists and economists was now actively pushing for policy change and writing on the topic. Two influential books that summarise the dominant thinking at the time were James Winpenny's Water as an Economic Good and Sandra Postel's Last Oasis: Facing Water Scarcity. James Winpenny, a then research fellow at the Overseas Development Institute (ODI) considered that water mismanagement was due to agriculture, industry and the 'politicisation' of water allocation and the solution was therefore to charge

[6] Interview with Bruce Mitchell, 27 March 2013.

[7] Various interviews, see Annex.

[8] Interview with Frank Rijsberman, 2 April 2013.

the real cost of water. In his final analysis, an economic approach to water management will ultimately bring both financial and environmental benefits (Winpenny, 1994). This position very much echoed the World Bank's position at the time under the leadership of Ismael Serageldin (the World Bank Vice President for Environmentally and Socially Sustainable Development) and John Briscoe (Water and Sanitation Division at the World Bank). Water as an economic good was indeed key to the 1993 World Bank Water Resource Management Strategy Paper (World Bank, 1993) and later presentations by John Briscoe and others at the World Bank in international conferences (Briscoe, 1996).

This new discourse coalition brought together economists such as Winpenny with environmentalists and conservationists such as Sandra Postel from the Worldwatch Institute. Postel (1992) also considered that the growing pressures on water resources thus called for a new approach to water resources management. She was indeed concerned by both efficiency and conservation when saying, for example:

> In a sense, masking scarcity is a principal aim of water development, the collection of engineering projects and technologies that give people access to and control over nature's supply. But all too often it has proceeded without regard for harmful side-effects. We build ever more and larger projects to meet spiraling demands wherever they arise, but pay little mind to the ecological services of rivers, lakes, and wetlands that are lost in the process (Postel, 1992: 18).

As a matter of fact, Postel follows the logic of the first Dublin principle when she says that although water is a renewable resource, it is also a finite one. Decentralisation, water pricing, the elimination of government subsidies especially for irrigation, and the active role of women are also factors that can achieve both efficiency and conservation (Postel, 1992). Again, this position was central to the Bank as illustrated through the 1993 World Bank Development Report that was focusing on Environment and Development.

Overall, sectoral policy approaches were not viable anymore as important urban centres were developing (see for e.g. Meinzen-Dick and Appasamy, 2002). Economic and social returns from urbanisation were seen in a positive light compared to irrigation development, which was criticised for being heavily subsidised. Mostafa Kamal Tolba, the Executive Director of UNEP at the time, often criticised the irrigation sector as the most subsidised sector in the world. Big water works or 'man-made' problems, mainly the widespread construction of dams and unsustainable irrigation, were also critically appraised. The hydraulic mission was called into question (Allan, 2003).

The consensus, which brought together policy-makers, environmentalist and hydrologists in the 'North' and water specialists in the 'South', was increasingly concerned with water scarcity.[9] In this respect, the spread of IWRM was the result of a particular discourse coalition promoting resource management against a more development-led concern around water supply. Indeed, the IWRM paradigm replaced the International Drinking Water Decade. This tension and shift can be seen in the meetings in the late 1980s and early 1990s (Nicol et al., 2012). In some ways, the Bruntdland Report, the Abidjan Accord and the New Delhi Statement all advocated the most basic form of 'integrated' water management: they did pay attention to both surface water and groundwater, as well as water quantity and water quality – but did not yet link water to land (erosion, floods) and the environment (Mitchell, 1990). However, the policy focus of these conferences was still on drinking water supply. This coalition of the willing was made possible since an alternative model similar to the idea of IWRM was developing in a few countries across the globe, most notably Australia, Canada, France, the Netherlands and the US.[10] New national environmental policies created increasing contradictions and the call for an

[9] Scarcity was taken as a given and it was only much later that scarcity has begun to be discursively deconstructed and politicised (see for e.g. Mehta, 2005).

[10] Various interviews, see Annex.

integrated approach became more and more appealing. For example, there were instances in Canada where a provincial Ministry of Natural Resources was protecting wetlands while a Ministry of Agriculture was draining them. However, the World Bank and the GWP conceptual model for IWRM was really based on the French basin agencies after a World Bank team visit and review under the leadership of John Briscoe of the different European water management models (Finger and Allouche, 2002).

