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Introduction

TODAY, AS IN the 1970s[1], nearly one billion people[2] are deprived on a daily basis of the most fundamental requirement for survival, health and dignity: water. While figures have declined on a relative scale[3], the extent of the crisis remains enormous. Basic human needs go unrealised each and every day. The crisis is a silent one that gets less attention than, for instance, wars and natural disasters. It has proven to be a persistent crisis.

The global water crisis not only relates to access to water for household uses, but is multifaceted. It becomes manifest in the shrinking and drying up of major rivers and lakes, the Aral Sea, the Colorado and the Jordan only being some of the most prominent examples[4]. The dramatic state of many water bodies shows in their diminution as well as their pollution. All of India's 14 major rivers are heavily polluted. For instance, 200 million litres of sewage and 20 million litres of waste are discharged into the Yamuna in Delhi every single day[5]. Both phenomena, shrinking water bodies as well as water pollution, not only relate to public health and the reduction of water available for human usage, but also have an ecological dimension[6].

Water is a multi-purpose resource that is used not only in households, but to a much greater extent in the agricultural and industrial sectors. Water is thus also essential for food security, economic development and

[1] For 1977, a figure of 1.2 billion people without access to drinking water can be assumed, as cited in P Alston, 'Human Rights and Basic Needs: A Critical Assessment' (1979) 12 *Revue des Droits de l'Homme* 19, 23.

[2] World Health Organization and United Nations Children's Fund, *Progress on Sanitation and Drinking-Water, 2010 Update* (Geneva and New York, World Health Organization and United Nations Children's Fund, 2010) 7. See section I. below on the shortcomings and inaccuracies of these estimates.

[3] When population growth is taken into account, the percentage of people without access to water has decreased. With about 4 billion people, the world population in the mid-1970s was significantly lower than today, see United Nations, *World Population Prospects*, 2004 Revision (New York, United Nations, 2005) 'Highlights', vi.

[4] United Nations Development Programme, *Human Development Report 2006, Beyond Scarcity: Power, Poverty and the Global Water Crisis* (New York, Palgrave Macmillan, 2006) 141; F Kürschner-Pelkmann, *Das Wasser-Buch, Kultur, Religion, Gesellschaft, Wirtschaft* (Frankfurt am Main, Lembeck, 2005) 34 et seq, 239 et seq.

[5] United Nations Development Programme, above n 4, 143.

[6] *Ibid.*

livelihood security. It relates to all these and many more policy areas. The water crisis is therefore a crisis of many dimensions. While some of these issues will be touched upon throughout the book, its focus is specifically on the human dimension of the water crisis – in particular the neglect of basic human needs in the allocation of water resources – seeking to address this issue from a human rights perspective.

I. LACK OF ACCESS TO WATER

Water is an extraordinary resource with unique characteristics. All life depends on water. Access to water is a precondition for survival[7]. Water cannot be substituted by any other resource. It is fundamental for sustaining health and leading a life in dignity[8]. Yet, as mentioned above, according to the latest official figures published by the Joint Monitoring Programme of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), close to a billion people lack access to water[9]. The actual figures can be assumed to be even higher, as these numbers are based on several assumptions: the indicator used for these official figures is access to an improved drinking water source[10], but criteria such as affordability and safety are not explicitly taken into account[11]. Water services may be unaffordable for indigent people; others may face prohibitive waiting times at the point of collection; some improved drinking water sources may not supply water regularly[12]; water provided by improved sources such as boreholes or protected wells may be contaminated – when these factors are taken into consideration, the extent of the crisis in the lack of access to water is likely to be much greater.

[7] J Boesen and PE Lauridsen, '(Fresh) Water as a Human Right and a Global Public Good' in EA Andersen and B Lindsnaes (eds), *Towards New Global Strategies: Public Goods and Human Rights* (Leiden, Martinus Nijhoff, 2007) 393, 394 et seq; United Nations Development Programme, above n 4, 2; GJ Young, JCI Dooge and JC Rodda, *Global Water Resource Issues* (Cambridge, Cambridge University Press, 1994) 10.

[8] United Nations Development Programme, above n 4, 2.

[9] World Health Organization and United Nations Children's Fund, above n 2, 7.

[10] World Health Organization and United Nations Children's Fund, *Global Water Supply and Sanitation Assessment 2000 Report* (Geneva and New York, World Health Organization and United Nations Children's Fund, 2000) 77 et seq.

[11] See Office of the United Nations High Commissioner for Human Rights, *Claiming the Millennium Development Goals (MDGs): A Human Rights Approach* (Geneva, 2008) 39; General Assembly, *Report of the independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation, Catarina de Albuquerque*, 6 August 2010, A/65/254, paras 22 et seq.

[12] Centre on Housing Rights and Evictions, American Association for the Advancement of Science, Swiss Agency for Development and Cooperation and United Nations Human Settlements Programme, *Manual on the Right to Water and Sanitation* (Geneva, 2007) 3.

