

## **Overcoming State-Centrism in International Water Law:**

### **‘Regional Common Concern’ as the Normative Foundation of Water Security**

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## Abstract

The peaceful management of the world's freshwater resources is one of the most challenging tasks the international community is facing. While 'water war' is a catchphrase mainly used by the media, one cannot overstate the disruptive force water disputes have on all aspects of socio-economic development and the environment. Furthermore, the accelerating global water crisis draws a dark picture in which the future may look nothing like the present. With rising demand and declining availability of key natural resources, the world might soon face a 'perfect storm' of food, energy and water shortages. A simultaneous occurrence of these crises would seriously threaten global stability, and thus endanger the very foundation of international security.

The aim of this paper is to contribute to progressive legal discourse by asking how the notion of 'regional common concern' can serve as a normative foundation of water security, in order to help overcoming the state-centrism in orthodox international water law. The refinement of international (water) law is vital; should it play a more prominent role in addressing the challenges of global water insecurity.

## A. Introduction

The international community is faced with the crucial task of peacefully managing the world's shared freshwater resources – which is getting increasingly challenging, since water is an integral part of the planet's social, economic, political and environmental wellbeing. While the potential disputes over shared water resources may not have led to outright conflict,<sup>1</sup> it nevertheless has been used as a political tool or even military target, frequently.<sup>2</sup> Realizing the pressure on the sustainable management of freshwater resources added by population growth, economic development and global environmental change, one cannot overrate the disruptive force water disputes (local or international) already have for the socio-economic

<sup>1</sup> The only known war solely fought over water, between the ancient Mesopotamian city states of Lagash and Umma, occurred some 4,500 years ago; see S. L. Postel & A. T. Wolf, 'Dehydrating Conflict', *Foreign Policy* (2001) 126, 60,60.

<sup>2</sup> P. H. Gleick, 'Water and Terrorism', 8 *Water Policy* (2006) 6, 481, 481.

development and the environment. Coming to grips with global water insecurity is an exceptionally complex challenge with multilevel and polycentric forces that all have to be taken into account. For too long, the debate has been focused on piecemeal approaches solely within the 'water box.' Here, the concept of 'water security' could provide a new pathway – one which leads the discourse beyond military aspects and the narrow interests of nation states. In order to achieve this, however, the political notion of water security needs to be underpinned by international law, which plays a key role in maintaining 'international peace and security.'<sup>3</sup>

Earlier work has introduced the novel analytical framework of water security – the '4As' of availability, access, adaptability, and ambit – as a solid concept for looking at the global water crisis from the perspective of international law. It exposes the shortcomings of the current legal regime; above all state-centrism, which has thwarted true hydrosolidarity among riparians. In order to stabilize global security, international water law has to better address the 'common' character of the vital resource. This can only be achieved by rethinking some of the most fundamental tenets of international law (such as state sovereignty); which, in turn, will strengthen its own role and relevance.

A promising way forward seems to be considering water security as a matter of 'regional common concern', drawing from the notion of 'common concern of mankind'. The looming global water crisis and the increased interdependence of states sharing the freshwater resources could provide the necessary push to justify re-examination of established paradigms – and ultimately help to overcome prevalent political reluctance. Fully apprehending the notion of 'ambit', which does justice to the fact that security can no longer be considered as a zero sum game between states, will allow for a take on water security which acknowledges that 'ultimate' (i.e. common and sustainable) security can only be achieved with a truly joint strategy for the benefit of the whole region. This paper will contribute to the forward-looking legal debate by asking how the notion of 'regional common concern' can serve as a normative foundation of water security, in order to ultimately overcome the state-centrism of international water law. It will do so by (1) briefly illustrating the '4A' analytical framework of water security; (2) highlighting the main shortcomings of the current legal regime;

<sup>3</sup> Art. 1(1) of the *Charter of the United Nations*, 24 October 1945, 1 U.N.T.S. 16 [UN Charter].

and (3) proposing a way out of the state-centered quandary by phrasing water security as a matter of 'regional common concern'.

It is our responsibility to transform this time of crisis into a time of opportunity – the opportunity to drive new thinking forward. Only if we develop the fundamental tenets of international law further, can it live up to the challenges of global water insecurity, and ensure the peaceful management of our shared freshwater resources.

## B. Water in Crisis

Although our planet will never run out of freshwater,<sup>4</sup> due to its extremely uneven distribution (caused by both natural and human factors), the technical and economic constraints on tapping some of the largest volumes of freshwater, increasing pollution of the easily available stocks, and the fact that moving water around is mostly non-economical, billions of people around the world are denied access to safe drinking water and adequate sanitation.<sup>5</sup> While this scarcely poses an immediate inter-state military threat, the consequent increase in local and regional tensions over access to freshwater resources is nonetheless jeopardizing global stability and international security.<sup>6</sup> Without playing down the importance of other levels of water security (national, local, and even individual), the focus of this paper is on the international dimension. Not only do transboundary watercourses constitute a hugely important source of freshwater;<sup>7</sup> they are

<sup>4</sup> Globally, the total volume of freshwater resources has always been, and will always be, around 35 million km<sup>3</sup> (of which 90 per cent are locked up in polar ice caps and groundwater reservoirs which are presently inaccessible) – which equals 2.5% of the 1.4 billion km<sup>3</sup> of water on Earth; see I. A. Shiklomanov, 'World Fresh Water Resources', in P. H. Gleick (ed.), *Water in Crisis: Guide to the World's Fresh Water Resources* (1993), 13.

<sup>5</sup> United Nations Department of Economic and Social Affairs, 'The Millennium Development Goals Report 2010' (2010) available at <http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20low%20res%2020100615%20-.pdf> (last visited 28 April 2011), 59.

<sup>6</sup> B.-O. Magsig, 'Introducing an Analytical Framework for Water Security: A Platform for the Refinement of International Water Law', 20 *Journal of Water Law* (2009) 2/3, 61, 61.

<sup>7</sup> The 270 basins shared by two or more countries cover around fifty per cent of the global landmass, contribute almost sixty per cent of freshwater flow, and make forty per cent of the world's population dependent on these transboundary water resources; S. E. Draper & J. E. Kundell, 'Impact of Climate Change on Transboundary Water Sharing', 133 *Journal of Water Resources Planning and Management* (2007) 5, 405,

also heavily influenced by the complex power games of geopolitics, making international water security even more multi-faceted than water management in general. Here, the gap between the surging increase in demand for freshwater with sufficient quality and its declining supply, the uneven distribution of resources, and unilateral development of (often big in scale and in social/environmental impact) water projects frequently constitute disruptive factors in co-riparian relations.<sup>8</sup>

Chronic water scarcity, as well as water-related disasters like droughts and floods, are affecting communities in both developed and developing countries. While sometimes the impacts are quite vivid – e.g. the recent flood in Pakistan which caused the death of at least 1.500 people, left more than ten million Pakistanis homeless and had a detrimental impact on the country's food-security;<sup>9</sup> or the armed battles for water between tribes in Kenya<sup>10</sup> – often, the linkages are rather hidden. As the world becomes more and more interdependent, the world water crisis gets more and more complex, as well. A recent report by the Royal Academy of Engineering, for instance, found that the UK is heavily relying on 'virtual water' (imported in form of goods) from drought-prone countries.<sup>11</sup> Hence, its main recommendation was to put water at the centre of the UK's international development policy – not only to avoid surging water insecurity abroad, but also at home.<sup>12</sup> Recognizing that through 'virtual water' the market is a powerful driver of water policies even in distant countries, another report looking at the impacts of the UK's water footprint through a case study of Peruvian asparagus is calling the investors and retailers to change existing

405; W. T. Jarvis, 'Water Wars, War of the Well, and Guerilla Well-Fare', 48 *Ground Water* (2010) 3, 346, 347.

