

Tracing the Emergence and Deployment of the 'Integrated Water Resources Management' Paradigm

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Abstract

The unequal distribution of water quantity and quality in space and time severely burdens the livelihoods of billions of people on this planet, the vast majority living in developing countries. 'Integrated Water Resources Management' (IWRM) is a normative policy paradigm that holds the promise of a holistic management of this unfair distribution. In two decades time the paradigm has gained an apparently hegemonic status in the network of water development actors worldwide. The article traces the emergence of the IWRM paradigm in the network of development actors and describes its deployment in Mali. Both the governmental and non-governmental pathway of deployment in Mali are accounted for. Harnessing Actor-Network Theory (ANT) as descriptive tool, the article describes how actors create alliances in support of the paradigm, including academics, multi-lateral agencies, non-governmental organizations, and actors in Mali's water sector. ANT is helpful in showing that the 'success' or 'failure' of the development paradigm depends on the strength of the alliance, not the strength of the paradigm. It shows how policy making and practice are actively geared one to the other

1 Introduction

Since the inception of development aid after World War II, the development expert communities have displayed a continuous effort to 'get the development policy right', thereby unceasingly promoting new concepts and theories to adjust preceding policies that allegedly failed to deliver (Mosse, 2004; Thorbecke, 2007; Kremer et al., 2009; Nederveen Pieterse, 2010). Also the field of water-related development is characterized by a similar intellectual ferment (Meinzen-Dick, 2007; Ingram, 2011; Molle, 2008).

Obviously, the water expert community *does* face impressive and very diverse challenges that do not have *one* miraculous solution (UNDP, 2006; Pahl-Wostl et al., 2008; UN-Water, 2012): between 1.4 and 2.1 billion people currently

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live in water-stressed or over-exploited river basins (IPCC, 2008); floods affect 140 million people each year (IPCC, 2008); and nearly 800 million people still lack access to safe drinking water (WHO-UNICEF, 2012). Just like in any other sector of development, however, the alleged failure to achieve the desired progress in addressing these challenges is invariably attributed either to the misconception of the preceding policy, or to an unintended gap between policy making and implementation (Mosse, 2004; Rap, 2006). Therefore, new ideas, theories, technologies, management schemes, policies and eventually new overarching paradigms are incessantly proposed to correct the preceding policy or to reduce the gap between policy and practice. To name only one such trend, the water community has produced over the past fifty years policies that emphasized first public, then private, then community-based, and then mixed private-public institutions as *key* to water management (Meinzen-Dick, 2007; Ingram, 2011).

To the critical observer, these constant conceptual renewals appear as ‘fads’, ‘fashions’, ‘bandwagon concepts’ or ‘buzzwords’ (Cornwall, 2007). Thanks to their discursive and disembodied power they engross the whole community of development professionals (as in Ferguson, 1990). At best they are promoted by a global epistemic community and multi-lateral agencies (Haas, 1992; Stone, 2003) or an advocacy coalition (Sabatier and Weible, 2007).

To the contrary, in the positivist observer’s view, these constant conceptual renewals reflect the quest towards better and refined practice-informing policies. This view is largely grafted on the ‘stagist’ theory of the policy process (as in Easton, 1965; Jenkins, 1978), which supposes that it is possible objectively formulate the problem, make a well-informed policy making, straightforwardly implement the policy, and objectively evaluate the policy (Kremer et al., 2009).

Both views are highly problematic. The first ignores the role of individuals and networks of individuals in the shaping and framing of the concept, in making them work, and in keeping them alive (Shore and Wright, 1997; Rossi, 2004; Molle, 2008). The second view relies on an overly positivist epistemology (Chambers, 1997; Crewe and Harrison, 1998; Bryld, 2000; Cooke, 2004; Kothari, 2005; Wilson, 2007a,b). I argue, in line with the growing number of ‘ethnographers of aid’ (e.g. Gould and Marcussen, 2004; Mosse, 2005b,a) and ‘anthropologists of policy’ (e.g. Shore and Wright, 1997), that both the critical and the positivist view derogate the agency of individuals, the political struggles in policy making, and the complex relation between policy making, implementation, and real-world impact. We need ethnographies that challenge the epistemological assumptions of these grand theories (Wedeen, 2010) and that *actually observe and describe* the role of *actors* in the emergence and implementation of these putative ‘fads’, ‘fashions’ and ‘bandwagon concepts’.

Integrated Water Resources Management (IWRM) is one such concept —I will call it a ‘paradigm’— that is currently ubiquitous in the sphere of water management and water-related development aid. IWRM holds the promise of a fair and sustainable management of water resources. It recognizes that water is key to different and often competing goals: human health, economic development, and environmental sustainability. Therefore, IWRM advocates a *cross-sectoral* management of water resources —covering the agricultural sector, industry, energy, domestic life, the environment— as well as a *vertical* integration of the different decision-making levels —national government, river basin, municipality, community (GWP, 2000a; Conca, 2006). To reach this horizontal and vertical reconciliation of sectors and levels, IWRM counts on some form of

Survey	categories as mentioned in the survey			respondents
GWP, 2006	<i>IWRM plans or strategies in process</i> 53%	<i>IWRM plans or strategies in place</i> 21%	<i>IWRM plans or strategies being implemented</i> n.a.	95
UN-Water, 2012	<i>water laws being changed</i> 81%	<i>IWRM plans in place</i> 64%	<i>IWRM plans being implemented</i> 34%	125

Source: Adapted from UN-Water (2008, 2011)

Table 1: Countries with IWRM-inspired laws and management plans, auto-declared in surveys.

Habermasian communicative rationality: actors reach, through consensus building, a common understanding of the problems and the desired actions (Mehta et al., 2007; Saravanan et al., 2009).

Scholars concur that over the past two decades the IWRM paradigm has attained a hegemonic status in water policy making and management worldwide (Conca, 2006; Saravanan et al., 2009; Orlove and Caton, 2010). Over 80% of countries worldwide now have the IWRM principles in their water laws and two thirds have developed a national IWRM plan (see Table 1). This success is surprising in two ways. First, water governance is highly scattered at international level (Gupta, 2009) and IWRM is not endorsed by any international agreement like the one on trans-boundary waters (Conca, 2006). Second, despite being on the lips of many, there is still much debate about the practical value of IWRM (van der Zaag, 2005; Merrey, 2008; Quevauviller, 2010), given its malleability and the lack of concrete guidelines for implementation (Gooch and Stålnacke, 2006; Saravanan et al., 2009; Orlove and Caton, 2010).

I argue that IWRM does *not* derive its hegemony from being a woolly “nirvana concept”, as stated by Molle (2008), or for being a widely spoken “lingua franca” (Ingram, 2011), or “discursive construct” (Orlove and Caton, 2010). Instead, in the next section I show the crucial role of *actors* in supporting the emergence of the IWRM paradigm in the sphere of multi-lateral organizations towards the end of the 20th century, and in routing the IWRM paradigm towards Mali during the first decade of the current century. I trace the myriad major and minor connections that actors knit amongst each other in order to establish a firm network that can make other actors *do* something. These connections can take the form of organizations, agreements, principles, or any other hybrid artifact. In my tracing of this network I try *not* to invoke presupposed discursive powers or social structures, nor to artificially separate ‘policy makers’ from ‘policy takers’. I only trace links.

This way of describing the emergence and the hegemony of IWRM is very innovative. With a few exceptions such as Conca (2006), very few scholars pay attention to the *loads of work* that was required from *actors* and their network to make the paradigm emerge, and the *loads of work* that continues to be required from *actors* to maintain the paradigm alive and prominent. My way of describing ‘the social’ is based on Actor-Network Theory (Latour, 2005), a tool for the description of social data that is rooted in science and technology studies but that has been finding its way to other domains of the social sciences

as well (Latour, 2000). I will show that a paradigm such as IWRM appears to be ‘successful’ precisely *because* a well-built network sustains it.

The data presented in this article is based on policy documents, 48 interviews with key people, 21 focus group discussions, and 13 months of participant observation at three different sites in the network of development actors, to wit, at the headquarters of the Global Water Partnership (2011), at the headquarters of a non-governmental development organization (2010), and in Mali’s Inner Niger Delta (2010-11).

