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7. The Emergence of Standards Regarding the Right of Access to Water and Sanitation

Abstract

Despite continuing uncertainty over the precise legal status of the putative human right(s) of access to water and sanitation in international law, and also within the domestic legal frameworks of many national jurisdictions, the elaboration continues apace of a rich montage of water services standards by a diverse cast of formal and informal global, regional, State and transnational actors. In addition to emerging standards regarding the physical safety and adequacy of water supplied for domestic purposes, notably including the WHO Guidelines for Drinking-Water Quality, standards are also being adopted by bodies such as the International Organisation for Standardisation (ISO), which set down more general service quality guidelines for utilities providing domestic water and sanitation services. Also, certain institutions providing finance for major water services projects, such as multilateral development banks (MDBs), are developing sophisticated standards for cost recovery which seek to adopt elements of a human rights-based approach by taking account of the affordability of water and sanitation services and providing safeguards for poor and vulnerable people, including restrictions on service disconnection for non-payment of charges. At every level of decision-making regarding water and sanitation services, standards of governance informed by the practice of human rights, including standards concerned with transparency, participation, reviewability and accountability, have become pervasive.

1. Introduction

The question of which standards attend the recent emergence in international human rights discourse of a right of access to water and sanitation is absolutely central to understanding this right's role in creating a novel normative paradigm to further universal access. Though the precise legal status, justiciability and normative implications of a right to water and sanitation in international human rights law remains the subject of debate,[1] the proliferation of substantive and procedural standards in support of such a right testifies to the practical impact of such a rights discourse in this area. Myriad aspects of the various steps required to implement a human right to water and sanitation have come to be defined by diverse types of standards, both formal and informal, adopted at the international and transnational levels. These include technical environmental and health-related standards, such as those pertaining to the quality of drinking water, service standards for utility companies providing water and sanitation services, social and economic standards for the protection of vulnerable people, and governance standards designed to ensure the meaningful participation of stakeholders and the public in decision-making concerning all aspects of water services provision and water resources management.

Though a human right to water and sanitation might arise in either international law or domestic law, this chapter will focus on standards emerging at the international or transnational levels, as reference to the right to water or sanitation in national constitutions or legislation tend to be fleeting and lacking in detail. National rules therefore come to rely heavily on widely accepted standards developed at the international and transnational levels,

[1] For example, United Nations Development Report (UNDP) *Human Development Report 2006 – Beyond scarcity: Power, poverty and the global water crisis* (UN 2006), concedes at 60, that 'the recognition that water is a basic human right' can merely be understood as 'establishing a non-legally binding normative framework for the "progressive realisation" of the human right to water and sanitation'.

as indicative of international "best practice".[2] Such standards inevitably inform and facilitate the practical application of domestic rules. However, this chapter does not confine itself to an analysis of formal standards developed and adopted by State-led and officially mandated international bodies. It also takes account of voluntary codes and other informal performance standards relevant to realisation of different aspects of the human right to water and sanitation, which might in certain situations have a greater influence on the conduct of key actors than formal legal frameworks, even where such frameworks exist. Lack of international consensus regarding the formal legal status of the human right to water and sanitation, along with wide disparities in the right's formal incorporation into national legal systems, illustrate the inherent inadequacies of traditional State-centred mechanisms for elaborating and enforcing economic, social and cultural rights.[3] In response, a range of novel, and often informal, standards are emerging which serve incrementally to normativise the values promoted within the human right to water and sanitation.

2. Development of the Human Right(s) to Water and Sanitation

[2] See, for example, the Botswana case of *Matsipane Mosetlhanyane and Gakenyatsiwe Matsipane v The Attorney General* [2011] CA (Lobatse) CACLB07410, summarised in WaterLex / WASH United, *The Human Rights to Water and Sanitation in Courts Worldwide: A Selection of National, Regional and International Case Law* (WaterLex/WASH United 2014) 34.

[3] Walker describes Twining's point of departure in his examination of the new conception of legal order embodied in "global law" as 'the inadequacy of the received model of modern law – the state-centred law-world – to our circumstances of intensifying "global" interdependence'; See N. Walker, *Intimations of Global Law* (CUP 2014) 9, referring to W. Twining, *General Jurisprudence: Understanding Law from a Global Perspective* (CUP 2009) Chapter 1.

A degree of international consensus has now been achieved as regards the origins of the human right of access to water in international law and its broad normative content with the 2002 adoption of General Comment No. 15[4] by the UN Committee on Economic, Social and Cultural Rights (CESCR). General Comment No. 15 represents the CESCR's definitive position on the subject and 'is the first recognition by a United Nations human rights body of an independent and generally applicable human right to water'.[5] Though CESCR general comments do not formally impose legal obligations on States Parties to the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR),[6] let alone other States, General Comment No. 15 constitutes a non-binding but 'highly authoritative interpretation of the Covenant' and of the legal implications which flow from key relevant Covenant provisions.[7] As a non-binding interpretation, General Comment No. 15 may be used to determine whether States have met their treaty obligations.[8] However, McCaffrey characterises General Comment No. 15 as being 'more in the nature of a statement *de lege ferenda* rather than *lex lata*' and cautions that the interpretation of Articles 11 and 12 of the 1966 Covenant contained therein 'must be accepted by the States parties to the Covenant in

[4] Committee on Economic, Social and Cultural Rights, General Comment No. 15, The Right to Water (Articles 11 and 12 of the International Covenant on Economic, Social and Cultural Rights) U.N. DOC. E/C.12/2002/11, 26 November 2002; see also chapters 2, 5 and 13 in this volume by Sumudu Attapatu, Louis Kotzé & Anel du Plessis, and Nathan Cooper respectively, which also refer to the evolution of the right to water.