<sup>8</sup> United Nations Environment Programme, 'Atlas of International Freshwater Agreements' (2002) available at <http://www.transboundarywaters.orst.edu/publications/atlas/> (last visited 14 April 2011), 2.

<sup>9</sup> Alert Net, 'Interview – Pakistan flood rebuilding to take at least 3-5 years' (24 March 2011) available at <http://www.trust.org/alertnet/news/interview-pakistan-flood-rebuilding-to-take-at-least-3-5-years> (last visited 28 April 2011).

<sup>10</sup> N. Colundalur, 'Tribes in Kenya Wage Water War' (6 September 2010) available at [http://www.inthesetimes.com/article/6335/tribes\\_in\\_kenya\\_wage\\_water\\_war](http://www.inthesetimes.com/article/6335/tribes_in_kenya_wage_water_war) (last visited 28 April 2011).

<sup>11</sup> The Royal Academy of Engineering, 'Global Water Security: An Engineering Perspective' (2010) available at [http://www.raeng.org.uk/news/publications/list/reports/Global\\_Water\\_Security\\_report.pdf](http://www.raeng.org.uk/news/publications/list/reports/Global_Water_Security_report.pdf) (last visited 28 April 2011), 6.

<sup>12</sup> *Id.*

market standards which apparently fail to sufficiently consider the sustainability of water resource use.<sup>13</sup>

According to the United Nations World Water Assessment Programme, chances are high that two-thirds of the world's population will suffer from a lack of freshwater within a couple of decades.<sup>14</sup> The projected water scarcity will certainly have a negative impact on the annual crop yield – in spite of a 70-90 per cent increase in global food demand.<sup>15</sup> One of the future flash points will be Asia, where, in some regions, demands won't even be met by half.<sup>16</sup> Furthermore, the added variability and uncertainty caused by climate change exacerbates the risk of conflicts over shared water resources even more.<sup>17</sup> Considering that global demand for safe water already exceeds supply, the evermore widening 'water gap' is drawing a dark picture of the future.

By sheer dimension of this challenge, governments and businesses are acting in exceptional ways. International 'land grabs', for instance, are thought to alleviate the global water crisis by foreign states or co-operations acquiring (or leasing) fertile tracts of land in other countries to meet their

<sup>13</sup> N. Hepworth *et al.*, *Drop by Drop: Understanding the Impacts of the UK's Water Footprint through a Case Study of Peruvian Asparagus* (2010), 6.

<sup>14</sup> United Nations World Water Assessment Programme, 'The United Nations World Water Development Report 3: Water in a Changing World' (2009) available at [http://www.unesco.org/water/wwap/wwdr/wwdr3/pdf/WWDR3\\_Water\\_in\\_a\\_Changing\\_World.pdf](http://www.unesco.org/water/wwap/wwdr/wwdr3/pdf/WWDR3_Water_in_a_Changing_World.pdf) (last visited 14 April 2011), 36.

<sup>15</sup> World Economic Forum Water Initiative, 'Managing Our Future Water Needs for Agriculture, Industry, Human Health and the Environment: The Bubble Is Close to Bursting: A Forecast of the Main Economic and Geopolitical Water Issues Likely to Arise in the World During the Next Two Decades' (2009), available at <http://www.waterlink-international.com/download/WaterInitiativeFutureWaterNeeds.pdf> (last visited 28 April 2011), 4.

<sup>16</sup> 2030 Water Resources Group, 'Charting Our Water Future - Economic Frameworks to Inform Decision-Making' (2009) available at [http://www.mckinsey.com/client-service/Water/Charting\\_our\\_water\\_future.aspx](http://www.mckinsey.com/client-service/Water/Charting_our_water_future.aspx) (last visited 28 April 2011).

<sup>17</sup> S. E. Draper & J. E. Kundell, 'Impact of Climate Change on Transboundary Water Sharing', 133 *Journal of Water Resources Planning and Management* (2007) 5, 405, 409; Intergovernmental Panel on Climate Change, 'Climate Change 2007: Impacts, Adaptation and Vulnerability – Contribution of Working Group II to the Fourth Assessment Report of the IPCC' (2007) available at [http://www.ipcc.ch/publications\\_and\\_data/publications\\_and\\_data\\_reports.shtml](http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml) (last visited 28 April 2011).

own agricultural needs.<sup>18</sup> While these practices are not necessarily bad, and have been actively promoted by the World Bank and the Food and Agriculture Organization of the United Nations (FAO) as possible ‘win-win’ deals where poor countries not only receive money, but also infrastructure and know-how in exchange for their land,<sup>19</sup> they nonetheless gives rise to new concerns. Financially weak governments are often all too eager to offer up what they consider ‘useless’ land, but which might serve as the livelihood for indigenous populations. Further, these agribusiness deals can bring about ecosystem destruction, loss of biodiversity, exploitation of workers, market distortion and food insecurity in the host country. As the overthrow of the government in Madagascar has demonstrated, these challenges have to be carefully considered before entering into such long-term agreements.<sup>20</sup> Even the World Bank has now taken a more cautious view of the topic in its recent report; warning that investors are targeting countries with weak laws, buying arable land on the cheap and failing to deliver on promises.<sup>21</sup>

All this demonstrates that due to the increasing mismatch between supply and demand, competition over the (re)allocation of freshwater resources is not only getting rougher, but is also involving more and more actors with novel strategies on various levels of water management and policy. Businesses (like Coca-Cola, Lloyd’s, McKinsey, Nestlé) are playing an increasingly important role and engage more and more in the debate about water management;<sup>22</sup> either because they are directly affected by the water crisis, or because they are expecting benefit from new business opportunities, like the emerging speculative hedge funds buying water rights

<sup>18</sup> See M. Görgen *et al.*, ‘Foreign Direct Investment (FDI) in Land in Developing Countries’ (2009) available at <http://www.responsibleagroinvestment.org/rai/sites/responsibleagroinvestment.org/files/gtz-foreign-direct-investment.pdf> (last visited 14 April 2011), 6; M. Kugelman & S. L. Levenstein (eds), ‘Land Grab? The Race for the World’s Farmland’ (2009), available at [http://www.wilsoncenter.org/topics/pubs/ASIA\\_090629\\_Land%20Grab\\_rpt.pdf](http://www.wilsoncenter.org/topics/pubs/ASIA_090629_Land%20Grab_rpt.pdf) (last visited 14 April 2011), 2.

<sup>19</sup> L. Cotula *et al.*, ‘Land Grab or Development Opportunity? Agricultural Investment and International Land Deals in Africa’ (2009) available at [http://www.ifad.org/pub/land/land\\_grab.pdf](http://www.ifad.org/pub/land/land_grab.pdf) (last visited 28 April 2011), 11.

<sup>20</sup> *Id.*, 37.

<sup>21</sup> K. Deininger *et al.*, ‘Rising Global Interest in Farmland : Can It Yield Sustainable and Equitable Benefits?’ (2010) available at [http://siteresources.worldbank.org/INTARD/Resources/ESW\\_Sept7\\_final\\_final.pdf](http://siteresources.worldbank.org/INTARD/Resources/ESW_Sept7_final_final.pdf) (last visited 14 April 2011), 4.