The article is structured as follows. In the next section I describe the network of actors that underpinned the emergence of IWRM in the multi-lateral sphere as well as the implementation of IWRM in Mali through inter-governmental and non-governmental cooperation. The article does not *evaluate* nor *judge* these processes — it limits itself to description. In the third section I thoroughly introduce ANT and I discuss the suitability of the ANT vocabulary to describe the ups and sufferings of the IWRM paradigm. In the fourth section I reflect on the meaning of ‘success’ and ‘failure’ of a paradigm.

2 Tracing the IWRM network

2.1 Before the IWRM paradigm emerged

The history of IWRM dates back to at least the early 1900s (Viessman and Welty, 1985; Muckleston, 1990), when for the first time in modern history administrative units were established for the *integrated* management of natural resources in an area defined by a water body. Watershed Conservancy Districts were created for the Ohio river in 1913 as well as for the Muskingum and Miami rivers; the pioneering Tennessee Valley Authority was founded in 1933 (Mitchell, 1990).

The United Nations Water Conference of 1977 in Mar del Plata, Argentina, is generally considered as the first attempt to tackle water problems *globally* (Conca, 2006). “For the first time the range and complexity of the problems of water development confronting mankind were being taken up in their totality by a world forum in a systematic and comprehensive manner” (UN, 1977, p.555). In reality, the conference was narrowly focused on water supply and sanitation, and the sovereignty of nations over water resources in their territory was not under discussion. In the wake of the conference, the UN declared the 1980s as the International Drinking Water Supply and Sanitation Decade (IDWSSD).

Throughout the 1980s, water continued to be neglected as a cross-sectoral finite resource. The landmark Brundtland report *Our Common future* limited its discussion of ‘water management’ to ‘irrigation’, touching solely upon the problems of water pollution, salinization, and rapidly lowering water tables (Brundtland, 1987, p.134).

The *Abidjan Accord* of 1990, agreed in the framework of an assessment of the progress in water supply in Africa after one decade of dedicated efforts, argued that the increasing demand for finite water resources needed to be addressed through “an integrated approach to water resources management”. According to this *Accord*, an integrated approach supposed “a detailed consideration of supply, demand, conservation and protection” (World Bank, 1991).

The *New Delhi Statement* of the same year, which was issued at the conclu-

sion of the IDWSSD, was more forward-looking in stressing the need for stronger local institutions and community management, and in recognizing that water resources *and* liquid and solid wastes needed an *integrated* management (UN, 1990).

The Brundtland report, the Abidjan Accord, and the New Delhi Statement all advocated the most basic form of ‘integrated’ water management (Mitchell, 1990): they did pay attention to both surface water *and* groundwater, as well as water quantity *and* quality—but did not yet link water to land (erosion, floods) and the environment. The latter would be, according to Mitchell, the second interpretation of ‘integrated’ water management. The third and broadest interpretation of ‘integrated water management’ considers water as a *finite resource* that is central to *social and economic development in the broadest sense*, and hence needs to be managed in a cross-sectoral manner. ‘IWRM’ advocates the latter.

The International Water Resources Association (IWRA), a membership organization of water professionals founded in 1972, was very influential in shaping and promoting the IWRM paradigm (Conca, 2006), given that the organization, unlike other professional associations, positioned itself from the start as interdisciplinary (Falkenmark, 2011). Basically all promoters of an integrated management of water resources in the 1980s and 1990s, including Mitchell himself, were linked to IWRA.

Bringing the third and broadest interpretation of ‘integrated’ water management on the agenda of multi-lateral organizations in the early 1990s is to a large extent the merit of a cluster of key Scandinavian organizations and individuals. This is where my tracing of the IWRM network starts.

2.2 Nordic effervescence in the early 1990s

The Scandinavian countries, and Denmark in particular, had been major contributors to the IDWSSD initiative of the 1980s. Building on the first-hand experience that those projects had suffered from an approach too sectoral, and with the prospect of the forthcoming United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992, the Danish International Development Agency (Danida) took the initiative to establish a Nordic Freshwater Initiative (NFI), with the explicit objective to feed operational guidelines for *integrated* water resources planning and management into UNCED (Jønch-Clausen, 1992). The two key figures in the NFI were the Danish water professional Torkil Jønch-Clausen the Swedish academic Jan Lundqvist.¹ Jønch-Clausen, who was CEO of the Danish Water Quality Institute in 1993-1997 and secretary general of IWRA in 2004-6, was contracted by Danida to coordinate NFI. Jan Lundqvist was also a habitué of the multi-lateral scene, as consultant to the Swedish International Development Agency (SIDA), Swedish delegate to a number of UN bodies in 1987-92, regional director of IWRA in 1991-4, and vice president of IWRA in 1998-2000.

The NFI received a global platform at the first Stockholm Water Symposium in August 1991 (Jønch-Clausen, 1992). The first chair of the Symposium’s Scientific Program Committee (1991-2003) was the Swedish professor Malin Falkenmark, only woman on IWRA’s first board of directors when IWRA was

¹Interview with senior water advisor to Danida, 4 January 2012

created in 1972. The Symposium, predecessor of the present Stockholm World Water Week and a major platform for water policy makers worldwide (SIWI, 2012), took stock of everything that was going wrong in the water sector at that time and ‘problematized’ this as follows: water is a major constraint to any form of development and hence it needs to be seen as an *economic good* rather than as a freely available resource (Stockholm Water Symposium, 1992, p.5-7). The key message sent to the upcoming UNCED was that water management needed *multisectoral* strategies (Falkenmark, 1992, p.27).

Three months later an informal consultation of the NFI in Copenhagen in November 1991 further invigorated the Nordic plea for integrated, cross-sectoral management. Contrary to the critical tone of the Stockholm Water Forum, the *Copenhagen Statement* was conceived to feed *two practical guiding principles* for integrated water management into the UNCED process: (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’. The *Copenhagen Statement* still used the phrase “integrated water resources development and management” whereas the *report* was the first document to use “integrated water resources management” (NFI, 1992). Not only the term but also the two principles would prove to live a long life.

In January 1992, another three months later, 28 UN agencies and 58 external organizations met in Dublin for the International Conference on Water and Environment (ICWE) —the last preparatory meeting before UNCED in Rio de Janeiro— and agreed on the so-called ‘Dublin Principles’ (UN, 1992b):

1. Fresh water is a finite and vulnerable resource, essential to sustaining life, development, and the environment
2. Water development and management should be based on a participatory approach, involving users, planners and policy makers at all levels
3. Women play a central part in the provision, management, and safe-guarding of water
4. Water has an economic value in all its competing uses and should be recognized as an economic good

The *Dublin Principles* integrally incorporate the two principles that were proposed by the *Copenhagen Statement*. That the NFI coordinator was on the ICWE board and that the participants of the conference were government-designated experts (many linked to IWRA) rather than diplomats, had facilitated the broad support for the *Copenhagen Statement*, its translation into the Dublin principles, and the *de facto* acceptance of IWRM.

At the UNCED conference (or *Earth Summit*) later that year in Rio de Janeiro, which was a political rather than a technical conference, water did not attract the high-level regime-building negotiations that surrounded climate or biodiversity and IWRM was not high on the agenda (Conca, 2006). The ‘action plan’ that was published afterwards, *Agenda 21*, nevertheless dedicated an entire chapter to water. *Agenda 21* was the first multi-laterally endorsed political document to use the phrase “integrated water resources management”. Moreover, *Agenda 21* invited all countries to have, by the year 2000, “costed and targeted national action programmes [...] and appropriate institutional structures and legal instruments [for IWRM]” (UN, 1992a, Chapter 18).

Danida perceived this as a major success and renewed its engagement in water-related development:²

The Danish government was very happy with the Copenhagen and Dublin Statements and with the impact they had [in Rio], because that is what governments and donors care about: to have a strong footprint. So, Danida got very keen on this IWRM.

Uganda was Danida's IWRM pilot case. Thanks to a strong support from within the Ugandan water sector³ —the permanent secretary of the Ugandan Ministry of Water, B.K. Kabanda, was already involved in the NFI and was amongst the subscribers of the Copenhagen Statement (NFI, 1992)— 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*. The Danish Hydraulic Institute (DHI), a research-based not-for-profit foundation where Jønch-Clausen at that moment served as director of the Water & Environment division, obtained the contract to develop the plan. 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 (1997-99), Burkina-Faso (1998-2001) and Vietnam (2004-05).