The Scandinavians, especially the Danes, were very active before the Dublin and Rio conferences. The Danish International Development Agency (Danida) took the initiative to establish a Nordic Freshwater Initiative (NFI), bringing together Denmark, Sweden, Norway and Finland, with the explicit objective to feed operational guidelines for integrated water resources planning and management into UNCED (Jønch-Clausen, 1992).[11] The NFI received a global platform at the first Stockholm Water Symposium in August 1991 (Jønch-Clausen, 1992). Several key influential Scandinavian figures were key members of IWRA (International Water Resources Association), most notably Jan Lundqvist who sat on the board of directors (1992-94) and was its Vice President (1998-2000), as well as Malin Falkenmark, who occupied the same functions in the early 1980s. Three months later, an informal consultation of the NFI in Copenhagen in November 1991 further invigorated the Nordic plea for integrated, cross-sectoral management with the Copenhagen Statement. The Statement proposed two key principles: (i) water needs to be managed at the lowest appropriate decision-making level, and (ii) it needs to be managed as a finite resource with 'an economic value' (NFI, 1992). According to some interviewed, the conference organised by the NFI was also attended by Tanzanian, Indian and West African delegates. This conference was the result of a series of meetings among Nordic countries that ran for a whole year (four or five meetings in Denmark). The initiative was supported by the Nordic governments and also involved representatives from the World Bank (most notably John Briscoe), as well as the Asian Development Bank (ADB), and the Asian Institute of Technology.

While a new sanctioned hegemonic discourse on IWRM became increasingly accepted and legitimised through Dublin and Rio meetings, the World Bank was then behind the creation of the Global Water Partnership. Ismail Serageldin, and Anders Wijkman (the Policy Director at the United Nations Development Programme – UNDP) led the initiative to create the Global Water Partnership (GWP). The leadership really came from the World Bank which then approached UNDP (rather than UNEP) due to previous collaborations around drinking water. In early 1996, there was a meeting in Stockholm when a decision was taken to translate the outcomes of the meetings in Rio and in Dublin into practice. The 'operational team' included John Briscoe, Roberto Lenton (Director of the Sustainable Energy and Environment Division at the United Nations Development Programme), Johan Holmberg (Swedish International Development Cooperation Agency – Sida) and Gouri Ghosh (Head of the Water, Environment and Sanitation Section, UNICEF – New York). At this meeting (which regrouped around 80 people), it was officially decided to create the GWP, and Sida offered to host the interim secretariat. The GWP was therefore the result of a small meeting in Sweden. This led to the formal creation of GWP at the Stockholm Water Week in August of 1996, when its first consultative partners' meeting was held. Besides Sida, the Overseas Development Administration (ODA) in the UK was very supportive of the GWP, both materially and intellectually.

The operational group also decided to establish an interim Technical Advisory Committee. The 'operational team' approached Torkil Jønch-Clausen (Danish Hydraulic Institute – DHI) to chair what was then called the Technical Advisory Committee (TAC, later TEC), and Torkil Jønch-Clausen played a key

[11] The two key figures in the NFI were the Danish water professional Torkil Jønch-Clausen and the Swedish academic Jan Lundqvist. Jønch-Clausen, who was CEO of the Danish Water Quality Institute in 1993-1997 and Secretary General of IWRA in 2004-2006, was contracted by Danida to coordinate NFI. Jan Lundqvist was also a habitué of the multilateral scene, as consultant to the Swedish International Development Agency (Sida), Swedish delegate to a number of UN bodies in 1987-1992, Regional Director of IWRA in 1991-1994, and Vice President of IWRA in 1998-2000.

role in pushing the IWRM concept. Not surprisingly, one can find the same individuals at the head of the GWP, Ismail Serageldin was the first Chair and Torkil Jønch-Clausen was assigned as Chair of the GWP Technical Committee (GWP-TEC). Johan Holmberg, Assistant Director-General at Sida, served as first Secretary-General of GWP.

The institutional model of GWP was borrowed from CGIAR (the Consultative Group on International Agricultural Research) where Johan Holmberg had been active, and which was hosted by the World Bank. This model called for a light, networked organisation with a small secretariat at its centre and a heavy emphasis on scientific expertise and advice (Holmberg, 1998). GWP was quite successful in expanding worldwide. The GWP has 3000 member agencies, 85 country partnerships and 13 regional partnerships (according to their website). The light, networked organisation of GWP was cost-effective but proved difficult to manage. There was at times tension between TAC and the secretariat. As the field organisation grew, member organisations expected material support, which the centre was not resourced to provide.