<sup>22</sup> See 2030 Water Resources Group, *supra* 16, 24; G. Pegram, ‘Global Water Scarcity: Risks and Challenges for Business’ (2010) available at <http://www.lloyds.com/~media/4f955e64b88c43a9be1f4b4aa8010e49.ashx> (last visited 28 April 2011), 13.

to glaciers,<sup>23</sup> or shipping companies planning to export bulk water from Alaska to drought prone India.<sup>24</sup>

While the water gap, naturally, will be closed, the most crucial question is: How to share the diminishing pie of freshwater resources in the most equitable way, to avoid unnecessary suffering of the poor. Given the dimension of global water insecurity and its intertwining with other crises, it is obvious that any solution to the water crisis has to look beyond the national level. Following the established state-centered approach is simply inappropriate; since the degree of interdependence between the various actors at the different levels renders even the respective international river basins an all too small zone for sustainable water management. Further, it becomes obvious that some of the causes for the water crisis – like rapid economic development, population growth, and global environmental change – do not lend themselves to quick fix solutions. Instead, a multi-faceted approach is needed to sufficiently comprehend and tackle the looming water insecurity.

### C. Water Security

The fact that the global water crisis is already reshaping foreign policy – and will do so even more extensively in the future – put ‘water security’ high on the political agenda. One example is Kashmir, where the border between India and Pakistan, both nuclear-armed, has been continually contested – a situation which has led to a perpetual state of instability in the region. Fears by Pakistan that its powerful neighbor could use water control as a weapon have been exploited by extremists to keep up the pressure on Kashmir by claiming India is stealing water.<sup>25</sup>

<sup>23</sup> Global Risk Network of the World Economic Forum, ‘Global Risks 2009: A Global Risk Network Report’ (2009) available at <https://members.weforum.org/pdf/globalrisk/globalrisks09/> (last visited 28 April 2011), 17.

<sup>24</sup> L. Song, ‘US company plans to ship fresh water from Alaska to India’ (6 September 2010) available at <http://www.guardian.co.uk/environment/2010/sep/06/ship-fresh-water-alaska-india> (last visited 28 April 2011).

<sup>25</sup> N. Amies, ‘Water security the new front in Kashmir struggle between India, Pakistan (2 September 2010) available at [http://www.dw-world.de/popups/popup\\_printcontent/0,,5935413,00.html](http://www.dw-world.de/popups/popup_printcontent/0,,5935413,00.html) (last visited 28 April 2011); World Economic Forum Report, ‘Global Risks 2009 – A Global Risk Network Report’ (January 2009) available at [https://members.weforum.org/pdf/globalrisk/globalrisks09/global\\_risks\\_2009.pdf](https://members.weforum.org/pdf/globalrisk/globalrisks09/global_risks_2009.pdf) (last visited 28 April 2011).

But the whole region of the Himalayas has to be considered as a potential hot-spot of water insecurity. The glaciers of the Tibetan Plateau, also known as the ‘Third Pole’, feed the headwaters of the mighty rivers Yangtze, Yellow, Mekong, Salween, Brahmaputra, Indus, among others. More than 1.5 billion people downstream directly depend upon these waters – not to mention the implication for ‘virtual water’ trade. Since the outlook for this region is especially worrisome,<sup>26</sup> it seems reasonable to expect that governments will try to secure as much water resources as possible, which may force them to look beyond their borders – leading to even more geopolitical tensions. How China, for example, manages and dams its waters, will not only have a major impact on the water quality and quantity downstream, but also on the political stability of whole nations; since the societies heavily depend on the seasonal river flows for their energy production, water and food security.<sup>27</sup> This makes the question about the future status of Tibet even more sensitive, as its plateau stores abundant wealth of freshwater – the vital resource which will only become more valuable.

## I. Water Wars vs. Water for Peace

Despite the fact that the only ‘water war’ has occurred more 4,500 years ago,<sup>28</sup> the aforementioned security implications of the global water crisis suggest that the past may not be an adequate basis from which to make predictions about the potential for future water conflicts. While this may play into the reasoning of ‘Neo-Malthusians’ which believe that violent conflicts can erupt due to overexploitation of a specific resource,<sup>29</sup> often driven by population growth, rapid economic development and inequitable distribution of resources, ‘Cornucopians’ draw a much more optimistic picture of the future. They stress the argument that rather than being a crisis

<sup>26</sup> 2030 Water Resources Group, *supra* 16, 9.

<sup>27</sup> P. Bosshard, ‘China Dams the World’, 26 *World Policy Journal* (2009) 4, 43, 48; P. H. Gleick, ‘China and Water’, in P. H. Gleick *et al.* (eds), *The World's Water 2008-2009* (2009), 79, 97; J. Shaofeng *et al.*, ‘Will China's Water Shortage Shake the World's Food Security?’, 35 *Water International* (2010) 1, 6, 7.

<sup>28</sup> 2,500 BC, the two Sumerian states of Lagash and Umma signed an agreement that resolved a violent dispute; see S. L. Postel & A. T. Wolf, ‘Dehydrating Conflict’, *Foreign Policy* (2001) 126, 60, 60.

<sup>29</sup> T. F. Homer-Dixon, ‘Environmental Scarcities and Violent Conflict: Evidence from Cases’, 19 *International Security* (1994) 1, 5, 39.

of absolute resource scarcity, the water challenge is one of management.<sup>30</sup> This is why, in their view, it can and will be resolved through international trade ('virtual water'), economic development, and investment in infrastructure.<sup>31</sup>

While the academic debate has long been a rather bipolar one, several studies have moved away from this rather simplistic approach into new fields of study. Some suggest there is a clear link between relative water scarcity and different intensities of conflict – as well as cooperation;<sup>32</sup> others argue that conflicts over scarce resources only cross the threshold of violence in cases where certain socio-political factors allow for it.<sup>33</sup> Rohloff adds another spin to the discourse by criticising the branch of empirical conflict research for starting off from the flawed assumption that complex social relations (e.g. violent conflicts) can be classified and analysed by reducing them to their characteristic variables; while at the same time arguing that they are able to identify common and comparable traits irrespective of the singularity of each conflict situation.<sup>34</sup> A forth group of scholars tries to avoid the danger of generalization, and rather focuses on the concept of 'hydro-hegemony' in order to explain how the most powerful actor in a basin can impose its own policies on the weaker states, due to their respective power asymmetries.<sup>35</sup>

<sup>30</sup> N. P. Gleditsch, 'Armed Conflict and the Environment: A Critique of the Literature', 35 *Journal of Peace Research* (1998) 3, 381, 383.

<sup>31</sup> T. Allan, *The Middle East Water Question: Hydropolitics and the Global Economy* (2002), 4; T. Allan, 'Global Trade: Balancing Existing and Future Regional Water Resource Deficits', in H. G. Brauch *et al.* (eds), *Facing Global Environmental Change - Environmental, Human, Energy, Food, Health and Water Security Concepts* (2009), 575, 587; W. Barnaby, 'Do Nations Go to War over Water?', 458 *Nature* (2009) 7236, 282, 283.

<sup>32</sup> H. P. W. Tose *et al.*, 'Shared Rivers and Interstate Conflict', 19 *Political Geography* (2000) 8, 971, 993.

<sup>33</sup> G. Baechler, 'Environmental Degradation in the South as a Cause of Armed Conflict', in A. Carius & K. M. Lietzmann (eds), *Environmental Change and Security - a European Perspective* (1999), 108.

<sup>34</sup> C. Rohloff, 'Conflict Research and Environmental Conflicts: Methodological Problems', in A. Carius & K. M. Lietzmann (eds), *Environmental Change and Security - a European Perspective* (1999), 147.

<sup>35</sup> M. Zeitoun & J. A. Allan, 'Applying Hegemony and Power Theory to Transboundary Water Analysis', 10 *Water Policy* (2008) 2, 3, 6; M. Zeitoun & A. Jägerskog, 'Influencing and Challenging Power Asymmetry in Transboundary Waters' (2009), 1; M. Zeitoun & J. F. Warner, 'Hydro-Hegemony: A Framework for Analysis of Trans-Boundary Water Conflicts', 8 *Water Policy* (2006) 5, 435, 436.