The chief of the Water and Sanitation Division at the World Bank, however, lamented that the Dublin principles, agreed in January 1992 by the *technicist* ICWE conference, had disappeared from *Agenda 21* (Briscoe and Garn, 1994). Instead, *Agenda 21* was stuffed with “a long list of unreachable and un-fundable targets, with no fewer than 184 activities advocated in [the freshwater] chapter alone”. He proved right as not *Agenda 21* but the *Dublin Principles* became the basis for the World Bank's Water Resources Management Policy, the OECD's benchmark for the assessment of water-related development, and water-related bilateral aid of France and the Nordic countries (Briscoe and Garn, 1994). Briscoe himself would play a role in the further institutionalization of the Dublin Principles (see next section).

Since the UN lacked —and still lacks— an entity dedicated to water that could assist the developing countries in designing IWRM plans by the year 2000, the impact of *Agenda 21* in the water sector was relatively weak. This shortcoming was in part parried by two initiatives to institutionalize IWRM at intergovernmental level: the establishment of a World Water Council and a Global Water Partnership (see next section). Both initiatives were taken by individuals and organizations that had already espoused the IWRM paradigm.

2.3 Anchoring IWRM in new international organizations

Following the appeal of the Rio conference, the World Bank vice president for Environmentally and Socially Sustainable Development Ismail Serageldin, and the Policy Director at the United Nations Development Programme (UNDP) Anders Wijkman, took the initiative to create a Global Water Partnership (GWP). The ‘operational team’ to do so consisted of the earlier mentioned John Briscoe (Water and Sanitation Division at the World Bank), Roberto Lenton (Director of the Sustainable Energy and Environment Division at the

² *ibid.*

³ Interview senior advisor to GWP, 1 November 2011, and interview senior advisor to Danida, 4 January 2012.

United Nations Development Programme), Johan Holmberg (SIDA) and the earlier mentioned Torkil Jønch-Clausen (Danida, DHI).⁴ GWP was conceived as a network organization with the objective to advocate the implementation of IWRM plans and institutions around the world and share expert knowledge. Since its inception, the Dublin Principles are at the core of its mission.

The first chair of GWP was Ismail Serageldin himself. Torkil Jønch-Clausen was assigned the chair of the GWP Technical Committee (GWP-TEC). Since he continued to manage the Water & Environment division of DHI, this organization was selected as GWP-TEC secretariat. Johan Holmberg, assistant director-general at SIDA, served as first secretary-general of GWP. Since the establishment of GWP until today, the GWP Global Secretariat is hosted by SIDA in Stockholm.

Through both the general-secretary and the TEC chair, SIDA and Danida continued to influence the intellectual and political positioning of GWP to a large extent. GWP's tripod framework for IWRM implementation—that builds on an 'enabling environment', 'institutional roles', and 'management instruments' (GWP, 2000a, p.30)—was integrally developed years earlier by DHI, in the context of the Ugandan Water Action Plan, and was imported in GWP through Jønch-Clausen.⁵

Whatever Danida did concerning IWRM, they always turned to us at DHI. And we could then link it to the GWP, which is one of the reasons why Danida has always been one of the key supporters of GWP. You know, it's very incestuous [*sic*]. But this is the way the world works: through networks.

A second initiative to anchor IWRM in a multi-lateral organization was taken by IWRA, the US-rooted association of water professionals, who felt that UNCED had "failed to attach much priority or urgency to water" and that *Agenda 21* reflected "no substantive inputs from the [technicist] Dublin conference" (Grover and Biswas, 1993). Therefore 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, founded the World Water Council (WWC) in 1996. The WWC presents itself as a more elite membership organization for private companies, government agencies, and development organizations (Conca, 2006). Its principal activity has consisted of organizing the triennial, highly influential World Water Forum (WWF). The WWC, too, had Ismail Serageldin on its initial board of governors.

In their early years, the two organizations—GWP and WWF—were by many water professionals seen as competing initiatives. The Water Supply and Sanitation Collaborative Council (WSSCC), established by the UN in 1990 to continue the work of the IDWSSD decade, offered a neutral ground where collaboration between the two organizations was cultivated. This collaboration was particularly facilitated by three Canadians:⁶ Margaret Catley-Carlson, who was chair of WSSCC in 1992-1996 and chair of GWP in 2000-2008, William Cosgrove, who was chair of WWC in 2003-2005, and Aly Shady, who was water advisor of CIDA and co-founder of WWC.

⁴Interview senior advisor to GWP, 1 November 2011

⁵Interview with senior advisor to Danida, 4 January 2012

⁶Interview ex GWP employee, 29 February 2012.

The first WWF, which took place in 1997 in Marrakesh, urged the world to develop a *World Water Vision*. Such a *Vision* was subsequently developed by the ad hoc ‘World Commission for Water in the 21st Century’, chaired by Ismail Serageldin, and built on a number of *Regional Visions* that were gathered through GWP’s network of regional technical committees. At the second WWF in 2000 in The Hague, WWC released the *World Water Vision* and GWP presented a *Framework for Action* that urged the world to have “comprehensive policies and strategies for IWRM in process of implementation in 75% of countries by 2005 and in all countries by 2015” (GWP, 2000b). The WWF of 2000 firmly established GWP as a key water player at the international and regional scene (GWP, 2012).

2.4 Pressing for national IWRM plans

With the upcoming Rio+10 conference in Johannesburg in 2002 (the World Summit on Sustainable Development –WSSD), the water community started working again to get water and IWRM back on the agenda, since “in those large conferences water does not come in automatically.”⁷ Through three channels they exerted their influence: the Nordic countries brought IWRM to the attention of the European Parliament and Commission, the German government organized the Bonn Conference on Freshwater, and the GWP Regional Water Partnerships and Regional Technical Committees lobbied the governmental negotiators of the many developing countries.

Co-organized by the German ministries for Economic Co-operation and Development (BMZ) and the Environment (BMU), an international conference on freshwater in Bonn in 2001 aimed at intensifying the voice of the German government and the water community in the run-up to Johannesburg. Since GWP had shown leadership at the 2000 WWF, the then chair of GWP, Margaret Catley-Carlson, was invited as facilitator for the Bonn conference, and GWP was amply represented at its International Steering Committee.

The building up of the Bonn conference had indeed started many years earlier. Fritz Holzwarth —deputy director-general of BMU (1996-), head of the German delegation in numerous transboundary river basins, and negotiator in the EU Water Framework Directive (EU-WFD)— initiated in 1998, together with the World Bank and the German Foundation for International Development (DSE), a series of international high-level round tables on “transboundary water management” as a “catalyst for cooperation”. Already the report of the first two round tables, held in Petersberg and Berlin in 1998, stated that Germany was planning to host an international conference on freshwater in 2001/2 in the run-up to the Rio+10 summit⁸, with the aim to “examine the implementation of *Agenda 21*” (DSE, 1998).

In 2000 the European Parliament, too, picked up the IWRM concept as guiding principle for water-related development aid, in part through its own experience with the EU-WFD, but mostly through the continued influence of the Nordic countries. In November 2000, during a public hearing, the earlier mentioned professors Malin Falkenmark and Jan Lundqvist acquainted the parliamentary Committee on Development and Cooperation with the IWRM concept,

⁷ *Ibid.*

⁸ The original report stated that the conference would be held in 2002, but in the end it was held at the end of 2001.

which they had described, together with colleagues of the Swedish International Water Institute (SIWI), in a commissioned report on *Water and Development in the Developing Countries* (Björklund et al., 2000). During this particular hearing, the chair of GWP-TEC, Jønch-Clausen, presented the *World Water Vision* and *Framework for Action* to the parliamentary Committee (European Parliament, 2000). Note that at that moment, Anders Wijkman, co-founder of GWP, was vice-chairman of this parliamentary Committee on Development and Cooperation.