Besides GWP, the most active organisation promoting IWRM was the Asian Development Bank under the leadership of Wouter Lincklaen Arriens. For some, ADB was actually much more successful in implementing IWRM compared to the World Bank.[12] Under the Water Financing Programme (WFP), ADB has committed to doubling its water investments during 2006-2010 to well over USD2 billion per year.[13] The overall target for ADB's lending under WFP 2011-2020 is USD20 billion, of which basin water investments are expected to contribute approximately 25%. Under this scenario, ADB seeks to increase basin water investments under WFP to approximately USD5 billion.[14] ADB is also active in promoting the Network of Asian River Basin Organisations (NARBO), which was established in 2003 to share knowledge and build capacity for IWRM in river basins throughout the Asia and Pacific region.

There were also other key players. Canadian Bill Cosgrove from the World Water Council also played an important role, especially in relation to the 2nd World Water Forum in the Hague, as well Mike Muller (at the time Director-General, Department of Water Affairs and Forestry, Government of South Africa).

The idea of IWRM as coercion is therefore based on the idea of a hegemonic discourse that prevents any alternative. Mukhtarov and Cherp (2014) follow this view but their argument is about a key moment in time rather than the hegemonic mechanisms of its diffusion. It is not that IWRM was imposed through the World Bank as a donor conditionality but rather that it wan the ideological and political battle and was seen as the solution that the international community espoused. This was further institutionalised when IWRM was the only norm and solution as agreed at the 2002 World Summit on Sustainable Development (WSSD). This internationalisation and globalisation of IWRM, as promoted by International Organisations, transnational actors, and the internet, should not obscure the fact that this consensus was just among a rather small group of people, which became the global advocates for IWRM at a time when no other clear coalition existed.

There are a number of limits to this theory. It places too much emphasis on the soft coercive power of the GWP, which was certainly successful in spreading the concept but which had clear limits being a small network organisation. Furthermore, the World Bank, which was the key powerful actor in this story, was blowing hot and cold over IWRM.[15] More fundamentally, many water specialists consider that one can trace the idea of IWRM far beyond the early 1990s and that the World Bank and the

[12] Interview with Peter Rogers, 22 March 2013.

[13] www.adb.org/sectors/water/financing-program (accessed 22/08/16).

[14] This is not all necessarily IWRM-related but is used as an illustration to show how water resources management is seen as an important policy priority at the ADB.

[15] Interview with Alan Hall, 3 March 2014.

Global Water Partnership were just instrumental in implementing a growing consensus around the need for integration around water resources management.[16]

Cooperation

For other water specialists, this soft coercion idea cannot account for the global diffusion of IWRM in that it had been in existence at least since the beginning of the 20th century. In this light, IWRM is seen as a cumulative knowledge process going back before the adoption of the concept in global policy circles in the early 1990s. In this perspective, the global policy diffusion of IWRM has occurred through cooperation rather than through coercion. IWRM is seen through a 'longue durée' perspective as knowledge construction, a positivist perspective, which involves the scientific study of water systems in relation to human society and ecosystems. This creates a methodological difficulty as it is more difficult to trace and identify the mechanisms of the formation of this transnational epistemic community over such a long period.

Different experiments around integrated water management, one could argue, go back to as early as the beginning of the 20th century (if not before), notably in the US and Europe (Teclaff, 1967; Mitchell, 1990; Rahaman and Varis, 2005). The Tennessee Valley Authority (TVA), which was established in 1933 in the US, was an early example of IWRM in practice, as it was set up as a river basin organisation to facilitate multipurpose management to deal with water supply, pollution, navigation, flood management and conservation. The Ruhr River Association in Germany and the UK River Basin Authorities were other examples. For some, TVA was the first attempt to bring together social engineering, land and water management, and regional development (Selznick, 1949; Wescoat, 1984). The TVA effort contained many elements of today's perception of IWRM: comprehensive planning of natural resource utilisation combined with economic, social and even environmental objectives (Snellen and Schrevel, 2004; Mukhtarov, 2009; Cherlet, 2012). More generally, the idea of Multi-Purpose River Valley Projects (MPRVPs) marked a new era of integrated resource management.