A. Inequalities in Access

Access to water is characterised by huge inequalities. On a global scale, consumption differs greatly between countries of the Global North and the Global South. Whereas a German citizen uses an average 129 litres per day[13] and a US citizen even up to 300 litres per day[14], many people in developing countries do not have access even to 20 litres per capita per day (l/c/d) to satisfy their most basic needs. But inequality in access also exists within countries, even within the same cities. Whereas well-off neighbourhoods in many cities of the Global South are often provided with unlimited amounts of water – at low prices – people living in informal settlements and other disadvantaged neighbourhoods often have access to less than 20 l/c/d[15]. According to the *Human Development Report 2006*, on average 85 per cent of the wealthiest 20 per cent of the population have access to piped water in the household, whereas only 25 per cent of the poorest 20 per cent of the population enjoy such access[16].

It has been found that the point of access to water has a strong impact on the quantity of water used. Whereas people with a household connection have unhindered physical access to often unlimited amounts of water, the average quantity collected from a point of access 100 metres from the house is around 20 l/c/d. This amount decreases to about 5 l/c/d when the point of access is at a distance of more than 1,000 metres[17]. The physical proximity to access to water is therefore an important factor in determining inequalities in access to water.

People living in informal settlements and other low-income urban areas are particularly disadvantaged regarding access to water. It is estimated that informal settlements may account for as much as 30 to 60 per cent of the global urban population. For example, about half of Mumbai's population lives in squatter areas[18]. The improvement of living conditions in these areas is often a low priority in urban policies. In many cases, municipal governments avoid improving water and sanitation services because

[13] U Scheele and S Malz, 'Wasserbedarf und Wasserverbrauch privater Haushalte und der Industrie nach Ländern' in J L Lozán, H Graßl, P Hupfer, L Menzel and CD Schönwiese (eds), *Warnsignal Klima: Genug Wasser für alle?, Genügend Wasser für alle – ein universelles Menschenrecht* (Hamburg, Wissenschaftliche Auswertungen, 2005) 91, 93.

[14] Kürschner-Pelkmann, above n 4, 14; Scheele and Malz, above n 13, 93; R Engelmann, B Dye and P LeRoy, *Mensch, Wasser, Report über die Entwicklung der Weltbevölkerung und die Zukunft der Wasservorräte* (Hannover, Balance, 2000) 20, even assume an average of 650 litres per day.

[15] United Nations Development Programme, above n 4, 2.

[16] *Ibid*, 7.

[17] G Howard and J Bartram, *Domestic Water Quantity, Service Level and Health* (Geneva, World Health Organization, 2003) 22.

[18] AK Biswas, 'Water Management for Major Urban Centres' (2006) 22 *International Journal of Water Resources Development* 183, 190 et seq.

they do not want to encourage or legitimise informal settlements[19]. Not being supplied with water through the public water network, inhabitants of informal settlements are often forced to buy water from private water vendors, or to use water from unsecure sources that is often contaminated[20]. While the middle- and upper-class areas of cities receive piped water into their homes, it is estimated that 20 to 30 per cent of all urban inhabitants of developing countries are dependent on private water vendors[21]. Their prices are often significantly higher than those for water supplied through the network[22]. For example, people living in the informal settlements of Jakarta and Nairobi pay 5 to 10 times more per water unit than those living in high-income areas of the same cities[23]. In exceptional cases, water bought from water vendors may be priced as much as 100 times the official tariff[24]. The amount people spend on drinking water then often represents a significant proportion of their income, for example up to 25 per cent in Mexico City[25]. As with physical access to water, this aspect of economic accessibility also has an enormous impact on the quantity of water consumed and illustrates the extent of inequalities in urban water supply.

Similarly to people living in poverty in urban areas, poor rural settlements are often given low priority in terms of development and resource allocation. In the framework of the Millennium Development Goals (MDGs)[26], the proportion of population with access to improved water sources is assessed. According to 2010 figures, 87 per cent of the world's total population has such access, but only 76 per cent of the rural population in developing regions compared to 94 per cent of the urban population, ie 84 per cent of the population without access to an improved

[19] M Falkenmark and C Widstrand, 'Population and Water Resources: A Delicate Balance' (1992) 47 *Population Bulletin* No 3, 22.

[20] O Varis, 'Megacities, Development and Water' (2006) 22 *International Journal of Water Resources Development* 199, 214; C Tortajada, 'Water Management in Mexico City Metropolitan Area' (2006) 22 *International Journal of Water Resources Development* 353, 361; Falkenmark and Widstrand, above n 19, 22.

[21] Varis, above n 20, 214.

[22] Falkenmark and Widstrand, above n 19, 22.

[23] United Nations Development Programme, above n 4, 7.

[24] Varis, above n 20, 214.

[25] Tortajada, above n 20, 361.