The outcome of the Bonn conference —known as the *Bonn Recommendations for Action* and the five *Bonn Keys* (GTZ, 2002)— was endorsed in March 2002 by a communication of the EU Commissioner for Development and Humanitarian Aid (European Commission, 2002). As a result, the Bonn conference had two direct impacts on the WSSD negotiations: an extra Millennium Development Goal on water supply and sanitation (MDG 7c) was added to the existing goals, and the WSSD action plan repeated the call that all states had to “develop integrated water resource management and water efficiency plans by 2005, with support to developing countries” (UNESA, 2002, Chapter 4).

Like Denmark had had a footprint on UNCED in Rio through the Copenhagen and Dublin meetings of 1991, Germany influenced the WSSD in Johannesburg thanks to the Bonn conference in 2001. This strategy was repeated in 2011, when Germany organized a second Bonn conference on the Water-Food-Energy Nexus, in the run-up to Rio 2012. In both occasions the driving forces were Manfred Konukiewicz, head of division in BMZ, and Fritz Holzwarth, Deputy Director General of BMU.⁹ For the second Bonn conference, GWP was again amply represented at the International Steering Committee, in the person of the current GWP-TEC chair Mohamed Ait Kadi, the former GWP chair Margaret Catley-Carlson, and Bai-Mass Taal, Executive Secretary of the African Ministers Council on Water (AMCOW)—one of GWP’s strongest African allies.¹⁰

2.5 Conscripting Mali in the network

After the WSSD in Johannesburg, the insistent call to develop national IWRM plans was finally heard by a number of organizations and donors. On the one hand, Danida supported the ‘IWRM 2005 Programme’ of the United Nations Environmental Programme (UNEP), which ran from May 2005 to December 2008 in over 60 countries and 10 sub-regions. The implementation of the program happened through the UNEP-DHI Centre for Water and Environment, which had been established in October 2001 by UNEP, Danida, and DHI, and is housed in Denmark by the latter. Thanks to this collaboration, UNEP’s Water Policy and Strategy is integrally based on IWRM. Torkil Jønch-Clausen, then head of DHI Water & Environment, was also UNEP-DHI programme coordinator and member of its three-headed Steering Committee.

On the other hand, GWP took the initiative to mount a ‘Partnership for Africa’s Water Development’ (PAWD), with the aim to develop IWRM plans in five African countries. Up till that moment, GWP had always acted as a neutral network for knowledge exchange and advocacy, not as implementer of a development project. The PAWD project, however, emerged as a bid of GWP to

⁹Interview senior Danida advisor, 4 Jan 2012.

¹⁰Observed, May 2011 - September 2010

diversify and augment the core funding sources.¹¹ The Canadian International Development Agency (CIDA) responded to the needs of GWP and agreed to sponsor the PAWD-under-construction, but it imposed, much against the will of the GWP-TEC, a project-like setup of PAWD. CIDA also hand-picked the eligible countries according to their own interests—Mali was one of them.¹² The PAWD project supported Mali from January 2004 to December 2007 in the production of a national IWRM plan ‘PAGIRE’, which was eventually adopted by the parliament in 2008.

The PAWD project started in Mali when significant reforms were already being made in the water sector. IWRM was not an entirely new concept anymore, as it had entered the country already through two doors. In March 1998 Danida and DHI organized a West African conference on IWRM in Ouagadougou. In effect, Danida had experience that a similar regional conference in Entebbe had proven effective in initiating regional cooperation in Eastern Africa. In the occasion of the Ouagadougou conference, the Malian minister of water signed, together with 11 West African colleagues, the *Ouagadougou Statement*, pledging to reform water management at both national and regional level. A regional secretariat, part of the regional economic union ECOWAS, was established to follow up on the regional IWRM plan, and Mali’s neighbor Burkina-Faso, IWRM pilot case of DHI and Danida, started developing its own national IWRM plan (1998-2001).

Moreover, in May 1998 the French Development Agency (AFD) and UNDP had organized a first concertation workshop in Mali to start developing a national *Water Code*.¹³ The *Code* was set to include references to IWRM and to water as economic resource, in agreement with the *Dublin Principles*. The Water Code was eventually adopted in 2002.

In April of 2003, one year after GWP had created a West African Regional Water Partnership (RWP), this Regional Water Partnership founded a Malian country water partnership (PNE-Mali). The chair was assigned to Amadou Maïga Housseini, who had already collaborated with GWP in the *World Water Vision* process (1997-2000), and who served at that moment as focal point of the Niger Basin Authority at the Malian Water Directorate (DNH). DNH is the operational branch of the Ministry of Water in Mali. The DNH, which has always been the central hub for donors in the water sector, nimbly pulled together different donor strings—principally from the World Bank and GWP—to create a new IWRM unit within the DNH and put Maïga Housseini at the head of this IWRM unit.

In December 2003 a memorandum of understanding was signed between GWP, DNH and PNE-Mali, identifying PNE-Mali and the DNH-IWRM unit as the two focal points for the GWP-led PAWD program, that was poised to start in January 2004 in Mali. Although there was an intense consultation of stakeholders (Patterson, 2008), the preparation and finalization of the IWRM plan was centralized within the DNH-IWRM Unit, whereas PNE-Mali’s role was limited to sensitize all stakeholders in IWRM matters.¹⁴ The fact that the

¹¹Interview ex GWP employee, 29 February 2012.

¹²*Ibid.*

¹³The creation of the *Water Code* is the step that preceded the creation of the *Water Law* and *Water Policies*.

¹⁴Interview PNE-Mali general secretary, 29 September 2010 and interview PNE-Mali chair, 17 August 2011

chair of PNE-Mali and the head of the DNH-IWRM unit were one and the same person, impeded stakeholders to distinguish both organizations, and hindered PNE-Mali to play its role as independent watchdog of the policy-process. Or as a permanent staff member of PNE-Mali formulated euphemistically: “the power of PNE-Mali consists in that it gets on so well with the [DNH] administration.”¹⁵

The PAGIRE plan that came out of the project was adopted by the Malian government in April 2008, but no single donor had committed to the *implementation* of the PAGIRE. However, the aid landscape of Mali’s water sector had started changing with the arrival of Denmark as a new donor in 2006. Active in neighboring Burkina Faso since several decades, Danida had expanded the radius of action of its technical assistants at Ouagadougou to Mali. Danida, later joined by SIDA, started supporting the embryonic attempt of DNH to develop a program for sectoral budget support to water and sanitation (PROSEA). Danida stimulated the creation of an inter-ministerial Cell for Planning and Statistics (CPS) in 2008. This cell has gradually assumed the authority over PROSEA but heavily depends, to date, on Danish technical support to manage and implement PROSEA.

The implementation of PAGIRE was integrally incorporated in the PROSEA. At a donor round-table in February 2009, organized by Maïga Housseini of DNH together with a the senior technical assistant of the Netherlands, a number of donors (Denmark, Sweden and the African Development Bank) pledged half of the budget needed to implement the PAGIRE component of PROSEA.

Although the PROSEA program has partly succeeded already in aligning the aid of the international development partners in the development sector,¹⁶ the director of DNH still laments that too many foreign consultants are coming in, all of them bringing in their own ideas.¹⁷

¹⁵Interview with a permanent staff member of PNE-Mali, 29 November 2010.

¹⁶Interview key Malian policy maker, 21 August 2011; interview senior foreign technical assistant, 24 April 2012.

¹⁷Interview with key Malian policy maker, 21 August 2011.