This so-called first generation of IWRM (1930s-1960s) was slowly replaced by the second generation of IWRM (1960s – 1990s), which integrated ecosystems and environmental concerns (Chakraborty, 2010). Scholarly advances in the general understanding of water systems and water resources helped to create ways of designing integrated water resources management policies. The breakthrough in terms of advances in knowledge really started in the 1960s. White (1961) and others started to develop key frameworks in relation to resource management, decision-making and imperfect knowledge (Simon, 1957: White, 1961; Wolpert, 1964). Another set of literature started to bring together issues of land, water and ecosystems. The driving force behind this literature was in reaction to the perceived declining quantity and quality of available freshwater (de Jong et al., 1995). The idea of water resources management as an interaction between land, resources, and the environment was well stated by Burton (1984) in his article, *The Art of Resource Management.* Burton argued for a land-use appraisal of resource use. However, even at that time, integrated management of water resources still meant *maximum* possible human use. Finally, the last set of literature focused on environmental management and water quality (see Dorfman et al., 1973).

Parallel to scholarly advances, environmental conservation around water management also began to be practised. In Canada for example, the Ontario conservation authorities were created in 1946 and later two of the authorities received the Theiss Riverprize in Australia. From the 1970s onwards, IWRM 'experiments' were established across the world. OMVS (The *Organisation pour la mise en valeur du fleuve Sénégal*; in English Senegal River Basin Development Authority)[17] is a good example of

[16] Various interviews, see annex.

[17] Initially created in 1963 as the *Organisation des Etats Riverians du Fleuve Sénégal.*

'integrated' transboundary water cooperation. Many countries in the 'South' had also established water resources ministries (China: 1979; India: 1980) and holistic water resources management had already been practised in the 1970s in some Latin American (Argentina, Mexico) and Asian countries (Indonesia).[18] These 'experiments' around IWRM were continuously improving.

The third generation of IWRM (post-1990s) broadened the theory to include socioeconomic subsystems and the way water resources management can be connected to broader social and economic development (see, in particular, work by Mitchell, 1990). In the Netherlands, the American RAND (Research ANd Development) Corporation, in collaboration with the Delft Hydrological Institute, conducted a systems approach analysis for the government, modelling water flows and integrating the economic dimension of water management in decision-making. Frank Rijsberman, who later became Director General of the International Water Management Institute (IWMI), and then Chief Executive Officer of CGIAR (Consultative Group on International Agricultural Research), was involved and heavily influenced by this approach. In Canada/US, the Great Lake 1987 agreement led to the realisation of the limits of an integrated approach and brought about ideas of defining a comprehensive and a more focused approach (Mitchell, 2008). The need to identify key areas and criteria (in this case 47 key areas of concerns according to five criteria), rather than a comprehensive overall map and health of the entire Great Lakes basin system, was established.

One interesting feature between these three generations of IWRM is the connection between them and how IWRM was diffused. One very interesting connection to the diffusion of the concept is the Harvard Water programme. Launched in the early 1950s, it resulted in the collaboration among engineers, political scientists and economists leading to the following publication in 1962: *Design of Water-Resource Systems: New Techniques for Relating Economic Objectives, Engineering Analysis, and Governmental Planning*. Many of these Harvard-trained engineers ended up at the World Bank which was a crucial actor in promoting IWRM, most notably John Briscoe but also Nagarajarao Harshadeep, John Dixon, Teddy Herman, and Gerhardt Tschannerl.

The Harvard Water Programme was just one of many water ecosystem programmes looking at the relationship among water, land and ecosystems. A slow consensus emerged across different networks and national experiences in relation to the benefits of the IWRM approach. Engineers and hydrologists were the key initial thinkers of the concept. The most active community was the optimisers, those modelling water flows using system analysis. These include people like Peter Rogers (Harvard University) or Daniel P. Loucks (Cornell University). The other key group comprised hydrologists, and most notable among them were Malin Falkenmark, Bruce Mitchell, John Burton and John Pigram to name a few.