[26] The MDGs aim at the eradication of extreme poverty. MDG target 7.C pledges to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. It is inexplicable why Target 7.C figures under the goal of environmental sustainability instead of under Goal 1 together with the target to halve the number of people suffering from hunger. These two – hunger and lack of access to water supply – are manifestations of poverty that are closely linked together, see F Nuscheler, 'Sinnentleerung des Prinzips Nachhaltigkeit, Die Millennium-Entwicklungsziele haben eine ökologische Lücke' in F Nuscheler and M Roth (eds), *Die Millennium-Entwicklungsziele, Entwicklungspolitischer Königsweg oder ein Irrweg?* (Bonn, Dietz, 2006) 155, 165. In the *Millennium Declaration* the target on water supply still appears within the first bullet point next to the goal related to reducing hunger, see General Assembly, *United Nations Millennium Declaration*, 18 September 2000, A/Res/55/2, para 19.

drinking water source is estimated to live in rural areas[27]. In Sub-Saharan Africa, only 47 per cent of the rural population has access to an improved water source[28]. The symbolic picture of women and girls walking for miles to collect water from a waterhole or well has been shown, described and reiterated many times. Yet it remains a meaningful illustration of the marginalisation of people living in poverty in rural areas. Not only do women have to walk long distances to collect water, they often also have to wait for a long time, because water availability is low and many people rely on the same points of access. Furthermore, the collected water is in many cases unsafe and contaminated.

B. Impact on Health and Human Development

The lack of access to water has an enormous impact on human health. Water-related diseases are a leading cause of death in the developing world, in particular among children[29]. Such diseases are associated with the lack of access to safe drinking water, poor hygiene and inadequate sanitation. Nearly 4,000 children die of the consequences every day[30].

So-called *water-borne diseases*, such as diarrhoea, cholera and typhoid, are caused by drinking unsafe water[31]. Water can be contaminated by human, animal or chemical waste due to inadequate sanitation, agricultural or industrial run-off. Also, some naturally occurring elements such as arsenic pose a major threat to human health, resulting in a significant risk of skin lesions and cancer. The high concentration of arsenic in groundwater in Bangladesh, for example, is a major concern[32]. The most common water-borne disease is diarrhoea. According to estimates, each child in a developing country under the age of 5 suffers on average from three episodes of diarrhoea per year[33]. Diarrhoeal diseases sound harmless, but are the leading cause of death among children from water-related diseases. While outbreaks of cholera – as recently occurred in Zimbabwe[34] – draw major attention, the day-to-day diarrhoea of small children is responsible for the great majority of deaths[35]. Overall, diarrhoea accounts for 21 per cent of all deaths of children under the age of 5 in developing

[27] World Health Organization and United Nations Children's Fund, above n 2, 18.
[28] *Ibid*.
[29] World Water Assessment Programme, *United Nations World Water Development Report 2: Water, a Shared Responsibility* (Paris, 2006) 204.
[30] *Ibid*.
[31] J Eyles and R Sharma, 'Infectious Diseases and Global Change: Threats to Human Health and Security' (2001) 8 *AVISO* 1, 8 et seq.
[32] World Water Assessment Programme, above n 29, 219.
[33] *Ibid*, 210.
[34] See eg B Peta, '3,000 dead from cholera in Zimbabwe', *Independent*, 26 November 2008.
[35] World Water Assessment Programme, above n 29, 211.

countries[36], resulting in 1.5 million deaths of children under 5 each year[37]. It claims the lives of five times as many children as HIV/AIDS[38]. Other water-related diseases are so-called *water-washed diseases*[39], among them eye infections such as trachoma, that relate to the lack of sufficient water for personal hygiene[40]. Altogether, more people die of water-related diseases than in wars[41]. The former UN Secretary General, Kofi Annan, summed up the dependence of good health on access to water and sanitation, stating that '[w]e shall not finally defeat AIDS, tuberculosis, malaria, or any of the other infectious diseases that plague the developing world until we have also won the battle for safe drinking water, sanitation and basic health care'[42].

Lastly, the broader impact of the lack of access to water on human development is enormous: children are unable to attend school because they suffer from water-related diseases or because they are responsible for collecting water, a time-consuming task. Water-related illness results in 443 million school days lost each year[43]. Similarly, the millions of women who spend several hours each day collecting water cannot engage in any gainful activity[44]. Addressing the lack of access to water would thus not only have direct benefits, it would also play a catalytic role for progress in public health, education and poverty reduction.

II. THE QUESTION OF PRIORITISATION

Addressing the crisis in the lack of access to water requires, of course, water resources. These resources have to be made accessible through infrastructure, which in turn depends on adequate financing as well as sound legal and institutional frameworks. Yet above all, it requires the

[36] *Ibid*, 210.

[37] United Nations Children's Fund and World Health Organization, *Diarrhoea: Why Children Are Still Dying and What Can Be Done* (New York and Geneva, 2009) 1.

[38] United Nations Development Programme, above n 4, 42.

[39] Apart from water-borne diseases and water-washed diseases, vector-borne diseases, such as malaria and schistosomiasis, are also associated with water. Yet they are not directly linked to the lack of access to safe water and sanitation. Such diseases are transmitted by insects or animals (vectors) breeding in aquatic ecosystems. Malaria, for example, is transmitted by mosquitoes. In this regard, they show a link to dam construction, irrigation development and water management, as human settlements are often situated close to man-made reservoirs and irrigation sites. See World Water Assessment Programme, above n 29, 205, 213 et seq.