Year	International and regional sphere	National sphere (Mali)	WaNGO and the Inner Niger Delta	Year
1977	UN water conf., Mar del Plata			1977
1987	Brundtland report released		<i>May</i> IND partially designated Ramsar	1987
1990	Abidjan Accord			1990
	New Delhi Statement			
1991	1st Stockholm Water Symposium	<i>Mar</i> Overthrow Traoré regime		1991
	Copenhagen Statement			
1992	ICWE conf., Dublin			1992
	Earth Summit, Rio de Janeiro			
	Call to create IWRM plans			
1993		<i>Jan</i> Decentralization law voted		1993
1995	Creation GWP			1995
1996	Creation WWC			1996
1997	1st WWF, Marrakech			1997
1998	West African IWRM conf., Ouagadougou	<i>May</i> 1st workshop on new Water Code		1998
1999	Creation West Africa Technical Advisory Committee to GWP			1999
2000	2nd WWF, The Hague			2000
	World Water Vision presented			
	EU-WFD adopted			
	Hearing of GWP in EU Parliament			
2001	Int. Conf. on Freshwater, Bonn	<i>Dec</i> World Bank water sector diagnostic	WaNGO turns to water	2001
2002	Creation West Africa RWP	<i>Jan</i> Adoption of Water Code		2002
	EC adopts IWRM as policy for water-related ACP-EU aid			
	Earth Summit, Johannesburg			
	Launch of EU Water Initiative		<i>Sep</i> WaNGO at Earth Summit	
	Call to create IWRM plans		WaNGO joins EU Water Initiative	

Year	International and regional sphere	National sphere (Mali)	WaNGO and the Inner Niger Delta	Year
2003	<i>Aug</i> Start pre-activities PAWD	<i>Apr</i> Creation PNE-Mali	<i>Mar</i> W. applies for IWRM funding	2003
	<i>Oct</i> W-Afr conf on IWRM planning			
	<i>Dec</i> GWP and CIDA sign PAWD	<i>Dec</i> MoU between GWP, PNE-Mali, DNH	<i>Dec</i> WaNGO organizes IWRM conf.	
2004	<i>Nov</i> 1st call EU Water Facility 1	<i>Jan</i> Start PAWD	<i>Feb</i> Entire IND designated Ramsar	2004
			<i>Apr</i> WaNGO starts IWRM study	
2005			IND	
2006	<i>Mar</i> 2nd call EU Water Facility 1	<i>Feb</i> Water Policy adopted	<i>Mar</i> WaNGO mainstreams IWRM	2005
				2006
		<i>Nov</i> PAWD planning workshop	<i>Jun</i> Start IWRMIND pilot phase in 4 IND municipalities	
2007		<i>Nov</i> National Development Strategy for Drinking Water Supply	<i>Oct</i> WaNGO proposes the IWRMIND project to ACP-EU Water Facility	2007
		<i>Dec</i> End of PAWD	IWRMIND starts in 14 IND municipalities	
2008		<i>Apr</i> PAGIRE adopted		2008
2009		<i>Feb</i> PNE-Mali accredited by GWP		2009
		<i>Feb</i> Donor round table to collect money for PAGIRE implementation		
2010	<i>Jun</i> 1st call of EU Water Facility 2			2010
2011	<i>Nov</i> Water-Energy-Food Nexus conf, Bonn			2011
2012	<i>Jun</i> Earth Summit, Rio de Janeiro			2012

Table 2: Key events in the emergence and implementation of IWRM

2.6 Creating an EU Water Initiative and Water Facility

As mentioned earlier, IWRM had already been discussed in the Committee on Development and Cooperation of the European Parliament, in November 2000 (European Parliament, 2000). In March 2002 the Commissioner for Development and Humanitarian Aid —at the time the Dane Poul Nielson (1999-2004)—released a communication on “Water Management in Developing Countries Policy and Priorities for EU Development Cooperation”, stating that the European Commission’s policy on water-related development would be “to build strategies based on the overarching *principles of Integrated Water Resource Management*” (European Commission, 2002).

At the WSSD in Johannesburg, the European Commission presented the new EU Water Initiative (EU-WI) to the world. The EU-WI, although supported by different Directorate-Generals of the European Commission, is not a proper European Commission institution, but rather an open platform for coordination between the public, private and civil society actors in water matters. Its creation was in part promoted by European non-governmental organizations such as the British WaterAid and French PSEau, research institutes such as the British WECD and Swiss SKAT, and governmental donors active in the water sector such as Denmark, France and the United Kingdom. These actors had already been meeting on a regular basis before the WSSD conference in Johannesburg.¹⁸ The initiative enjoyed the support of the European Commission and was formalized at WSSD (Partzsch, 2009).

Obviously, also the EU-WI adhered to the IWRM principles: it declared that it would “promote better water governance arrangements and good practice centered on the *principles of integrated water resources management*” (European Commission, 2003). The Finance Working Group of EU-WI, in agreement with the World Panel on Financing Water Infrastructure (WWC, 2003), promoted the creation of a European Water Facility (EU-WF), in order to increase aid in the water and sanitation sector.¹⁹ In January 2004 the DG Development communicated the creation of such an EU-WF, with two goals: (i) work towards the MDG on access to water and sanitation, (ii) *implement IWRM worldwide*. The EU-WF is conceived as a “fully demand driven” body in which the African, Caribbean and Pacific (ACP) countries, along with other civil society actors from Europe and from the Global South, can define the policy (European Commission, 2004b).

The EU-WF allocates the largest part of its budget through periodic calls-for-proposals. Under the first and second call, of 2004 and 2006, three types of actions were eligible: (i) improvement of water management and governance, including “the development and *implementation of integrated water resources management*,” (ii) co-financing of water and sanitation infrastructure, and (iii) co-financing of civil society initiatives that, where applicable, “*lobby governments to address [...] IWRM*” (European Commission, 2004a). At the call of 2006 the European non-governmental organization WaNGO²⁰ obtained a grant to implement IWRM at municipal level in the Inner Niger Delta (IND) in Mali.

¹⁸Interview ex executive director of WaNGO, 17 Apr 2012.

¹⁹The Water Facility is a funding channel of EuropeAid, exclusively dedicated to finance activities that address the MDGs in water and sanitation.

²⁰WaNGO is a pseudonym.

2.7 Conscripting non-governmental aides

WaNGO—an international, non-governmental development organization (NGO)—is founding member of the EU Water Initiative in 2002 in Johannesburg and a major non-governmental proponent of IWRM in Mali since 2004. Originally created in the late 1970s to deliver non-governmental technical assistance in a wide range of sectors in Haiti, WaNGO now works in 9 countries in Africa and Latin America. In the landscape of myriad development organizations that compete for donor funding,²¹ WaNGO carved out its own specific niche in two steps: as of 2001 it concentrates its work in the water sector, and in 2005 it adopted IWRM as mainstreaming principle for all projects.

As nearly 82% of the WaNGO budget derives from governmental sources (45% project funding and 37% structural funding), WaNGO attaches great importance to its status of professional and highly specialized NGO.²² The adoption of IWRM as guiding principle has endowed the organization, according to the employees, with an additional “comparative advantage with respect to other NGOs, definitely at the national but to some extent also at the European level.”²³ Very few western or grassroots NGOs are conversant with IWRM:²⁴

Other NGOs don’t care about IWRM. The ones involved in irrigation tend to work *vertically*, focusing on the agricultural production chain,²⁵ while we work *horizontally*, putting irrigation next to the other uses of water.

The idea to frame all actions of WaNGO within an IWRM framework emerged at the headquarters, not through discussion with the partners in the field.²⁶ This is common practice in the organization; strategic innovations usually sprout from the headquarters. The serendipity of the former executive director, was key in this aspect. The employees resolutely disaffirm that IWRM sneaked into the organization under pressure of the donors. Conversely, they avow that it is loosely based on the practices of integrated water management and river basin management in the home country, and in the European Union in general. In 2003 the WaNGO headquarters organized an IWRM conference in the home country, inviting national water management experts and academics to think up an IWRM strategy for WaNGO. Two years later, in 2005, the organization adopted an IWRM strategy that was based on “a mix of external input, own interpretation, and some experience from the field.”²⁷ The strategy paper credits the WSSD conference and states that “for WaNGO, IWRM is the strategic reference framework in which all different actions are inscribed [but] it is not an objective on its own.”²⁸

²¹Personal communication of WaNGO employee, June 2010.

²²Personal communication of several WaNGO employees, February – July 2010.

²³Quoted from an interview with the IWRM focal point of WaNGO, 30 June 2010, and confirmed by the ex director, 17 April 2012.

²⁴Interview with the head of Southern Operations Department, 29 June 2010.

²⁵NGOs working in the agricultural sector tend to focus on the sustainability of the entire production chain, from seed and fertilizer supply, over irrigation and yield improvement, to the sales on the market.

²⁶Interview with the head of Southern Operations Department, 29 June 2010, interview with the IWRM focal point, 30 June 2010, interview with ex-director, 17 April 2012.