In any case, even if the future conflicts over water are not likely to lead to fully fledged wars between the riparian countries, early interaction between the states will help alleviate the water crisis. A discourse solely focused on whether we will face 'water wars' in the future or not can never do justice to the complexity of the global water crisis. It has to be acknowledged that conflict and cooperation always coexist – in the form of water interaction.<sup>36</sup> Not only does this observation limit the danger of alarmism; it also recognizes that although dissent between riparian states regarding the (re)allocation of their shared waters may not always pose a military threat; it nevertheless has the potential to destabilize societies in a world which is already highly unstable. Hence, instead of focusing on the likelihood of military inter-state conflicts, more research is needed in order to be able to fight the 'long war' of sharing transboundary waters equitably.

## II. The Securitization of Water

In recognizing that the threat of 'water wars' is a political argument, mainly driven by the media, which often ignores the complexity of the issues involved in the transboundary water management, a different conceptual framework is needed to comprehend the global water crisis. Here, the notion of water security seems much more appropriate to address the crux of the challenge, since it touches the realm of various other securities – just as water is the gossamer that links all socio-economic activities with the environment.

Simply put, securitization is a strategy for managing risk perceptions of stakeholders which aims at moving a security issue to the top of the agenda in order to generate the political will needed to address it. Thus, in theory, an issue becomes a security issue when it poses an existential threat and can only be handled with extraordinary measures. While this would obviously support the political status of transboundary water issues, would it automatically achieve a more peaceful management of the shared resource; or would it rather be a "regrettable detour to a virtual blind-alley?"<sup>37</sup> There

<sup>36</sup> M. Zeitoun & N. Mirumachi, 'Transboundary Water Interaction I: Reconsidering Conflict and Cooperation', 8 *International Environmental Agreements: Politics, Law and Economics* (2008) 4, 297, 312; M. Zeitoun *et al.*, 'Transboundary Water Interaction II: The Influence of 'Soft' Power', *International Environmental Agreements: Politics, Law and Economics* (forthcoming).

<sup>37</sup> D. Z. Mekonnen, 'The Nile Basin Cooperative Framework Agreement Negotiations and the Adoption of a 'Water Security' Paradigm: Flight into Obscurity or a Logical Cul-De-Sac?', 21 *European Journal of International Law* (2010) 2, 421, 421.

are certainly risks involved in the securitization of water. First of all, it may bring up discursive absolutes that are conceived to be ‘non-negotiable’ between the parties or it could enforce ‘nationalistic feelings’<sup>38</sup> – both potentially limiting the usefulness of negotiations by promoting disparities between riparians. In addition, it could also lead to a militarization of water policy, rather than a demilitarization of security policy.<sup>39</sup>

However, these concerns can be overcome by following a contemporary path of security, rather than applying the orthodox state-centered and military-focused approach. While the literal meaning of ‘security’ is simply a state of living without care and concern,<sup>40</sup> the perception of the concept has changed dramatically. It no longer needs a violent conflict over scarce resources to affect the security and development of nations.<sup>41</sup> As Wolf noted correctly, “[m]ore people are affected each year by the water crisis than by all wars in any given year”.<sup>42</sup> This is why, today, security is being recognized as something more than just the absence of military conflict. However, this has not always been the case. Traditionally, the discipline of security studies has always focused on military threats to the integrity (sovereignty) of nation states.<sup>43</sup> This changed considerably during the 1980s, following the realization that various new threats to security – i.e. economic, social, and environmental – simply could not be addressed by looking through the military lens alone.<sup>44</sup> The subsequent inclusion of non-military threats – so called ‘widening’ process – was accompanied by efforts to also ‘deepen’ security studies. Here, the strategy was to regard the individual, rather than the state, as the main referent

<sup>38</sup> B.-O. Magsig, ‘Rising to the Challenge of Water Security: International (Water) Law in Need of Refinement’, *International Journal of Sustainable Society* (forthcoming).

<sup>39</sup> See D. Deudney, ‘The Case against Linking Environmental Degradation and National Security’, 19 *Millennium – Journal of International Studies* (1990) 3, 461.

<sup>40</sup> J. F. Warner & R. Meissner, ‘The Politics of Security in the Okavango River Basin: From Civil War to Saving Wetlands (1975-2002): A Preliminary Security Impact Assessment’, in L. Jansky *et al.* (eds), *International Water Security: Domestic Threats and Opportunities* (2008), 252.

<sup>41</sup> R. H. Ullman, ‘Redefining Security’, 8 *International Security* (1983) 1, 129, 140.

<sup>42</sup> UN General Assembly Economic and Financial Committee, ‘Panel Discussion on Enhancing Governance on Water’ (2009).

<sup>43</sup> H. G. Brauch, ‘Introduction: Globalization and Environmental Challenges: Reconceptualizing Security in the 21st Century’, in H. G. Brauch *et al.* (eds), *Globalization and Environmental Challenges: Reconceptualizing Security in the 21st Century* (2008) 27, 27.

<sup>44</sup> B. Buzan, *States, Peoples and Fear: An Agenda for International Security Studies in the Post-Cold War Era*, 2nd ed. (1991), 2.

object, introducing the concept of ‘human security’.<sup>45</sup> Along this line of thought the ‘essential freedoms’ discourse placed the security paradigm within the fundamental freedoms of: freedom from want, freedom from fear, freedom to live with human dignity, and freedom from hazardous impact.<sup>46</sup> The widening and deepening process has recently led to the notions of collective and sustainable security,<sup>47</sup> which try to pave the way towards a mutual understanding that security can no longer be regarded as a zero sum game between states; since a contemporary take on the notion unveils its ‘common’ characteristic.<sup>48</sup>

While, obviously, the debate about fully fledged ‘water wars’ is very appealing to the media, it can be argued that it is not only incapable of comprehending the complex challenge of the water crisis, but it also constitutes a ‘red herring’ – distracting from the real issues. The fact that more than 3.5 million people die each year because of poor water, sanitation, and hygiene clearly suggests a wider approach to water security than the narrow military one.<sup>49</sup> It has been estimated that by 2020, if the international community fails to effectively address global water insecurity, as many as 135 million preventable deaths could occur.<sup>50</sup>

Furthermore, the debate about cooperation *or* conflict over freshwater usually ignores the quality of cooperation and the various levels of conflict – since not all cooperation is automatically good; and not all conflict is inherently bad. Also, the interlinkages between different layers and other crises are consistently being overlooked. Sustainable freshwater management is strengthening a whole web of securities. For instance, a

<sup>45</sup> See O. Brown, ‘The Environment and Our Security: How Our Understanding of the Links Has Changed’ (2005) available at <http://www.iisd.org/publications/pub.aspx?pno=696> (last visited 28 April 2011).

<sup>46</sup> P. Wouters *et al.*, ‘Water Security, Hydrosolidarity and International Law: A River Runs through It ...’, 19 *Yearbook of International Environmental Law* (2009) 97, 101.

<sup>47</sup> For an introduction to the concepts, see W. Scholtz, ‘Collective (Environmental) Security: The Yeast for the Refinement of International Law’, 19 *Yearbook of International Environmental Law* (2009) 135; C. Voigt, ‘Sustainable Security’, 19 *Yearbook of International Environmental Law* (2009), 163.

<sup>48</sup> B.-O. Magsig, ‘Introducing an Analytical Framework for Water Security: A Platform for the Refinement of International Water Law’, 20 *Journal of Water Law* (2009) 2/3, 61, 64.