[40] *Ibid*, 212.

[41] United Nations Development Programme, above n 4, 1.

[42] United Nations Secretary General, 'Poverty Biggest Enemy of Health in Developing World, Secretary-General Tells World Health Assembly', Press Release SG/SM/7808, 7 May 2001, available at <www.un.org/News/Press/docs/2001/sgsm7808.doc.htm> (accessed 1 October 2011).

[43] United Nations Development Programme, above n 4, 6.

[44] *Ibid*.

political will to use these resources in a way to prioritise basic human needs. The question of who gets how much water is not only a management issue, but also a political issue. As Bielefeldt puts it, the 'seemingly technical questions of water supply, water management or water quality actually reflect societal power relations'[45].

The lack of access is not a question of water availability. When speaking of *water scarcity*, it has to be kept in mind that only a small percentage – around 5 to 10 per cent – of the total consumption occurs in households[46], including non-essential household uses such as car-washing, filling swimming pools or watering lawns. Other sectors, in particular agriculture and industry, are much larger water users. There is sufficient water to meet all people's basic household needs, even in countries with very low water availability. The *Human Development Report 2006* sums this up, stating that 'the scarcity at the heart of the global water crisis is rooted in power, poverty and inequality, not in physical availability'[47].

While there is sufficient water to satisfy the basic household requirements of all people, the entire societal demand for water often exceeds availability. Therefore, competition for water arises. To meet basic human needs requires setting priorities in the allocation of water for that purpose. This is often not the case, for example, when golf courses are watered while neighbouring areas of a city are not supplied with water in the dry season[48]. Current priorities in the allocation of water tend to benefit the well-off and the powerful. A saying originating in the American West goes: 'Water flows uphill . . . toward money.'[49] Accordingly, addressing the question of prioritisation and allocation is essential.

Realising access to water evidently requires not only water resources, but also building, expanding and investing in infrastructure, as access to water cannot be achieved without provision of services. Yet if political priorities were aligned towards the fulfilment of basic human rights, it seems plausible that financing would be found. There are unprecedented resources and technologies available to solve the crisis in lack of access to water[50]. It has been estimated that an additional $10 billion per year are necessary to achieve the MDG targets on water and sanitation on the basis

[45] H Bielefeldt, 'Access to Water, Justice and Human Rights' in E Riedel and P Rothen (eds), *The Human Right to Water* (Berlin, Berliner Wissenschafts-Verlag, 2006) 49, 50.

[46] United Nations Development Programme, above n 4, 2.

[47] *Ibid*.

[48] See the example of Delhi, J Schweikle, 'Stadt der Verschwender' (2007) No 3 *Zeit Wissen* 26, 30.

[49] See A Markels, 'Sin City's Continuous Flow', *US News*, 27 May 2007; see also LA Swatuk, *Mainstreaming Politics: the bottom line on transboundary benefit sharing*, Paper presented at the World Water Week, Stockholm, 22 August 2006, 3; and more generally RP Hiskes, 'Missing the Green: Golf Course Ecology, Environmental Justice, and Local "Fulfillment" of the Human Right to Water' (2010) 32 *Human Rights Quarterly* 326.

[50] United Nations Development Programme, above n 4, 5.

of low-cost sustainable technology[51]. This seems an enormous sum. Put in perspective, however, this is less than global military spending over five days, and less than half of what people in rich countries spend on mineral water each year[52]. Moreover, the long-term benefits of investing in water and sanitation must be considered: fewer child deaths, fewer health-care requirements and increased school attendance. Recent estimates by the WHO assume that there is a $4 return for each dollar invested in water in costs averted and productivity gained[53]. The *Human Development Report 2006* assumes overall economic benefits of about $38 billion per year, the benefits thus far outweighing the costs[54].

This book will therefore address the underlying question of prioritisation in resource allocation, focusing on setting priorities in the allocation of water resources. These underlying decisions on allocation and prioritisation often drive the subsequent decisions on the expansion of infrastructure and services. When priorities in water allocation are set for the realisation of basic human needs, they may be expected to influence decisions about water services.

III. THE EMERGENCE OF THE HUMAN RIGHT TO WATER

The human right to water has significant implications for the allocation of resources and can play a decisive role in addressing this crisis. It guarantees access to safe and affordable water in sufficient quantities without discrimination, and it obliges States to act upon the lack of access. The human right to water has the potential to empower people. It transforms the basic need for water into a rightful claim and gives rise to corresponding obligations on the State. As such, individuals can hold the State to account to live up to its human rights obligations. The fact that human rights are legally binding lends legitimacy and authority to such claims. Human rights can provide a compelling and coherent framework on which to base claims to improve access to water[55].