This long tradition of working on multidisicplinarity and system analysis used the sustainable development policy momentum to bring about the IWRM concept. It is no coincidence that the concept of IWRM blossomed in the early 1990s. Although some experts, and especially Asit Biswas, claim that the UN Mar del Plata conference in 1977 was the time that the IWRM principle was endorsed internationally (see also Jeffrey and Geary, 2006; White, 1998: 23 also lists a number of UN initiatives before Mar del Plata), the policy momentum only started in the early 1990s. The emergence of the IWRM concept in the early 1990s cannot be separated from global environmental politics. Although IWRM has its particular history, the concept was linked to rising environmental awareness. The culmination of IWRM was really between 1992 and 2002 with the EU Water Initiative.[19]

Having said this, it must be stated that this epistemic community was not very successful in integrating the IWRM agenda into the sustainable development agenda. It is interesting to note that no

[18] Interview with Roberto Lenton, 3 April 2013; and Eelco van Beek, 28 March 2013.

[19] The EU Water Initiative was a huge financial success for IWRM advocates with more than 1 billion euros available for promoting IWRM in practice in the African, Caribbean and Pacific Group of States (ACP) countries.

water-related experts were involved in the Brundtland Commission. Dublin was organised by the Government of Ireland in partnership with United Nations bodies, as a pre-conference sectoral water meeting for the Earth Summit in Rio. It was not an intergovernmental meeting but was attended by government-nominated water experts. The relationship between Dublin and Rio is interesting in that many governments considered that the economic approach endorsed at Dublin by water experts was too radical. In Rio, water was considered as an economic *and* social good (Savenije and van der Zaag, 2002).

In contrast to Dublin, Rio was a political rather than a technical conference, and water did not attract the high-level regime-building negotiations that surrounded climate or biodiversity; IWRM was not high on the political agenda at that time (Conca, 2006). This had an important impact on how the policies and institutions were put in place to promote IWRM. This is very important not only in terms of different values for water but also in relation to institutional strategies; the institutions promoting IWRM were not intergovernmental but networks and partnerships (Conca, 2006). As one interviewee put it, Rio rejected the vision of water as just an economic good and the governmental route was blocked.[20] Rather than a UN-led intergovernmental body, this outcome led to the creation of two institutions: the Global Water Partnership (GWP) and the World Water Council (WWC).

Learning, information cascade and policy mimicking

Soft coercion and cooperation assume a certain level of coordination at the global level. For some policy-makers and practitioners interviewed, there was no master plan as IWRM was an ideal. IWRM was based on a 'learning from the ground' approach where it was tested and improved. The GWP was conceived as a network organisation with the objective to advocate the implementation of IWRM plans and institutions around the world and share expert knowledge. The Technical Advisory Committee (TAC) was seen as a very good way to promote and further understand the concept by bringing together an agronomist (Mohammed Aït Kadi), economists (Marian S. delos Angeles, Ramesh Prathia), a geographer (Judith Rees), engineers (Ivan Chéret, Fernando Gonzalez Villarreal, Janusz Kindler, Torkil Jønch-Clausen, Paul Roberts, Peter Rogers, and Albert Wright), an environmentalist (Anil Agarwal), a hydrologist (Malin Falkenmark), a lawyer (Miguel Solanes) and a sociologist (Sonia Davila-Poblete).[21] For some, the success of GWP lay in its TAC and its "scientific approach to water resources management" (rather than its regional networks).[22]

This theory may be supported by the fact that GWP learned a lot from the ground. It is said that Nordic countries were inspired from experiences in Africa, most notably water master plans in Tanzania.[23] Furthermore, according to Torkil Jønch-Clausen, IWRM really came from Africa.[24] In his eyes Uganda was the first country of the developing countries to try and experiment with IWRM and it was in Uganda that an interdisciplinary team of engineers and hydrologists came up with the three pillars so central to the IWRM doctrine, namely:

- An *enabling environment* of suitable policies, strategies and legislation for sustainable water resources development and management,
- Putting in place the *institutional framework* through which to put into practice the policies, strategies and legislation.

[20] Interview with Tony Allan, 20 March 2013.

[21] These were the initial members of the Committee, and in subsequent years the composition of the committee changed as members ended their term and new members were added.

[22] Interview with Johan Holmberg, 22 March 2013.

[23] Interview with Torkil Jønch Clausen, 21 March 2013.

[24] Interview with Torkil Jønch Clausen, 21 March 2013.

- Setting up the *management instruments* required by these institutions to do their job.