<sup>49</sup> C. J. Schuster-Wallace *et al.*, *Safe Water as the Key to Global Health* (2008), 8.

<sup>50</sup> United Nations Environment Programme, ‘The Greening of Water Law: Managing Freshwater Resources for People and the Environment’ (2010) available at [http://www.unep.org/dec/PDF/UNEP\\_Greening\\_water\\_law.pdf](http://www.unep.org/dec/PDF/UNEP_Greening_water_law.pdf) (last visited 28 April 2011), 17.

situation of acute water scarcity (caused by drought or mismanagement) in a developing country which is highly dependent on agriculture would certainly compromise human security (increasing poverty and affecting health), food security (domestic and, potentially, of food importing countries), economic security (decrease in agricultural output), energy security (diminishing availability of water for production of electricity), and environmental security (putting ecosystems under stress and causing biodiversity loss) at the local, regional or even international level. Just like hydropolitics and transboundary water interaction, ‘security’ is a multi-level, multi-centered, and multi-actor approach linking various schools of thought and disciplines.<sup>51</sup> Further, water is a multi-purpose resource of high economic, social and environmental significance, with diminishing availability and uneven distribution in space and time – exposing it to conflicting claims of different users and uses, both domestically and internationally.<sup>52</sup> Without question, this clearly justifies giving freshwater resources special treatment as a key component of ‘ultimate security’.<sup>53</sup>

### III. 4A Analytical Framework

Although ‘water security’ is now featured prominently in the policy arena, and academia is slowly picking it up as well, it still lacks a precise definition or any normative parameters. Various attempts to carve out the precise essence of the emerging concept did result in a variety of interpretations:

- Water security, at any level from the household to the global, means that every person has access to enough safe water at affordable cost to lead a clean, healthy and productive life, while

<sup>51</sup> A. Kibaroglu *et al.*, ‘Transboundary Water Issues in the Euphrates-Tigris River Basin: Some Methodological Approaches and Opportunities for Cooperation’, in L. Jansky, *et al.* (eds), *International Water Security: Domestic Threats and Opportunities* (2008), 223.

<sup>52</sup> P. Wouters *et al.*, *supra* 46, 103.

<sup>53</sup> E. Burlinson, ‘Water Is Security’, 31 *Environs - Environmental Law and Policy Journal* (2008) 2, 197, 197; B.-O. Magsig, ‘Introducing an Analytical Framework for Water Security: A Platform for the Refinement of International Water Law’, 20 *Journal of Water Law* (2009) 2/3, 61, 65.

ensuring that the natural environment is protected and enhanced.<sup>54</sup>

- [T]he notion of water security can be understood as the state of having secure access to water; the assured freedom from poverty of, or want for, water for life.<sup>55</sup>
- [Water security is] adequate protection from water-related disasters and diseases and access to sufficient quantity and quality of water, at affordable cost, to meet the basic food, energy and other needs essential for leading a healthy and productive life without compromising the sustainability of vital ecosystems.<sup>56</sup>

Considering the vagueness of these attempts, international law can, and definitely should, provide the normative content for this concept. While there are different views on the actual role and relevance of international law in preventing conflicts and ensuring the fair use of shared resources,<sup>57</sup> the global water crisis simply cannot be alleviated without generally recognized ‘rules of the game’ about how to manage this vital resource. The ultimate goal of international law is ‘to maintain international peace and security’<sup>58</sup> – and the global water crisis is threatening this fundamental premise.

This is why the concept of ‘4As’ proposes a legal framework to examine water security by focusing on issues of (1) availability; (2) access;

<sup>54</sup> Global Water Partnership, ‘Towards Water Security: A Framework for Action’ (2000) available at [http://www.gwptoolbox.org/images/stories/Docs/water%20security\\_2000\\_doc\\_78\\_en.pdf](http://www.gwptoolbox.org/images/stories/Docs/water%20security_2000_doc_78_en.pdf) (last visited 28 April 2011), 12.

<sup>55</sup> P. Wouters, ‘Water Security: What Role for International Water Law?’, in F. Dodds & T. Pippard (eds), *Human and Environmental Security: An Agenda for Change* (2005), 166, 168.

<sup>56</sup> L. Jansky *et al.*, ‘Introduction: From Domestic to International Water Security’, in N. I. Pachova *et al.* (eds), *International Water Security: Domestic Threats and Opportunities* (2008), 1, 1.

<sup>57</sup> D. Tarlock, ‘Water Security, Fear Mitigation and International Water Law’, 31 *Hamline Law Review* (2008) 3, 704, 705.

<sup>58</sup> Art. 1(1) UN Charter.

(3) adaptability; and (4) ambit.<sup>59</sup> These core elements comprise important legal themes for comprehending the concept of water security, and could help, through the normative strength of international law, maintaining ‘international peace and security’ in spite of the increasing potential for conflict over shared freshwater resources.

## 1. Availability

Issues of ‘availability’ relate to concerns of water quality as well as water quantity. Primarily, this facet deals with the management of the resource as such – including its control and sustainable protection. The legal rules addressing the quantitative aspects are numerous and can be found, predominantly, in treaties, where states aim to specify the basic principles of international water law.<sup>60</sup> In trying to spread the risk of water stress among all riparians, states often allocate water corresponding to percentage and time of flow, rather than a fixed amount.<sup>61</sup> While doing this, however, it still puts downstream users at particular risk if developmental changes occur upstream, as their share in the water they receive will almost certainly diminish. Often, states negotiate so-called ‘escape clauses,’ which allow countries that suffer from water scarcity to deliver less water than they would have to under normal circumstances.<sup>62</sup>

<sup>59</sup> See B.-O. Magsig, ‘Introducing an Analytical Framework for Water Security: A Platform for the Refinement of International Water Law’, 20 *Journal of Water Law* (2009) 2/3, 61, 65.

<sup>60</sup> See, e.g. Treaty between India and Pakistan Regarding the Use of the Waters of the Indus (19 September 1960, entered into force 1 April 1960) 419 U.N.T.S. 125 (1960) (Indus Waters Treaty); Art. 1 of the Treaty between His Majesty’s Government of Nepal and the Government of India concerning the Integrated Development of the Mahakali River including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, 12 February 1996 (entered into force June 1997) reprinted in 36 ILM 531 (1997) [Mahakali Water Treaty].

<sup>61</sup> I. Fischhendler, ‘Legal and Institutional Adaptation to Climate Uncertainty: A Study of International Rivers’, 6 *Water Policy* (2004) 4, 281, 283.

<sup>62</sup> Article 4(B)(d) of the Treaty between the United States of America and Mexico relating to the ‘Utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande’ (14 November 1944; entered into force 8 November 1945) available at <http://www.usembassy-mexico.gov/bbf/bfboundwater.pdf> (last visited 28 April 2011) [Colorado-Rio Grande Treaty].

Examples for obligations regarding pollution control and prevention in transboundary water agreements, however, are rather limited.<sup>63</sup> The aspect of mitigating the destructive force of water-related natural disasters (like floods) is first and foremost stipulated by rules dealing with emergency preparedness and response.<sup>64</sup> Further, the need to maintain the natural integrity of the freshwater resource – by requiring environmental flows or introducing terms like ‘peak ecological water’ – is being addressed in the sphere of ‘availability’ as well.<sup>65</sup> However, water for the environment has still no priority in water management practices, which has caused tremendous environmental pressures around the world.<sup>66</sup> In China, for instance, 70 per cent of the rivers and lakes are significantly contaminated, while 50 per cent of its cities only have access to polluted groundwater resources – not only affecting businesses and communities in China, but also further downstream.<sup>67</sup> Yet, state practice shows that new thinking in the sustainable management of water resources is slowly emerging; and international water law can provide the basic tools for effectively addressing the environmental protection and sustainability of transboundary watercourses.<sup>68</sup>

<sup>63</sup> Art. 7 of the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin 5 April 1995 (entered into force 5 April 1995) reprinted in 34 ILM 864 (1995) [Mekong Agreement].