[51] *Ibid*, 8. Estimates of the WHO are slightly higher, with $18 billion per year, see G Hutton and J Bartram, 'Global Costs of Attaining the Millennium Development Goal for Water Supply and Sanitation' (2008) 86 *Bulletin of the World Health Organization* 13, 13. See also the comparative study by Toubkiss stating that global estimates range from $9 billion to $30 billion per year, J Toubkiss, *Costing MDG Target 10 on Water Supply and Sanitation, Comparative Analysis, Obstacles and Recommendations* (Marseille, World Water Council, 2006) VI.

[52] United Nations Development Programme, above n 4, 8.

[53] G Hutton, L Haller and J Bartram, *Economic and Health Effects of Increasing Coverage of Low Cost Household Drinking-Water Supply and Sanitation Interventions to Countries Off-Track to Meet MDG Target 10* (Geneva, World Health Organization, 2007) 20.

[54] United Nations Development Programme, above n 4, 8.

[55] See generally, eg, B Hamm, 'A Human Rights Approach to Development' (2001) 23 *Human Rights Quarterly* 1005; M Darrow and A Tomas, 'Power, Capture and Conflict: A Call for Human Rights Accountability in Development Cooperation' (2005) 27 *Human Rights Quarterly* 471; E Filmer-Wilson, 'The Human Rights-Based Approach to Development: The Right to Water' (2005) 23 *Netherlands Quarterly of Human Rights* 213; see further ch 6, section I.

Compared to other human rights, dealing with the human right to water is complicated by the fact that it is not explicitly recognised either in the Universal Declaration of Human Rights (UDHR) or in the International Covenant on Economic, Social and Cultural Rights[56] (Social Covenant/ICESCR). It has been warned that a proliferation of human rights bears the danger of undermining the cause of recognised human rights. Alston stated that

> [t]he challenge is to achieve an appropriate balance between, on the one hand, the need to maintain the integrity and credibility of the human rights tradition, and on the other hand, the need to adopt a dynamic approach that fully reflects changing needs and perspectives and responds to the new threats to human dignity and well-being.[57]

Does recognising water as a human right undermine the cause of other human rights? Is water a 'new' human right in that sense?

In contrast to other issues recently discussed from a human rights perspective, such as access to information technologies[58], the need for access to water has little to do with changing living standards and circumstances. Water has always been essential to life, human health and dignity. Yet it has only recently started to be dealt with from a human rights perspective. Whereas this cannot be attributed to changing needs, threats to access to water only now become more obvious or are only now understood. Several aspects are relevant in that regard: Water is increasingly perceived as a scarce resource[59]. Water pollution and its impact on human health have become more and more evident. Moreover, many actors see a danger in the increasing commodification of water services and aim to link this to the issue of water as a human right[60].

[56] International Covenant on Economic, Social and Cultural Rights, 16 December 1966, entered into force 3 January 1976, 160 States Parties (as of 3 October 2011), *United Nations Treaty Series*, vol 993, 3.

[57] P Alston, 'Conjuring Up New Human Rights: A Proposal for Quality Control' (1984) 78 *American Journal of International Law* 607, 609.

[58] See S Tully, 'A Human Right to Access Water? – A Critique of General Comment No 15' (2005) 23 *Netherlands Quarterly of Human Rights* 35, 37; M Langford, 'Ambition that Overleaps Itself? A Response to Stephen Tully's Critique of the General Comment on the Right to Water' (2006) 24 *Netherlands Quarterly of Human Rights* 433, 437; S Tully, 'Flighty Purposes and Deeds: A Rejoinder to Malcolm Langford' (2006) 24 *Netherlands Quarterly of Human Rights* 461, 463; M Langford, 'Expectation of Plenty: Response to Stephen Tully' (2006) 24 *Netherlands Quarterly of Human Rights* 473, 474.

[59] The statement of Ismail Serageldin, the former Vice President of the World Bank, that 'many of the wars of this century were about oil, but wars of the next century will be about water' (in B Crossette, 'Severe Water Crisis Ahead for Poorest Nations in Next 2 Decades', *New York Times*, 10 August 1995, A13) has often been cited in this context; see also JR Starr, 'Water Wars' (1991) 82 *Foreign Policy* 17; J Bulloch and A Darwish, *Water Wars: Coming Conflicts in the Middle East* (London, Gollancz, 1993).

[60] See generally K Moosdorf, *Das Recht auf Wasser, Die Entstehung eines neuen Menschenrechts* (Marburg, Tectum, 2007) 79 et seq.

When the Social Covenant was drafted in the 1950s and 1960s, water was simply not considered a pressing issue. It was seen as freely available as the air to breathe[61], its availability taken for granted by the drafters of the Covenant[62]. The issue was therefore most likely overlooked when drafting the Social Covenant[63]. Yet water has always been fundamental to human survival. It is as important for humans as other well-established human rights such as the human right to food[64]. The Committee on Economic, Social and Cultural Rights (CESCR) points out in that regard that '[t]he right to water clearly falls within the category of guarantees essential for securing an adequate standard of living, particularly since it is one of the most fundamental conditions for survival'[65]. Considering water from a human rights perspective therefore cannot be thought of as undermining the cause of human rights, but rather fills a gap in the human rights framework that has become more obvious than ever over recent years with the increasing awareness of the crisis in the lack of access to water.