²⁷Interview with the head of Southern Operations Department, 29 June 2010

²⁸*Ibid.*

2.8 Conscripting the municipalities in Mali

The Inner Niger Delta (IND) is a landlocked wetland area in the Malian Sahel, where the Niger river annually floods up to 35 000 km². Over one million people make a living in this fertile area, from agriculture, fishing and animal husbandry. Because of its extremely high natural value the IND is protected as Ramsar site. However, hydro-power dams on the Niger river, as well as changing rainfall, are affecting the eco-system and the livelihoods of the people (Zwarts, 2010).

WaNGO had been working in the IND at village level since 1997, in collaboration with two local NGOs, to provide rural drinking water infrastructure and improve the small scale rice irrigation and flood control infrastructure. In 2002 it seized the opportunity of a new donor call to define a clear IWRM project in the IND. WaNGO chose the IND for the implementation of a pilot IWRM project because “it is an environment that naturally fits IWRM.” “WaNGO deployed IWRM in the IND because *there* the visibility would be higher.”²⁹ The Niger river and the wetland character of the IND were helpful to increase the visibility of the project, both towards the donors *and* the beneficiaries:³⁰

People easily understand IWRM when the water is supplied by a gravitational systems or when they have to share a river. This is different from [our work in] Benin, where groundwater is the principal source of water.

In 2004, in the same year that GWP’s PAWD took off, WaNGO launched the IWRM pilot project in the IND, covering 4 municipalities in the *cercle* of Mopti. Given that the project acronym IWRMIND³¹ contains the four letters ‘IWRM’, WaNGO *de facto* started profiling itself as an IWRM organization in Mali, in the IND, and *vis-à-vis* the donors. However, rather than implementing a holistic management of water in the IND, the initial aim of the IWRMIND project was to “combine into one project all the *existing* activities [of WaNGO] concerning drinking water supply, sanitation, and irrigation.”³² Interviewed WaNGO employees sustain that the IWRM discourse has changed their way of working, by streamlining actions that used to be fragmented, but that it did not add new elements. Indeed, in 2011 the project entered its fourth phase, involving 18 municipalities in the IND, and the vast majority of the budget is still absorbed by infrastructure works for water supply, sanitation, and irrigation, rather than by IWRM activities.

As of the third phase of IWRMIND, which was funded by the EU-WF, the national branch of GWP, PNE-Mali, was drawn in the project to build the capacities of the council members and local NGOs in terms of IWRM. In the national context, the role of PNE-Mali is mostly limited to sensitizing different audiences (council members, women, journalists) about IWRM.³³ This is no different in the IWRMIND project. PNE-Mali has been criticized for delivering theoretical trainings about IWRM whose level is much too high and whose practical use too low.³⁴

²⁹Interview with the manager of the first IWRMIND project, 4 November 2011.

³⁰Interview with the manager of the first IWRMIND project, 30 June 2010.

³¹IWRMIND is a pseudonym.

³²Interview with the manager of the first IWRMIND project, 4 November 2011.

³³Interview general secretary of PNE-Mali on 29 September 2010.

³⁴Mid-term evaluation by the European Commission, January 2010.

2.9 The council members and villagers

In order to check whether the IWRM paradigm had found its way to the municipal council members and to the beneficiaries in the villages, six municipalities of the IWRMIND project were subjected to a more profound analysis.

The decentralization process, started in Mali in the early 1990s, transferred to the municipalities the responsibility to develop a municipal Plan for Social, Economic and Cultural Development (PDSEC). This is a substantial document that analyzes the needs of the municipality, sets the objectives, and makes a budget estimation. Since virtually no municipal councils in the IND (except that of Mopti) have the capacities and resources to develop a PDSEC, these plans are usually developed by an external (national) consultant and financed by external (non-governmental) organizations. Of the six municipalities under scrutiny, four had the latest version of their PDSEC financed by WaNGO and each of these four included IWRM as a key to socio-economic development (see Table 3). The two remaining PDSECs, financed by other organizations, make no mention of IWRM, despite WaNGO being active in those municipalities.

Municipality	PDSEC sponsor	PDSEC author	IWRM included
Ouroubé-Doudé	IFAD, WaNGO	Malian consultant A	no
Konna	WaNGO	Malian consultant B	yes
Socoura	WaNGO	Malian consultant B	yes
Soyé	WaNGO	Malian consultant B	yes
Togué-Mourrari	no recent PDSEC	no recent PDSEC	no
Kéwa	WaNGO	Malian consultant B	yes

Source: PDSECs of the six municipalities

Table 3: Characteristics of the PDSEC plans of the six municipalities

However, PDSECs are said to “never reflect the reality on the ground,” as they tend to be “ignored by most intervening development partners.”³⁵ Therefore, 12 focus group discussions in the 6 municipalities were organized; 6 with villager and 6 with the council members.³⁶ Each of the groups was asked (i) in which ways the high variability of rainfall and water level throughout the year determined their livelihood and domestic economy, (ii) to what extent they were able to take control of this variability, (iii) what was needed to do that, (iv) whether the different uses of water (agriculture, animal husbandry, fishery, domestic water use) generated tensions between families or groups, and (vi) how that could be mitigated.

The recurrent answers of the villagers was that they needed more and better infrastructure, such as drinking water points, channels and dams, fishing ponds, irrigated areas, etc. In none of the discussions the villagers alluded to the idea of managing water in an integrated, comprehensive or participative. This can be explained, on the one hand, by the fact that the abstract concepts typical of development aid, such as IWRM, never penetrate into the indigenous languages. (The languages used in the discussions with the villagers were Bambara, Fula, and Bozo.) This has been ascertained by various scholars (Olivier de Sardan, 2005, p.178-84). On the other hand, IWRM is not of the issue to the villagers,

³⁵Focus group discussion with mayors and NGOs representatives, 24 September 2010

³⁶Held in September 2010 and October-November 2011.

as the repartition of land and water amongst different users is regulated by the customary and still widely applied laws of the *Diina* (Benjaminsen and Ba, 2008).

Surprisingly, neither during the discussions with the council members (held in French) the idea of integrated, comprehensive or participative management of water resources emerged—let alone the concept of IWRM. Some concepts typical of the realm of development aid, however, *did* penetrate into the discourses of the council members; ‘climate change’ and ‘capacity development’ in particular.³⁷ Again, the enduring rule of the *Diina* could explain that council members do not spontaneously think of IWRM. Notwithstanding, the municipality as administrative structure overrules the customary management of natural resources and its boundaries do not coincide with those of the *Diina* units. Only when *explicitly* asked about IWRM, the discussants subscribed to the concept, but identified it with the arrival of WaNGO in the municipality, rather than with PNE-Mali and its sensitization workshops.

3 Some experimentions with ANT vocabulary

In the previous section I have described IWRM’s emergence and rise to hegemony by exclusively focusing on the actors, and by tracing the many major and minor links they knit amongst each other. I consciously employed this strategy in order to navigate between the disembodied ‘discursive’ view and the positivist ‘stagist’ view on the policy process. The strategy I employed is very affine to Actor-Network Theory (ANT).

At its most fundamental level, ANT claims that there does *not* exist a *given* dimension of reality that can be labeled as ‘social structure’ or ‘social context’. We should, in fact, not confuse the *explanans* with the *explanandum*: it is *the social itself* that needs to be explained. The social comes into being as a living assemblage of myriad connections that actors construct between each other. Connections can be of any nature —material, semiotic, economic, legal, linguistic, etc.— and they can connect very heterogeneous actors —human and non. Indeed, any entity that possesses the agency to forge, maintain, or transform a connection is considered an actor (Latour, 2005).

Actors try to establish connections and assemblages to make other actors *do things*. The relations between actors in such assemblages, however, are not causal. One actor never fully controls an action nor does he fully control other actors — an action is always ‘over-taken’ by the assemblage.

By leaving aside pre-conceived social structures, the analysis should also relinquish pre-conceived ideas about categories of actors, what their matters of concern are, or what counts as a social actor and what as a natural actor. These features only become clear through the tying process; they are defined by the actors themselves and by their connections. It cannot be the task of the observer to pre-assume these delineations.