<sup>64</sup> E.g., Art. 1, 10 of the Mekong Agreement.

<sup>65</sup> A. Forslund *et al.*, ‘Securing Water for Ecosystems and Human Well-Being: The Importance of Environmental Flows’, 24 *Swedish Water House Report* (2009); M. Palaniappan & P. H. Gleick, ‘Peak Water’, in P. H. Gleick *et al.* (eds), *The World's Water 2008-2009* (2009), 1.

<sup>66</sup> United Nations Environment Programme, *supra* note 50, ix.

<sup>67</sup> P. H. Gleick, ‘China and Water’, in P. H. Gleick *et al.* (eds), *The World's Water 2008-2009* (2009) 79, 83; Responsible Research, ‘Water in China: Issues for Responsible Investors’ (2010) available at [http://www.syntao.com/Uploads/%7BBE7D448C-9F86-4D6D-A550-055781FD7F52%7D\\_WATER-IN-CHINA-Issues-for-Responsible-Investors-FEB2010.pdf](http://www.syntao.com/Uploads/%7BBE7D448C-9F86-4D6D-A550-055781FD7F52%7D_WATER-IN-CHINA-Issues-for-Responsible-Investors-FEB2010.pdf) (last visited 28 April 2011), 4.

<sup>68</sup> Arts 5, 20 of the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (21 May 1997, not yet entered into force) UN Doc A/51/869, reprinted in 36 ILM 700 (1997) (UN Watercourses Convention); Art. 2(2) of the UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes (17 March 1992, entered into force 6 October 1996) reprinted in 31 ILM 1312 (1992) [UNECE Helsinki Convention].

## 2. Access

The element of ‘access’ describes the right to make use of the shared water resources and is at the center of the water security debate. It covers a broad spectrum of concerns across the increasing diversity and growing number of users and uses with regard to matters of (re)allocation. Here, the principle of ‘equitable and reasonable utilization,’ the cornerstone of international water law, determines the right of a state to use the waters of an international watercourse. It does so in two distinct ways. First, it establishes the objective to be achieved (an equitable and reasonable use of the water), which then specifies the lawfulness of the new (or increased) utilization of an international watercourse. Second, it incorporates an important operational function, since it requires that all relevant factors and circumstances have to be considered when determining what qualifies as an equitable and reasonable use. The obligation to balance all the interests of the various stakeholders is essential to the notion of ‘access.’<sup>69</sup> In order to help with the application of this relatively vague principle, the UN Watercourses Convention provides a (non-exhaustive) list of factors to be considered in each specific case – all the factor being principally equal in weight; although there might be a priority of use regarding vital ‘human’ and ‘environmental’ needs.<sup>70</sup>

However, the issue of fairness of access still continues to divide states in various transboundary basins. One recent example, where Nepalese Maoists destroyed copies of the Mahakali Water Treaty between India and Nepal in public, arguing the agreement is unfair and against the interest of Nepalese people, is just one of many showing that the complex issue of fair ‘access’ will remain one of the most difficult legal challenges of water security.<sup>71</sup> Whether the respective international water regime provides for specific rules on conflict resolution or not, in cases of deadlock in transboundary water interactions, the general rules of public international law require the peaceful resolution of the differences through ‘negotiation,

<sup>69</sup> P. Jones, *The Application of Equitable and Reasonable Utilisation to Transboundary Water Resources Disputes: Lessons from International Practice*, PhD Thesis (2009).

<sup>70</sup> Arts 6, 10, 21 of the UN Watercourses Convention.

<sup>71</sup> B.-O. Magsig, ‘Introducing an Analytical Framework for Water Security: A Platform for the Refinement of International Water Law’, 20 *Journal of Water Law* (2009) 2/3, 61, 66.

enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means'.<sup>72</sup>

### 3. Adaptability

Considering that, in most of the cases, the key variable of sharing freshwater resources is the resilience of the institutions that govern water management, rather than absolute water scarcity,<sup>73</sup> a future-proof framework for transboundary watercourses has to include a fair amount of flexibility. This is vital for ensuring adaptability in order to be able to address changing conditions in supply and demand, but still provide for some level of predictability. Since many states depend on the waters from shared basins, they need certainty on the quantities and qualities of the water they are entitled to utilize and obliged to provide – and this within the ever changing interplay between supply and demand. Here, law has to provide for 'security of expectations' – which can be considered as one of its main functions, and proves to be crucial within transboundary water management and the constantly changing societal, political, and environmental needs.<sup>74</sup>

In addition to this 'legal challenge,' the impacts of global climate change, population growth, and economic development are all uncertain variables which have a considerable impact on transboundary water interaction. Furthermore, the notion of 'security' as such is a moving target rather than an end in itself. Not only does the evolving perception of the concept correlate with the ever-changing requirements of the individual users – it also depends to a large extent on the international relations between the respective countries. Thus, in order to be able to continuously adapt to the complex emerging trends and challenges, any transboundary freshwater regime has to be reasonably flexible.<sup>75</sup>

<sup>72</sup> Art. 33 UN Charter.

<sup>73</sup> G. Eckstein, 'Water Scarcity, Conflict, and Security in a Climate Change World: Challenges and Opportunities for International Law and Policy', 27 *Wisconsin International Law Journal* (2009) 3, 409, 414.

<sup>74</sup> M. Bothe, 'Security in International Law since 1990', in H. G. Brauch *et al.* (eds), *Globalization and Environmental Challenges: Reconceptualizing Security in the 21st Century* (2008), 475.

<sup>75</sup> See S. C. McCaffrey, 'The Need for Flexibility in Freshwater Treaty Regimes', 27 *Natural Resources Forum* (2003) 2, 156, 161.

#### 4. Ambit

The final element is the concept of ‘ambit’, which, in this context, delimits the scope of water security – i.e., the sphere of influence of the notion.<sup>76</sup> In addition to the traditional meaning of ‘scope’,<sup>77</sup> the approach here is to better reflect the ‘common’ character of the challenges of water insecurity. So far, the main weakness of transboundary water interaction has been the inability to link the various influencing factors in a comprehensive manner – a serious shortcoming which has led to ‘water blindness’<sup>78</sup>.

The ‘scope’ of a transboundary water agreement usually determines (1) the waters covered by the regime;<sup>79</sup> (2) the range of stakeholders that are eligible to participate in the utilization of those waters;<sup>80</sup> and (3) the breadth of objectives addressed.<sup>81</sup> In addition to this traditional perception of scope, the concept of ‘ambit’ also does justice to the fact that water security has to be regarded as a collective security issue. Unsustainable and unilateral water management of one state not only poses a domestic threat in this country, but will most certainly also affect other riparians. Due to the aforementioned interconnectedness of the globalized world and the role water plays in linking the various emerging crises, negative impacts may even be felt outside the river basin in apparently remote countries. The times where

<sup>76</sup> B.-O. Magsig, ‘Introducing an Analytical Framework for Water Security: A Platform for the Refinement of International Water Law’, 20 *Journal of Water Law* (2009) 2/3, 61, 67.

<sup>77</sup> See P. Wouters *et al.*, ‘Sharing Transboundary Waters: An Integrated Assessment of Equitable Entitlement: The Legal Assessment Model’ (2005) available at <http://unesdoc.unesco.org/images/0013/001397/139794e.pdf> (last visited 28 April 2011), 19.