The Permanent Secretary of the Ugandan Ministry of Water, B.K. Kabanda, who was already involved in the Nordic Freshwater Initiative, was amongst the subscribers to the Copenhagen Statement (NFI, 1992). As a result, Danida chose to assist Uganda in developing a Water Action Plan, between January 1993 and July 1994. This plan can be considered the first African IWRM plan *avant la lettre* (Jønch-Clausen, 2004). The Danish Hydraulic Institute (DHI), a research-based not-for-profit foundation where Jønch-Clausen was Director of the Water & Environment Division, obtained the contract to develop the plan. As a result, with technical and financial support from Danida, Uganda embarked upon the world's first National Water Resources 'Water Action Plan' (WAP) from 1993 to 1994 (see Nicol, this special issue for a more detailed discussion of Uganda). The water professionals of Danida felt that the approach of the Ugandan Water Action Plan was replicable and started a similar IWRM process in Central America (1997-1999), Burkina-Faso (1998-2001) and Vietnam (2004-2005).

The fact that Uganda may be the first example of IWRM in developing countries will create as many debates as there are many understandings of what IWRM means.[25] This is not really the point. This alternative theory shows that IWRM could be conceived as a bottom-up process based on learning from the ground, showing how Uganda played a critical role of the early reflexive development of IWRM. Of course, while the learning elements of the Ugandan were probably important, the bottom-up aspect could be questioned. As shown by Nicol and Odinga (this special issue), the Ugandan government at this particular period was more of a follower rather than a designer, as the government had become a 'donor darling', keen to show its willingness to develop policy instruments that reflected emerging mainstream aid policy.

Learning, information cascade and mimicking of IWRM are of course broader than GWP and the Ugandan experience. Wescoat (2005) gives many examples of these cultural exchanges, ranging from diplomat letters between countries across Europe, the US, Asia and the Middle East to US engineering delegations travelling to Australia, China, Egypt, Europe and India for example. Legal treaties were another form of cultural exchange. With respect to IWRM, the 'focused approach' around the Great Lake 1987 agreement led to many exchanges and knowledge-sharing practices between Australia and Canada.[26] Models of best practice river basin organisations were another form of uncoordinated diffusion. The French model of *Agences de l'Eau* was modelled and copied across the world, including among the former Soviet states as well as Asian states that sought to institute financial self-sufficiency of River Basin Organisations (RBOs) (Mukhtarov and Gerlak, 2013). Mukhtarov and Gerlak (2013) also give the example of the Australia's Murray-Darling River Basin Commission, which has influenced developments in countries such as China, Sri Lanka, and Vietnam and contributed to the creation of the Mekong Basin Commission and its ongoing operations, as well as the International Commission for the Protection of the Rhine, which served as a model for the establishment of commissions along the Elbe, Danube, and Odra rivers. As put by Molle (2009: 491), the vogue of the IWRM concept translated into a multitude of attempts to establish RBOs, often inspired by foreign 'models', in countries such as Brazil, Indonesia, Morocco, Sri Lanka and Vietnam and promoted – among others – by the Global Water Partnership and the International Network of Basin Organisations (INBO). However, although the INBO should have played a key role, it has been limited to 'event publicity' in the words of UNESCO's International Hydrological Programme (UNESCO, 2007: 2009).

The uncoordinated diffusion of IWRM and the fact that many countries used water scarcity as a

[25] Mitchell, for example, mentions an IWRM project in Indonesia between 1986 and 1990. He considered the project very successful from a technical point of view but less effective on the basis of the 2nd principle to get everybody on board. In Indonesia, there were difficulties during that time in promoting a bottom-up approach. Others mention the South African experience in the late 1980s and early 1990s.

[26] Interview with Bruce Mitchell, 27 March 2013.

driver for water reforms could illustrate a case of policy mimicking, an issue which should deserve more research. However, one has to recognise the methodological difficulties in finding examples of policy mimicking precisely because of its uncoordinated nature. While this section is shorter than the sections on coercion or cooperation, this is not to belittle this understanding of diffusion compared to the other section but just to recognise the difficulties in researching this mechanism compared to the two previous ones.

Global policy translation: Coordination, politics and resistance

The key assumption behind these three storylines is a consensual, agreed and, to a certain extent, well-defined policy and practical agenda. In fact, what makes the Dublin Conference so significant is this apparent consensus. Abu Zeid (former minister of water in Egypt for many years throughout the 1990s), who later became instrumental in the creation of the World Water Council, played a prominent role in the Dublin Conference as the bridge maker between different epistemic communities and the policy world. As said by one of my interviewees, he 'could make things happen'.[27] Being from the 'South', he was also seen as very instrumental in convincing developing countries.