While the question of a human right to water has already been dealt with in some seminal work from the 1990s[66], it has only recently received increasing attention. The significance of General Comment No 15 of the CESCR from 2002 cannot be overestimated, as it has proven to be a catalyst for the discussion of the right to water and has triggered its further recognition[67]. Subsequently, many developments have taken place in the UN context. The

[61] E Riedel, 'The Human Right to Water and General Comment No 15 of the Committee on Economic, Social and Cultural Rights' in E Riedel and P Rothen (eds), *The Human Right to Water* (Berlin) Berliner Wissenschafts-Verlag, 2006) 19, 24, fn 19.

[62] E Riedel, 'The Human Right to Water' in K Dicke, S Hobe, KU Meyn, A Peters, E Riedel *et al* (eds), *Weltinnenrecht – Liber amicorum Jost Delbrück* (Berlin, Duncker & Humblot, 2005) 585, 589; T Kiefer, *The Human Right to Water: Domestic and International Implications*, LLM Thesis (Amsterdam, Universiteit van Amsterdam, 2003) 32, fn 130; Moosdorf, above n 60, 59; see also B Rudolf, 'Menschenrecht Wasser – Herleitung, Inhalt, Bedeutung, Probleme' in B Rudolf (ed), *Menschenrecht Wasser?* (Frankfurt am Main, Peter Lang, 2007) 15, 22.

[63] A Cahill, 'The Human Right to Water – A Right of Unique Status: The Legal Status and Normative Content of the Right to Water' (2005) 9 *International Journal of Human Rights* 389, 390; A Hardberger, 'Life, Liberty, and the Pursuit of Water: Evaluating Water as a Human Right and the Duties and Obligations it Creates' (2005) 4 *Northwestern Journal of International Human Rights* 331, 345; see also M Craven, 'Some Thoughts on the Emergent Right to Water' in E Riedel and P Rothen (eds), *The Human Right to Water* (Berlin, Berliner Wissenschafts-Verlag, 2006) 37, 40.

[64] Langford, above n 58, 437 et seq.

[65] Committee on Economic, Social and Cultural Rights, General Comment No 15, *The right to water* (Arts 11 and 12 of the International Covenant on Economic, Social and Cultural Rights), 20 January 2003, E/C.12/2002/11, para 3.

[66] SC McCaffrey, 'A Human Right to Water: Domestic and International Implications' (1992) 5 *Georgetown International Environmental Law Review* 1; P Gleick, 'The Human Right to Water' (1998) 1 *Water Policy* 487. Moreover, it has to be noted that the Sub-Commission on the Promotion and Protection of Human Rights had already started to consider the issue in the late 1990s and appointed a Special Rapporteur, El Hadji Guissé, see further ch 3, section II.C.v.

[67] Langford points out that the catalytic role of General Comment No 15 may well have surpassed the expectations of its drafters; see Langford, above n 58, 479.

UN High Commissioner for Human Rights presented a report in August 2007 dealing with the 'scope and content of the relevant human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments'. It concluded 'that it is now time to consider access to safe drinking water and sanitation as a human right'[68]. In March 2008, the Human Rights Council established a Special Procedure on human rights, water and sanitation[69]. Catarina de Albuquerque took up her mandate in November 2008. Her work contributes to raising awareness of water and sanitation and their perception as human rights, as well as the problems that persist for many people.

A breakthrough occurred in 2010 as regards the recognition of the human right to water. In July 2010, the UN General Assembly adopted a resolution on the right to water and sanitation that explicitly '[r]ecognises the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights'[70]. This was affirmed by the Human Rights Council in September 2010, which stated 'that the human right to safe drinking water and sanitation is derived from the right to an adequate standard of living and inextricably related to the right to the highest attainable standard of physical and mental health, as well as the right to life and human dignity'[71]. These resolutions are a very significant political step towards the recognition of the right to water, but from a legal perspective many questions remain as to the status of the right, ie whether it is legally binding and has a basis in international human rights law.

IV. SCOPE AND OUTLINE OF THE BOOK

This book seeks to answer these questions through a detailed analysis of the potential legal foundations of the human right to water, including human rights treaties and customary international law. It further examines its legal nature, States' obligations arising from the right to water and its normative

[68] Human Rights Council, *Report of the United Nations High Commissioner for Human Rights on the scope and content of the relevant human rights obligations related to equitable access to safe drinking water and sanitation under international human rights instruments*, 16 August 2007, A/HRC/6/3, para 66 (hereafter '*Report of the High Commissioner*').

[69] Human Rights Council, *Human rights and access to safe drinking water and sanitation*, 28 March 2008, A/HRC/Res/7/22. The mandate was initially entitled *Independent Expert on the Issue of Human Rights Obligations Related to Access to Safe Drinking Water and Sanitation*. After the human right to water and sanitation was recognised, the mandate was extended to that of a Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation; see Human Rights Council, *The human right to safe drinking water and sanitation*, 8 April 2011, A/HRC/Res/16/2.