One expressive, powerful repertoire that is often used to operationalize ANT is the one of ‘translation’ and ‘enrollment’, proposed by Callon and Law (1982) and Callon (1986). Take, for instance, a scientific experiment, a policy, or a paradigm. When actors take pains to bring these instances into existence, they first have to *problematize* the situation and define it in such a way that the

³⁷Focus group discussions, September 2010 and October-November 2011.

interest of other actors is awakened to take part in the event — this is the phase of *interessement*. Second, a process of *translation* starts: if one actor A can convince another actor B that A's knowledge is useful for B to achieve B's objectives, it is said that A *translates* his knowledge in order to *enroll* B. Interests drive the knowledge-production, but the interests are also iteratively shaped by knowledge. In this translation of knowledge and interests, the most nimble actors manage to profile themselves as *obligatory passage point*. Third, by enrolling others, actors try to build long chains of associates or *allies* in order to make the experiment, the policy, or the discourse work. As said earlier, no distinction is made between a supposed realm of policy making and a realm of implementation, nor between the social and the natural. The allies in the chain can be development planners, farmer unions, as well as statistical data, concepts, legal instruments or a water well. In fact, non-human devices and artifacts are particularly powerful in anchoring durable associations (Law, 1986; Latour, 2005). Finally, actors can also grow *dissident*, which forces the allies to renegotiate the interests. The dissidence can eventually lead to a break-down of the chain. The scientific experiment, the policy, or the discourse works or fails depending on the strength of the chain — not the other way around.

Rather than being a theory that *analyzes*, ANT is a way of *describing* the social, by tracing the translations between actors. This is possible because any translation and connection leaves physical traces (Latour, 2005, p.132). The previous section collected the traces left by the IWRM actors. My tracing was of course not an exhaustive coverage of the entire network. Drawing on the very concise body of data of the previous section, I demonstrate in what follows that Callon's vocabulary, which sprouted from science and technology studies, can equally be applied to a network of development actors.

Problematization, translation, enrollment The origins of the IWRM alliance remount to the initial phase of *problematization*. In order to make IWRM work as paradigm in water-related development activities, it needed to be put forward as solution to a problem that was insolvable without IWRM. In the sphere of multi-lateral organizations such a problem became obvious in the 1980s when the IDWSSD decade failed to attain its ambitious targets. A very select group of water professionals and organizations, described in the section 2.2, increasingly blamed the sectoral management of water and used different forums to propose 'cross-sectoral' or 'integrated' management of water as solution.

The problematization is also the act of formulating the problem in such a way that the other actors, that need to be enrolled in the assemblage, can recognize themselves in certain roles. The problematization ascribes roles to the to-be-enrolled actors: the multi-lateral organizations should promote IWRM and urge the development of IWRM plans, the national governments need to develop national IWRM plans, the experts/consultants can provide expert knowledge and transfer best practices, the donor agencies should mainstream IWRM in their water-related aid, etc.

This select group of water professionals and organizations proposed itself as *obligatory passage point* to reach the solution: they hold the knowledge to solve the problem, they know how to integrate the unintegrateable. This select group became in effect the obligatory passage point for the Rio process, for the EU

policies concerning water-related development, for the EU Water Initiative, and for the development of IWRM plans in developing countries such as Burkina Faso and Mali.

Actors get *enrolled* in the alliance because the most nimble *mediators* succeed in *translating* the different interests and showing that the IWRM network is of fundamental use to them. The malleability of the IWRM paradigm has proven to be a strength in this translation process. Through the Dublin and Bonn conferences the expert community convinced the multi-lateral agencies that the failure to improve the access to safe water and sanitation could be overcome by IWRM. The donor agencies (Danida in 1992 and GTZ in 2002) were told that, thanks to their support to IWRM, they had had an impact at the Earth Summit (in Rio and Johannesburg respectively). The DNH in Mali understood that the PAWD program posed the opportunity to create an IWMR-Unit. WaNGO realized that IWRM could give them the opportunity to propose a large unified project rather than fragmented one. The municipalities in the IND learned that IWRM was a new term to label trainings and investments in water supply, sanitation and irrigation.

ANT does recognize the differential pressures that are brought to bear on the assemblage by mediators and intermediaries, the latter simply adding predictability to the setting, the former shaping and transforming the assemblage in unexpected ways. The actors that are most nimble in bending the network, or the ones that have knitted most ties, are the most powerful mediators. Or citing one of the principal mediators of the IWRM network³⁸:

It always boils down to a few individuals—the champions [...] Like one dictator can ruin a whole country, a few champions can run a cause. And when they disappear, the cause disappears with them.

In the early years of the IWRM emergence, principal mediators were Torkil Jønych-Clausen of DHI and GWP, Ismail Serageldin of the World Bank, and the Swedish/European politician Anders Wijkman. The organizations GWP and WWC perpetuated their mediating role.

Devices as powerful mediators Actors do not need to be humans. In fact, non-human actors can be very effective and persistent mediators of power relations (Law, 1986) —usually much more effective and persistent than human-to-human ties, since the latter require continuous maintenance. Consider, for instance, the following non-human devices in the IWRM network: the *Dublin Principles*, the organizations GWP, WWC, and DHI, the PAWD project, a national IWRM plan, the Niger river, or the EU-WF calls-for-proposals.

The *Dublin Principles* were agreed in the last official preparatory meeting for the Rio *Earth Summit*. It took a number of Danida water experts a whole series of efforts in order to get four principles on the international agenda (these experts had to convince their government to change water development strategy, they had to establish a Nordic Freshwater Initiative, and had to convene an informal meeting with partners and multi-lateral agencies in Copenhagen in 1991). The NFI does not exist anymore and few people remember the *Copenhagen Statement* of 1991, but the *Dublin Principles* are still omnipresent, still quoted by many, including by GWP, and are still setting the mindset of many

³⁸Interview with senior expert to Danida, 4 January 2012

water managers worldwide. Even in 2011 the GWP-TEC chair still declared that the intellectual role of GWP-TEC is to “develop and implement the actual meaning of the *Dublin Principles*. They are the real intellectual background of TEC.”³⁹

GWP, WWC, or DHI-UNEP, too, were created by individuals, many of whom are not part of the network anymore nowadays, but the organizations themselves are still there, continuing to promote IWRM and to tie in new allies. The same applies to major projects such as PAWD: a small number of nimble mediators managed to forge a project with international outreach, but once funding was obtained the project was bound to go ahead, without the involvement of the original devisers.

Strangely enough, also the Niger river has played a role in promoting IWRM. As explained by a WaNGO employee, the Inner Niger Delta offered an environment that was particularly apt to IWRM, because the different uses of water interfere in a very visible way. People realize that they are sharing the same source. In Benin, especially in the areas where people exclusively rely on ground water as source of water, WaNGO has a hard time to promote IWRM.

A final and very powerful device worth mentioning is the call-for-proposals — the prevailing procedure used by donors to assign funding. The calls of the EU-WF, for instance, exactly define which types of development actions will be considered fundable (for the 1st EU-WF the three fundable actions were: water supply and sanitation, IWRM, capacity building), which types of actors can receive funding (either state or non-state actors, either national or international), in what time frame the actions need to be implemented, and how the partners will get paid. The organizations that apply to the call need to cram their project proposals in a prescribed Logical Framework, breaking down the project in hierarchical objectives and sequential activities. Moreover, the applicants and their partners need to be registered in the online database PADOR, which is “used by the European Commission for evaluating the operational and financial capacity criteria as well as for checking the eligibility of the organizations that participate in calls for proposals” (European Commission, 2012). This composition of (i) the call-for-proposals, (ii) the PADOR database, and (iii) the Logical Framework, effectively controls the mindset of the competing organizations and mainstreams their *modus operandi*. Deleuze and Guattari (1998) call such a powerful composition of extremely well geared socio-technical tools an ‘*agencement*’. The EU-WF *agencement* was without doubt very instrumental in promoting IWRM worldwide, as acknowledged, for instance, by the WaNGO employees.⁴⁰

Dissidence The chain of allies needs continuous maintenance, as actors can grow dissident and break the chain. Over the past few years donors have sent out some initial signals of IWRM fatigue. There are IWRM-like plans or policies in over 80% of the countries worldwide, but in most cases the step to implementation has not been made yet (UN-Water, 2011).