Some scholars would dispute this unified vision of IWRM policy diffusion due to IWRM's contested meaning and the institutional divisions over IWRM policies (Conca, 2006). As put by Mukhtarov and Cherp (2014: 10), "the contentious politics of water needed at least a *semblance* of consensus at a global scale" (emphasis added). Mollinga (2006: 5) states that "the so-called global water consensus, is such an amalgamation of ideas, with its own internal contradictions, and therefore not a true consensus, but more of a compromise 'sanctioned discourse' in the making". Furthermore, it was a consensus among few international water experts; as we have illustrated throughout this article, the social carriers of the concept across the world was done by a small group of people (Mollinga, 2006).

The policy translation of IWRM was more about fragmentation than consensus with the conflicting views and interests encapsulated in two organisations, the Global Water Partnership and the World Water Council. These were not limited to two organisations but they also reflected the leadership fight between international organisations (FAO, UNESCO, WMO, UNDP and World Bank) on the global water agenda.[28] The 'Dublin consensus' may have obscured some key divisions. Indeed, it is strange, to say the least, that two key global water organisations were created in the same year. While some international water experts met in Sweden in early 1996, other international key figures, most notably the IWRA president Mahmoud Abu-Zeid (also Egyptian water minister), the IWRA vice-president Aly Shady (also water advisor at the Canadian International Development Agency CIDA), and the Vice-Director of Suez Lyonnaise des Eaux René Coulomb, created the World Water Council (WWC) in 1996. The idea of the Council was established following the 1994 IWRA's VIIIth World Congress in Cairo, Egypt (Water International, 1995). As put by Salman (2003: 494), "The line of demarcation of responsibilities between the two institutions may be clear in theory. However, in practice there are areas of overlapping responsibilities, particularly with the expanding work of the Technical Advisory Committee of the Global Water Partnership and its regional offices, including the work on the strategic vision for integrated water resources management".

The World Water Council was really driven by the former World Bank irrigation adviser, previous to John Briscoe, Guy Le Moigne. A number of key people from IWRA (Asit Biswas, M. Abu Zeid, Aly Shady) were also involved. Guy Le Moigne became the first executive secretary. The French government, and then the Dutch and the Japanese governments, were the key drivers behind the Council. The Global Water Partnership was driven by another World Bank figure, John Briscoe. For some, this division

[27] Interview with Eelco van Beek, 28 March 2013.

[28] Interview with Salman Salman, 22 July 2016.

reflected an internal leadership fight within the World Bank. There were many overlaps between the two organisations (WWC and GWP). An external-led evaluation of the Global Water Partnership in 2008 concluded that the demarcations between both organisations were confused and the two organisations could be seen as competitors until 2004 (Gayfer, 2008: 46). This could be primarily explained by the potential overlap of competence between the two institutions. (Salman, 2005: 50-57). For some, WWC was about a different vision of IWRM compared to the Global Water Partnership which rejected the hydraulic mission.[29] At the WWC, it was more about integrated river basin management, including engineering and construction.[30] This image was reinforced given the role the private sector was playing, especially the French multinational companies. The tension between the two organisations really came to a head at the Hague, during the 2nd World Water Forum.

However, from 2004 both institutions made a move towards collaboration with the signing of a "Framework for Cooperation between GWP and WWC". According to this framework, the Executive Director of WWC and the Executive Secretary of GWP are ex-officio members of the governing bodies of the two organisations. Provision for regular coordination meetings between the two organisations – at least two per year – was put in place. They agreed to share information and committed to avoiding overlap and maximise synergies between themselves. As put by Fromageau (2012), they have found ways to establish "pacific coexistence" among them, although a recent survey by Varady and Iles-Shih (2009: 77) shows undertones of competition between supporters of WWC and GWP, if not between the two initiatives themselves, with numerous instances of inverse scoring patterns for the two organisations by survey informants. One explanation for this potential resurgence of competition between the two organisations is that the global policy momentum over water, at least through networks and conferences, is declining, including its funding, and both organisations are fighting for their existence.