<sup>78</sup> M. Falkenmark, ‘The Greatest Water Problem: The Inability to Link Environmental Security, Water Security and Food Security’, 17 *Water Resources Development* (2001) 4, 539, 542.

<sup>79</sup> E.g. ‘water resources’ (Article 4 UNECE Helsinki Convention), ‘international watercourse’ (Article 2(b) UN Watercourses Convention), ‘international drainage basin’ (Article II Helsinki Rules), or ‘tributaries’ (Article I(2) Indus Waters Treaty; Article 5 Mekong Agreement).

<sup>80</sup> State practice has demonstrated support for applying a basin-wide approach, although, still, too many international watercourse agreements lack the inclusion of all riparians – like the Indus Waters Treaty or the Mekong Agreement – which constitutes a high political risk.

<sup>81</sup> The extend ranges from merely quantitative agreements (like the Indus Waters Treaty) to highly sophisticated institutions (e.g. the Mekong River Commission) which also govern aspects of water quality and emergency situations (Article 11 Mekong Agreement).

water can solely be regarded as a national security issue are long past, since our most fundamental common value is under threat – the survival of humankind.<sup>82</sup>

Although water management is, in principle, a local challenge, several of its aspects, e.g. the ‘right to water,’ are debated in the global arena. This indicates that the linkages between the different scales of water interaction have become more and more fluid; calling for international water law to act as an interface between those layers.<sup>83</sup> Not only will the effectiveness of the international rules depend on a strong support of domestic norms (and vice versa); the impact of treaties outside the ‘water box’ (e.g. Biodiversity Convention; Ramsar Convention; UNFCCC) has to be factored into the analysis as well.<sup>84</sup> Finally, the notion of water security has to be open to novel ideas about how to best address the world water crisis; and thus it has to be able to integrate concepts like ‘virtual water’ or ‘peak ecological water;’ reflecting the interconnectedness of the global crises of water, food, and energy – and propose ways out of this tricky challenge.<sup>85</sup>

#### D. International Law and Water Security

Having used the ‘4As’ analytical framework as an entry point of looking at international water law through a security lens, the question now is how well the current legal setting is actually dealing with those elements. Since space does not allow for a more detailed analysis, only the major shortcomings of international water law will be addressed here.

While the principle of ‘equitable and reasonable utilization’ is a very flexible tool, generally able to incorporate the constantly changing ‘security’

<sup>82</sup> W. Scholtz, ‘Collective (Environmental) Security: The Yeast for the Refinement of International Law’, 19 *Yearbook of International Environmental Law* (2009) 135, 139.

<sup>83</sup> A. Rieu-Clarke, ‘The Role of Treaties in Building International Watercourse Regimes: A Legal Perspective on Existing Knowledge’, 12 *Water Policy* (2010) 6, 822, 829.

<sup>84</sup> A. Rieu-Clarke & D. Ziganshina, *(Mis-)Understanding the Role of International Law in Transboundary Watercourse Relations: The Need for a Cross-Disciplinary Research Agenda* (forthcoming).

<sup>85</sup> T. Allan, ‘Global Trade: Balancing Existing and Future Regional Water Resource Deficits’, in H. G. Brauch *et al.* (eds), *Facing Global Environmental Change - Environmental, Human, Energy, Food, Health and Water Security Concepts* (2009), 575; M. Nakayama, ‘The Implications of Domestic Security Policy for International Water Issues in the Context of ‘Virtual’ and ‘Real’ Water: The Aral Sea and Mekong River Basins’, in N. Pachova *et al.* (eds), *International Water Security: Domestic Threats and Opportunities* (2008), 180; M. Palaniappan & P. H. Gleick, ‘Peak Water’, in P. H. Gleick *et al.* (eds), *The World's Water 2008-2009* (2009), 1.

variables, most of the transboundary water agreements, however, try to specify the legal obligations of the riparians. This makes most treaty regimes inherently rigid instruments, as they can only be modified according to their own terms or by mutual agreement.<sup>86</sup> Hence, if a treaty lacks inbuilt tools of flexibility and a situation of water stress arises, disputes over the shared watercourse are likely in the case where one party to the agreement may find it difficult to reduce its consumption in order to comply with its legal obligations.<sup>87</sup> If the water stress causes asymmetric harm, the more seriously harmed state may be eager to terminate the agreement, while its co-riparian may find it beneficial to stick to it. In this respect, the International Court of Justice (ICJ) concluded in its *Gabčíkovo-Nagymaros* judgment that “[...] the stability of treaty relations requires that the plea of fundamental change of circumstances be applied only in exceptional cases”<sup>88</sup>. Furthermore, the ICJ noted that new developments or changing conditions should be dealt with on the level of implementation of the treaty; not by termination of it.<sup>89</sup> However, even if the governments agree to renegotiate the treaty – and a number of studies come to the conclusion that they will have to do so rather soon<sup>90</sup> – in some cases this extremely sensible diplomatic process may be too time consuming to adapt to the rapid changes in the demand for, or availability of, shared freshwater. It is surprising that despite the need to increase the flexibility of water agreements in order to cope with water stress, riparian states find it difficult to do so. The number of flexible mechanisms initially negotiated shows that the current inability of water sharing regimes to address climate-uncertainty is not an issue of awareness; it is rather owing to political obstacles.<sup>91</sup> The perceived threat of losing national sovereignty is increasing the political costs of implementing flexible mechanisms.<sup>92</sup> However, when excluding these measures, policy makers must necessarily also consider the potential

<sup>86</sup> S. C. McCaffrey, ‘The Need for Flexibility in Freshwater Treaty Regimes’, 27 *Natural Resources Forum* (2003) 2, 156, 157.

<sup>87</sup> I. Fischhendler, ‘Legal and Institutional Adaptation to Climate Uncertainty: A Study of International Rivers’, 6 *Water Policy* (2004) 4, 281, 297.

<sup>88</sup> *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* Judgment, ICJ Reports 1998, 7, para. 104.

<sup>89</sup> *Id.*, para. 112.

<sup>90</sup> G. Goldenman, ‘Adapting to Climate Change: A Study of International Rivers and Their Legal Arrangements’, 17 *Ecology Law Quarterly* (1990) 4, 741, 747.

<sup>91</sup> I. Fischhendler, ‘Legal and Institutional Adaptation to Climate Uncertainty: A Study of International Rivers’, 6 *Water Policy* (2004) 4, 281, 284.

<sup>92</sup> *Id.*, 298.

benefits their implementation would have had. In basing decisions on optimistic water-availability scenarios and low resource sensitivity forecasts, the reasons for including flexible mechanisms are reduced, and the non-implementation is justified.<sup>93</sup> The bottom line is that by stressing the immediate political costs instead of the future social and environmental benefits, the implementation of climate-uncertainty mechanisms seems unreasonable, and thus they are often excluded. The level of flexibility of water sharing regimes hugely depends on the political will of the co-riparians.

The same is true for another issue of transboundary water management: its rather scattered approach. The fact that many treaties merely focus on quantitative issues and/or not even include all riparians, suggest that most legal frameworks lack full support of the notion of ‘ambit.’ This political short-sighted behavior – focusing on one’s own national interests and security on the cost of international security – will inevitably backfire. Water interaction is still seen as zero-sum conflict with a ‘fixed-pie’ outcome, rather than a perpetual process to achieve the more sustainable ‘common security.’