[70] General Assembly, *The human right to water and sanitation*, 3 August 2010, A/Res/64/292, para 1.

[71] Human Rights Council, *Human rights and access to safe drinking water and sanitation*, 6 October 2010, A/HRC/Res/15/9, para 3.

content. Subsequently, it aims to examine the human rights implications for establishing priorities in water use, in particular to what extent precedence for basic human needs follows from human rights. It proposes the human rights framework and an approach based thereon to address the underlying structural causes of the lack of access to water as rooted in societal and power relations, inequalities and poverty.

The prioritisation between various kinds of uses is one of the issues identified by the above-mentioned Report by the High Commissioner as demanding further attention[72]. The Report states:

> Beyond the clear basic principle that safe drinking water for personal and domestic uses should be given precedence over other water uses, questions remain regarding the prioritization between various kinds of water use, particularly in situations of water scarcity. Once a sufficient amount of safe drinking water to prevent disease has been secured for all, allocation of water among various uses – water for personal and domestic uses beyond this sufficient amount, water to produce food, water to sustain livelihoods, or water to ensure environmental hygiene – remains unclear[73].

This focus on questions of allocation and prioritisation at the same time limits the scope of this book. While the question of water services will, of course, be touched upon, the book places stronger emphasis on the more fundamental underlying question of priorities in water allocation. To a certain extent, the priorities that will be established for water allocation can be transferred to other areas of resource allocation. As a consequence of the emphasis on questions of water allocation, the book does not address the question of private sector participation in the provision of water services[74] that has often been the focus of the debate[75]. Furthermore,

[72] Human Rights Council, *Report of the High Commissioner*, above n 68, paras 44 et seq, 67 et seq.

[73] *Ibid*, para 62.

[74] See in this regard M Fitzmaurice, 'The Human Right to Water' (2007) 18 *Fordham Environmental Law Review* 537, 557 et seq; W Vandenhole and T Wielders, 'Water as a Human Right – Water as an Essential Service: Does it Matter?' (2008) 26 *Netherlands Quarterly of Human Rights* 391; M Williams, 'Privatization and the Human Right to Water: Challenges for the New Century' (2007) 28 *Michigan Journal of International Law* 469; V Petrova, 'At the Frontiers of the Rush for Blue Gold: Water Privatization and the Human Right to Water' (2006) 31 *Brooklyn Journal of International Law* 577; A Kok, 'Privatisation and the Right to Access to Water' in K Feyter and F Gómez Isa (eds), *Privatisation and Human Rights in the Age of Globalisation* (Antwerp, Intersentia, 2005) 259; C de Albuquerque and IT Winkler, 'Neither Friend nor Foe – Why the Commercialization of Water and Sanitation Services Is Not the Main Issue for the Realization of Human Rights' (2010) 17 *Brown Journal of World Affairs* 167; Human Rights Council, *Report of the independent expert on the issue of human rights obligations related to access to safe drinking water and sanitation, Catarina de Albuquerque*, 29 June 2010, A/HRC/15/31; K Nowrot and Y Wardin, *Liberalisierung der Wasserversorgung in der WTO-Rechtsordnung, Die Verwirklichung des Menschenrechts auf Wasser als Aufgabe einer transnationalen Verantwortungsgemeinschaft*, Beiträge zum Transnationalen Wirtschaftsrecht, Heft 14 (Halle, 2003); P Dobner, 'Des Menschen Recht auf Wasser' (2007) *Blätter für deutsche und internationale Politik* 9.

[75] United Nations Development Programme, above n 4, 10.

the study puts its focus on the State as the primary duty-bearer and its human rights obligations. It does not deal with responsibilities of third parties, other actors and their accountability[76].

While the book is concerned with water allocation, it focuses on establishing priorities in water allocation in substantive terms. How to implement these priorities is to a great extent left to the discretion of States and falls outside the scope of this work. It is thus not concerned with the processes and instruments of how to achieve water allocation. Different instruments exist and may be used to implement the established prioritisation in water uses. There is a great variety of legal configurations for allocation mechanisms that States can use to regulate and control water use and demand. These include water rights, water licences, regulated water markets, other regulatory mechanisms, pricing mechanisms and subsidies[77]. Such national allocation mechanisms can impede or facilitate the realisation of the right to water. By focusing on the substantive question of priorities, it will be examined to what extent human rights provide parameters or restrictions for decisions on allocation[78].

To address these questions, the book starts by providing some background on water availability and competing demands from different sectors, before turning to the human right to water. It analyses its legal foundations, its legal nature, the State's obligations arising from the right and its normative content. Subsequently, it turns to the implications for water allocation, balancing personal and domestic uses guaranteed by the human right to water with other water uses that link to other human rights. The book concludes with an analysis of the benefits of understanding water as a human right.