This institutional battle was just one aspect of this contestation of the fine details of the translation of the IWRM concept. The broadness of the IWRM concept, as a nirvana concept to use Molle's (2008) metaphor, made it a subject of many contestations. Molle (2008), for example, showed the tension between the precepts of equity and efficiency. Allan (2003) talks about the missing A in IWRM and shows that IWRM is void of the politics which in fact are at the core of all critical water decisions. Bolding et al. (2000) identifies how sectoral compartmentalisation between different ministries (e.g. irrigation, rural water supply, forestry, land and so on) raises more general issues of how to organise stakeholder involvement in water and natural resources policy-making, planning, development and management. Mollinga (2006) recalls the three subideas of IWRM, around river basin management, participation and privatisation and shows how each of these can be in contradiction to the other. Overall, one can see how the discursive and the institutional division over IWRM implementation reveals the limits of global diffusion theories over the seemingly 'international consensus'.

CONCLUSION

In this article, I have attempted to retrace the history of the global diffusion and translation of the IWRM concept. I have focused on tracing the IWRM idea and knowledge diffusion but more work is needed to look at the political economy aspects, namely tracing back the funds among donors, institutions and IWRM programmes at the global level. Overall, institutions, and especially individuals, were key in the diffusion of this particular idea. However, this idea needs to be understood as embedded in a particular critical juncture in global environmental politics where other ideas of

[29] Namely "the strong conviction that every drop of water flowing to the ocean is a waste and that the state should develop hydraulic infrastructure to capture as much water as possible for human uses" (Wester, 2009).

[30] Interview with Peter Rogers, 22 March 2013; Interview with Alan Hall, 26 March 2013.

integration were also put forward.[31] In this respect, IWRM was just like the concept of sustainable development or integrated coastal management. It was a key concept within societies at the time, but all of them proved difficult to operationalise. As put by one interviewee, it was a successful idea, but the principles were not really applied, it was the same crowd preaching to itself.[32] In fact, IWRM was not a policy, it was a mindset.[33] This is why the concept also needs to be historicised within a continuum of knowledge in which the idea of integration at the river basin level emerged. It slowly evolved when environmental considerations were taken more into account in policy circles. Conceptually this article broadened policy diffusion debates to constructivist ideas in that one can see how the origins of concept and ideas are so important for the study of policy translation.

Why was this idea so successful in travelling across different regions of the globe? There are many answers to this question but the key ones in my mind are as follows. The resistance to IWRM, and more particularly to the idea of water as an economic good, created an institutional pathway around networks rather than an intergovernmental route. These networks allowed for much flexibility in the diffusion and acceptance of the idea. The second most important reason is that there were no clear policy alternatives at the time to the IWRM concept. Water infrastructural development, along Mike Muller's line (Muller, 2010), was not the flavour of the day and IWRM was seen as the only solution, more specifically "the only sustainable solution" (Durham et al., 2002: 333). In fact, the alternatives to IWRM are paradoxically within IWRM itself, whether the emphasis is on a participatory approach, an ecological one or an economic one.

Finally, is there an IWRM fatigue? Are we witnessing the death of IWRM? Some have argued that IWRM is now slowly becoming replaced by other emerging concepts such as water security (Allouche et al., 2016) or the nexus (Allouche et al., 2015). Indeed, the concept may become irrelevant if one focuses on new challenges (such as adaption and climate change or the water-food-energy crises). The importance of new donors such as the BRICS countries may also challenge the concept of IWRM, as it may not fit in with their key priorities around infrastructural development. Still, as argued by Movik et al. (this Issue), the idea is still strong and alive and kicking in southern Africa. Despite the emergence of new fads, the Global Water Partnership and others have been quite strategic in adapting their approaches to IWRM to other challenges, for example in aligning the IWRM approach with climate change discourses and water security.

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[31] Such as integrated costal management.

[32] Interview with Frank Rijsberman, 2 April 2013.

[33] To use James Winpenny's word, Oxford, 19 June 2015.

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ANNEX: LIST OF INTERVIEWS

Professor Tony Allan, Emeritus Professor, Kings College London.

Mr. William Cosgrove, Former President of the World Water Council.

Dr. Peter Gleick, President and Co-founder, Pacific Institute.

Mr. Alan Hall, Senior Advisor, GWP.

Mr. Johan Holmberg, Senior Advisor, GWP.

Dr. Guy Howard, WASH Policy Team Leader, DFID.

Professor Torkil Jønch-Clausen, Chief Water Policy Adviser DHI Group.