The reason for this tension between maximizing overall benefit and the ‘relative’ benefits of states is obvious: since water is the source of growth, it is often considered as a strategic resource. This is why states are constantly worried about the relative gains of other states. They are very cautious about the impacts any freshwater-interaction might have with regard to the power interplay of the respective actors. This usually leads to the pursuit of ‘maximized individual benefits’ rather than looking at how to gain the most from the management of the shared resource in absolute terms. States are often reluctant to implement rules that limit their sovereignty. Thus, many international water treaties remain ‘dead letter regimes;’ maybe negotiated with good intentions, but ineffective in reality. This dilemma is even getting worse, the more difficult the policy decisions get, and the less ‘harmonious’ the political relations are between the parties.<sup>94</sup> While states are obliged to protect their national interests – and will always be – most of what has been a national interest in the past is no longer ‘national’ at all. With the help of international law, the concept of water security has to create a ‘space’ which transcends national boundaries

<sup>93</sup> *Id.*, 295.

<sup>94</sup> N. Ely & A. Wolman, ‘Administration’, in A. H. Garretson *et al.* (eds), *The Law of International Drainage Basins* (1967) 124, 137.

(real and imaginary) and put water high on the agenda.<sup>95</sup> International water law, then, has to provide a legal environment that fully comprehends the ambit of water security by moving sustainable freshwater management from ‘independence’ to true ‘interdependence.’<sup>96</sup>

## E. Water Security as a Regional Common Concern

From the inevitable perspective of ‘collective’ water security, the notion ultimately challenges the supremacy of absolute national sovereignty.<sup>97</sup> The proposed framework of the ‘4As’ facilitates this development by acknowledging that the best possible management of transboundary freshwater resources can only be achieved with a truly common strategy – bringing together law and politics, and being open-minded for new strategies to tackle the global water crisis. However, the support of international law for such a progressive aspiration is missing as for now. Considering the shortcomings of the current legal regime, the securitization of water seems to be what is needed for transboundary water interaction – as ‘security’ is the move that can take pressing issues beyond the established rules of the game.<sup>98</sup> Further acknowledging that, in order to achieve global water security, a state-centred take on the water crisis is counterproductive, the question is: what should serve as the normative basis for the needed refinement of international water law?

Communitarianism has been addressed by international law in different ways. In general its role has been to facilitate both the coordination of states’ individual actions regarding a common concern, and the institutionalization of ‘normative communities.’<sup>99</sup> Two approaches seem rather impractical regarding the global water crisis. First, the concept of ‘common areas’ is limited to areas or resources which are perceived as

<sup>95</sup> A. Turton, ‘Water and State Sovereignty: The Hydropolitical Challenge for States in Arid Regions’, 5 *MEWREW Occasional Paper* (1999) available at <http://www.soas.ac.uk/water/publications/papers/file38349.pdf> (last visited 28 April 2011), 3.

<sup>96</sup> See F. X. Perrez, *Cooperative Sovereignty: From Independence to Interdependence in the Structure of International Environmental Law* (2000).

<sup>97</sup> R. Falk, ‘The Coming Global Civilisation: Neo-Liberal or Humanist?’, in A. Anghie & G. Sturgess (eds), *Legal Visions of the 21st Century - Essays in Honour of Judge Christopher Weeramantry* (1998), 15.

<sup>98</sup> B. Buzan *et al.*, *Security: A New Framework for Analysis* (1997), 178.

<sup>99</sup> J. Brunnée, ‘Common Areas, Common Heritage, and Common Concern’, in D. Bodansky *et al.* (eds), *The Oxford Handbook of International Environmental Law* (2007) 550, 555.

being common and states having, in theory, open access to it. Examples are the high seas and the outer space. Second, the notion of 'common heritage' is focused on the equitable sharing of benefits from the exploitation of resources beyond the limits of national jurisdiction. This concept has found recognition in the Law of the Sea Convention (Art. 136) and the Art. 11 of the 1979 Moon Treaty. While these two approaches are limited to a certain geographical area and its resources, the notion of 'common concern' seems more promising, as it is a much wider concept.

Although, the attention is again on common benefits, it regards the benefits from common action rather than those derived from the mere exploitation of a resource.<sup>100</sup> Furthermore, instead of targeting one area or resource, this concept focuses on what renders a concern as being 'common.' In so doing, it avoids discussions about common property and territorial sovereignty. One example of the implementation of a 'common concern' can be found in the UN FCCC, using it for the 'change in the Earth's climate and its adverse effects'<sup>101</sup>.

Given the sheer scope of the global water crisis, and recalling the detrimental impacts water disputes have on communities all over the world, it should be rather easy to construct an analogous mind-set for transboundary freshwater management. However, it is still difficult to sufficiently prove international consensus on whether water security is indeed of common concern. Here, scaling one level down by looking at the regional level could be useful, since at this layer, the common concerns relating to water interaction are much more evident. The regional focus, accompanied by a growing number of treaties implementing the notion, could pave the way for the development of customary international law by helping to shape the concept and settle its legal consequences. This is vital, since until treaties specify the 'regional common concern' as *erga omnes partes*, issues of state responsibility will still come up.<sup>102</sup> International agreements would also help constitute the relevant 'community' which shares the regional common concern.

<sup>100</sup> *Id.*, 564.

<sup>101</sup> Preamble of the United Nations Framework Convention on Climate Change, UN Doc A/CONF.151/26, adopted 9 May 1992 (entered into force 21 March 1994) reprinted in 31 ILM 849.

<sup>102</sup> J. Brunnée, 'Common Areas, Common Heritage, and Common Concern', in D. Bodansky *et al.* (eds), *The Oxford Handbook of International Environmental Law* (2007) 550, 566.

Considering water security as a 'regional common concern' would certainly strengthen international law in this area and equip it with the needed basis for overcoming state-centrism. Fully embracing the notion of 'ambit,' which does justice to the fact that security can no longer be regarded as a zero sum game between states actors, will permit a take on water security which acknowledges that 'ultimate' (i.e. common and sustainable) security can only be achieved with a truly joint strategy for the benefit of the whole region. However, given the degree of reluctance of some of the main players of the game, this line of thought requires further research and a great deal of convincing – including an examination of the evolving nature of collective security and the role international water law can play here.

## F. Conclusion

The challenges we are facing regarding the peaceful management of our shared freshwater resources are bigger than states – bigger than basins. In an increasingly water insecure world, a 'react-and-correct' approach is no longer adequate. What is needed, instead, is one of 'foresee-and-prevent'.<sup>103</sup> This, however, can only be possible if we overcome the prevailing state-centrism in international water law. Doing so requires fundamental changes to the interpretation of the established paradigms of international law – the concept of sovereignty, above all.

It is exactly this state-centered opposition which places the international community at the tipping point of global water insecurity, as it ignores the growing global interdependence of shared water resources. Recalling the obligation of the global community 'to maintain international peace and security',<sup>104</sup> the lack of collective political will to address the widespread water insecurity with the utmost effort seems astonishing. The looming water crisis, together with the acknowledgement that equitable water-sharing is becoming increasingly important, sets the ground for the powerful notion of 'water security,' which, thoroughly applied, can drive the legal discourse forward. Applying the '4A' legal analytical framework as a template for analyzing the key issues related to water security in the

<sup>103</sup> A. S. Timoshenko, 'Ecological Security: Response to Global Challenges', in E. Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (1992) 413, 440.

<sup>104</sup> Article 1(1) UN Charter.

context of transboundary water interaction, can serve as a point of departure for the refinement of international (water) law.

It is our responsibility to push the perception forward that as long as we keep focusing on ourselves, pursuing only our own benefits, we will fail in achieving 'ultimate security'. While still in an early stage of development, the notion of water security provides a novel mindset – one which may, if supported by the normative concept of 'common concern,' ultimately be capable of overcoming state-centrism.