[76] See in this regard Human Rights Council, *Report of the independent expert*, A/HRC/15/31, above n 74; and more generally Human Rights Council, *Protect, Respect and Remedy: a Framework for Business and Human Rights, Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, John Ruggie,* 7 April 2008, A/HRC/8/5; Human Rights Council, *Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework, Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, John Ruggie,* 21 March 2011, A/HRC/17/31, N Jägers, *Corporate Human Rights Obligations: in Search of Accountability* (Antwerp, Intersentia, 2002); A Clapham, *Human Rights Obligations of Non-State Actors* (Oxford, Oxford University Press, 2006); on international organisations, see AFS Russell, 'International Organizations and Human Rights: Realizing, Resisting or Repackaging the Right to Water?' (2010) 9 *Journal of Human Rights* 1.

[77] See United Nations Development Programme, above n 4, 17 et seq; A Dinar, MW Rosegrant and R Meinzen-Dick, *Water Allocation Mechanisms – Principles and Examples*, Policy Research Working Paper 1779 (Washington DC, World Bank, 1997).

[78] Similarly, environmental laws or ecological minimum flow requirements can be seen as restrictions on governments' allocative authority, see S Burchi, *Balancing Development and Environmental Conservation and Protection of the Water Resource Base – The 'Greening' of Water Laws*, Paper Presented at the Workshop 'Legal Aspects of Water Sector Reforms', 20–21 April 2007 (Geneva, International Environmental Law Research Centre, 2007), available at <www.ielrc.org/activities/workshop_0704/content/d0706.pdf> (accessed 1 October 2011).

Following this introduction, chapter two will show that there is sufficient water to meet all people's basic personal and domestic needs. However, as many other sectors rely on water, there are competing demands. Basic human needs are often neglected in the allocation of water. Due to constantly increasing demands, urbanisation and other factors, such competition is bound to increase. The question of allocation and prioritisation therefore is increasingly important.

Chapter three turns to water as a human right. While the human right to water was formally recognised in 2010, the resolutions of the General Assembly and the Human Rights Council by themselves leave many questions unanswered. The chapter seeks to determine the legal status of the right to water – whether it is legally binding and has a basis in international human rights law – by examining its potential legal foundations. Chapter four then turns to its legal nature, the obligations associated with it and its normative content.

Having determined that the right to water has a legal basis in international law, the book aims to establish its implications for water allocation in chapter five. It identifies other sectors that use water to a greater extent than households, and assesses their demand in order to balance competing uses and set priorities in water allocation. It establishes to what extent other water uses relate to human rights and aims to prioritise water uses in accordance with a rights-based analysis. Instead of prioritising any single water use, a framework is developed that builds upon different levels of realisation of human rights: the survival level, the core level and the level of full realisation of human rights. These levels provide the basis for setting priorities. The second component of the framework takes account of the fact that some human rights relate to water but do not rely on it exclusively in their realisation. Accordingly, alternatives for the realisation will be considered. The overall aim is the realisation of all human rights to the greatest extent possible.

Lastly, chapter six aims to determine why it is beneficial to consider the issue of access to water and the prioritisation of water for basic human needs from a human rights perspective. Their recognition as a human right transforms basic needs into legitimate claims. These rights correspond with obligations borne by the State, which allows people to hold the State to account. The benefits of an approach based on human rights will first be considered in general and then in more detail regarding the possibilities of judicially enforcing the right to water and the resulting priority for basic human needs. In this regard, national case law as well as international enforcement mechanisms will be analysed.

Chapter seven presents the conclusion and an outlook.

This book is situated in international human rights law. It is primarily concerned with international guarantees of the human right to water. Yet it has to be taken into account that human rights law is different from

other areas of international law. It is not characterised by a horizontal structure, but primarily concerned with the relation of the State and the individual. States are the primary duty-bearers in the realisation of human rights. International human rights law sets up international standards for this relationship, thus reaching from the international sphere into the national sphere. The implementation of human rights always takes place at the national level. The book does not stop at normative considerations, but looks at implementation at the national level, more specifically the implications of the human right to water for water allocation.

Moreover, the enforcement of human rights guarantees primarily takes place at the national level. Due to the rule of exhaustion of local remedies, international enforcement mechanisms are only subsidiary to national remedies. The CESCR points outs that

> [t]he rule requiring the exhaustion of domestic remedies reinforces the primacy of national remedies in this respect. The existence and further development of international procedures for the pursuit of individual claims is important, but such procedures are ultimately only supplementary to effective national remedies[79].

National courts often rely on national guarantees of the right to water, but use international standards in the interpretation of these guarantees. Such case law reinforces the linkages between international and national human rights law.

While international human rights law and national (constitutional) guarantees are two distinct bodies of law, they are interlinked and intertwined with a significant degree of overlap. In particular, the question of implications for water allocation – at the national level – cannot be examined without considering national implementation. Therefore, despite being well aware that the human right to water in international law is not tantamount to national guarantees, the book draws on national experiences and examples of legislation and case law.

[79] Committee on Economic, Social and Cultural Rights, *General Comment No 9, The domestic application of the Covenant*, 3 December 1998, E/C12/1998/24, para 4.