The era of financing *ideas* is over. We have to give a product. Donors want to see something tangible [...] We need to be aware of what

³⁹Statement by GWP-TEC chair, 17 August 2011

⁴⁰Interview with a former IWRMIND manager, 30 June 2010.

they want.⁴¹

Unless IWRM is renegotiated, donors will retract from the IWRM discourse. In ANT-terms, renegotiation means the ‘re-translation of interests’.

Also WaNGO employees have been casting doubts on the practical value of IWRM, especially on the Habermasian idea that a conciliation between different decision-levels is actually possible:⁴²

It is easy to coordinate the water users at the well—and the strategic regional or national IWRM platforms work fine, too. But there is a missing link between the two. In between the strategic platforms and the water users there is nothing.

Again, it might be a matter of translating IWRM into something that is more tangible. “As long as you work at village level—for drinking water or irrigation—you can really engage the villagers. But higher levels of IWRM coordination are unworkable [in Africa], unless real conflicts between sectors emerge.” As long as sector conflicts are not felt at their cost, actors are hard to mobilize. In other words, this is one point of the network where it appears hard to translate the interests of potential allies into IWRM terms. After all, this is how IWRM emerged: “first there were the problems, then the concept.”⁴³ Without conflict or problem, there are few interests to be translated.

Renegotiation of the paradigm Since the early 1990s, the United Nations organizations have been told that water is a “resource” that is key to any form of “social and economic development”, and that it needs “cross-sectoral management strategies” (Stockholm Water Symposium, 1992). Despite this inclusive definition from the onset, the IWRM alliance constantly needs to re-translate the paradigm—translate them in the terms and worries that prevail at that particular moment in history—in an effort to keep IWRM of interest to the existing and future allies. Three fronts of renegotiation can currently be distinguished:⁴⁴ (i) ‘Integrated Water and Land Resources Management’ for ‘green growth’, (ii) ‘food security’, and (iii) ‘climate change’.

One of the concerns of the first Stockholm Water Symposium (SWS) was the “large-scale land degradation in Third World countries.” Therefore the SWS insisted that “water and land have to be managed together locally” (Stockholm Water Symposium, 1992, p.7). Now, twenty years later, the IWRM community repeats the message that IWRM is about much more than water. Skepticism about the (lack of) concrete results of IWRM is countered by the argument that the deployment of IWRM “has been too much driven by water ministries and water people”⁴⁵ and that it, instead, should be *mainstreamed* in all national economic development planning. In order to lift IWRM out of the water box, there is a burgeoning tendency to re-brand IWRM as Integrated Water *and* Land Resources Management (IWLRM),⁴⁶ and to present water as the medium

⁴¹Personal communication of a RWP chair, 15 August 2011

⁴²Interview with the IWRM focal point of WaNGO, 30 June 2010

⁴³*ibid.*

⁴⁴Observations at the 2011 GWP Consulting Partners meeting, and observations at the 2011 Stockholm World Water Week.

⁴⁵Interview senior advisor to Danida, 4 January 2012

⁴⁶Observations at the 2011 GWP Consulting Partners meeting, observations at the 2012 World Water Forum, and also Hoff (2009) and GWP (2011).

that will break or make green growth.⁴⁷

Another concern at the SWS of 1991 was “rapid population growth” and “how to feed the new inhabitants with both water and crops.” Twenty years later this aspect of IWRM is still achingly relevant, with global food prices soaring since 2007 (FAO, 2012). However, while the 1991 SWS mostly worried about “rapid population growth”, today the focus of donors and multi-lateral organizations is on “food security”. Thus, a second way of keeping the interest of allies alive is by plugging IWRM into the food security debate. For instance, in 2011 the GWP Secretariat developed an operational strategy on food security, and GWP-TEC was working on a technical paper on IWRM and food security. The pressure to address food security was in part donor driven—one sponsoring partner hesitated to continue its long-standing funding of GWP. But also the partners in the countries played their role. The regional water partnerships develop their five year strategy in complete independence and most of them happen to have included food security. The task of the Global Secretariat is then “to draw together the treads.”⁴⁸

The IWRM community also needs to swim with the climate change stream. Although the core IWRM actors believe that “there is nothing new addressed in climate change adaptation strategies that wasn’t already addressed by IWRM,”⁴⁹ the IWRM community finds itself in the position that it *has* to “talk the climate change talk”, and that it *has* to use the forums and instruments of the United Nations Framework Convention on Climate Change (UNFCCC).⁵⁰

The GWP Global Secretariat has also found that “climate change is the funding strategy for the future.”⁵¹ Only by explicitly reorienting the activities on adaptation to climate change, GWP has been able to hitch a third phase to their landmark PAWD project and obtain funding for it. This third phase was re-branded as the ‘Water, *Climate* and Development Programme for Africa’ (WACDEP). In effect, the inception of WACDEP convinced another long-standing but wavering financial partner of GWP to continue sponsoring GWP. This financial partner now draws the money from a fund that it had earmarked for climate change adaptation. The network of actors behind WACDEP, however, has basically remained the same as the one behind PAWD, with the same regional partners in Africa and the same consultancy companies. The only difference is that the official ownership of the program is now in the hands of AMCOW.

WaNGO, too, seizes climate change as an opportunity to re-translate and strengthen its identity. Not only can WaNGO, due to its focus on water, present itself as an NGO that works in the sector of adaptation to climate change. More importantly, climate change is a leverage for WaNGO to reinforce its discourse on North-South inequalities. That the climate is changing due to consumption patterns in the North, whereas the impacts will be mostly felt in the South, reinforces WaNGO’s revendication that the Global North is *morally obliged* to channel development aid to the Global South.⁵²

⁴⁷The water-energy-food nexus in green growth was the topic of the 2011 Bonn conference.

⁴⁸Interview with GWP Executive Secretary, 8 August 2011.

⁴⁹Public statement by executive secretary of an RWP, Consulting Partners Meeting, 18 August 2011

⁵⁰Personal communication of several GWP employees, May-September 2011

⁵¹Personal communication during GWP observation, 26 July 2011.

⁵²Interview with the Climate Change focal point of WaNGO, 29 June 2010.

4 Conclusions—the meaning of success and failure

The skeptic reader might rightly wonder whether an ANT description really adds to our understanding of the development aid architecture. Perhaps, these actors, located at different points in the network, are very nimble at playing to the donor’s tunes? Doesn’t the alliance of actors simply align along the already well scoured flows of donor money?

From the ANT description, I deduct the exact opposite: the donor money follows those alliances that are performing. Taking a different tack than Foucauldian analyses, I argue that a paradigm such as IWRM derives its success from the loads of work that is being done ‘behind the stage’ by various actors in order to tie in allies in the assemblage, and to *make* the paradigm work. In other words, the paradigm performs because a network of actors makes it perform. “Only voices speaking in unison will be heard” (Callon, 1986). An alliance that performs, is also an alliance that attracts donor money. My tracing of IWRM shows that much effort had to be put in the IWRM assemblage before it attracted money: the money is an indicator that the chain performs—not the other way around.

And this is exactly happening in the case of GWP’s new WACDEP program. Conceived by an ex-PAWD project manager, building upon a strong alliance with African partner AMCOW, and using IWRM to address adaptation to climate change, the new WACDEP program was hailed with interest by bilateral donors when it was presented at the World Water Week. “Donors prefer to sponsor projects that appear to be working well *already*,” one WACDEP manager stated, “they don’t want to run much risk.”⁵³

So, I claim that the IWRM network *works*. It is, however, hard to tell whether the IWRM paradigm works *in positivist terms*. Is water management in Mali better now? Has the livelihood of people in the IND improved thanks to IWRM? Is water quality better? It is very hard to collect unequivocal data about that, and even if there were data available, it would be impossible to attribute it to IWRM alone. But, to the donors, or to the water actors in the IND, IWRM appears as a successful paradigm—yes, in need of constant improvement, but successful. And this is what ANT teaches us about development policies: “development success is not merely a question of measures of performance; it is also about how particular interpretations are made and sustained *socially*.” (Mosse, 2005b, p.158)

Disclaimer

Quotations from interviews or personal communications express the visions of the (anonymous) individuals and do not necessarily reflect the official position of the organization. Where official publications were quoted, they are duly cited in the bibliography.

⁵³Stockholm World Water Week, Focus on Africa, side event, 23 August 2011.

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