[5] S.C. McCaffrey, 'The Human Right to Water' in E. Brown Weiss, L. Boisson de Chazournes and N; Bernasconi-Osterwalder (eds), *Fresh Water and International Economic Law* (OUP 2005) 93 101

[6] UNGA Res. 2200, 21 UN GAOR, 22nd Sess., Supp. 49, UN Doc. A/6316 (1967), (1967) 6 ILM 360

[7] McCaffrey (n 5) 94.

[8] M. Williams, 'Privatization and the Human Right to Water: Challenges for the New Century'(2007) 28 *Michigan Journal of International Law* 469, 475; See also, E. B. Bluemel 'The Implications of Formulating a Human Right to Water' (2004) 31 Ecology Law Quarterly 957, 972.

order to be binding upon them'.[9] Though McCaffrey noted in 2005 that 'it may take some time for countries to react, one way or another, to the Committee's views, and thus for observers to have evidence on which to base a judgment as to whether an independent human right to water truly forms part of international law', it is today possible to identify a reasonably significant body of recent State practice supporting the existence of this right.[10]

While it has been suggested that a human right to water can be inferred from the 1948 Universal Declaration of Human Rights,[11] and the 1966 Covenant on Civil and Political Rights,[12] the CESCR contends that the emergence of the human right to water in general international law can primarily be traced to Articles 11 and 12 of the 1966 ICESCR.[13] Article 11(1) of the Covenant, which provides for the right to an adequate standard of living,

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[9] McCaffrey (n 5) 103.

[10] For examples of relevant State practice, particularly judicial or official policy statements alluding to the human right to water or to General Comment No. 15, see WaterLex / WASH United (n 2); Bluemel, (n 8) 977; R. Pejan, 'The Right to Water: The Road to Justiciability' (2004) 36 George Washington International Law Review 1181, at 1194-96 and 1203-08; P.H. Gleick, 'The Human Right To Water' (1998) 1(5) Water Policy 487, 494.

[11] Universal Declaration of Human Rights, UNGA Res. 217A (III), (New York, 10 December 1948), UN GAOR, 3rd Sess., UN Doc. A/64 (1948), Notably, Article 25(1) on the right to an adequate standard of living; See further A. Hardberger, 'Life, Liberty and the Pursuit of Water: Evaluating Water as a Human Right and the Duties and Obligations it Creates' (2005) 4(2) Northwestern Journal of International Human Rights 331, 337; and S.M.A. Salman and S. McInerney-Lankford, The Human Right to Water: Legal and Policy Dimensions (World Bank 2004); Gleick, ibid 491.

[12] UNGA Res. 2200, 21 UN GAOR, 22nd Sess., Supp. 52, UN Doc. A/6316 (1967), (1967) 6 ILM 368. See General Comment No. 15 (n 4), para. 3. Notably Article 6 on the right to life; See Williams (n 8) 474.

[13] Williams (n 8) 476. See further, J. Razzaque 'Trading Water: The Human Factor' (2004) 13(1) Review of European Community and International Environmental Law 15, 17.

sets out a non-exhaustive, indicative list of related entitlements which are indispensable for the realisation of that right, 'including adequate food, clothing and housing'. The CESCR concludes 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'.[14] One view suggests that water is such a fundamental requirement for an adequate standard of living that its formal inclusion under Article 11 was unnecessary.[15] In this context, General Comment No. 15 'notes the importance of ensuring sustainable access to water resources for agriculture to realize the right to adequate food', and also takes note of the duty in Article 1(2) of the Covenant, which provides that a people may not 'be deprived of its means of subsistence'.[16] The CESCR had earlier determined that the right to adequate housing should include 'sustainable access' to safe drinking water, site drainage, sanitation and washing facilities.[17] The Committee has also found that the right to water is inextricably linked to the right to the highest attainable standard of health, enshrined under Article 12(1) of the Covenant. General Comment No. 15 acknowledges the significance of clean, safe water for hygiene and health, stating that '[e]nvironmental hygiene, as an aspect of the right to health under article 12, paragraph 2(b), of the Covenant, encompasses taking steps on a non-discriminatory basis to prevent threats to health from

[14] General Comment No. 15 (n 4) para. 3.

[15] Gleick (n 10) 487. See further, S.R. Tully, 'The Contribution of Human Rights to Freshwater Resource Management' (2004) Yearbook of International Environmental Law 101,108.

[16] General Comment 15 (n 4) para. 7; See further, Tully ibid 110.

[17] CESCR, General Comment 4, The Right to Adequate Housing (Article 11(1)), UN Doc. E/1992/23, para. 8(b).

unsafe and toxic water conditions'.[18] Gleick insists that access to water can readily be inferred as a derivative right necessary to meet both the explicit rights to health and an adequate standard of living.[19]

Therefore, though General Comment No. 15 effectively extends the scope of the right to water, from a previously restricted understanding encompassing only a right to drinking water[20] to one including basic sanitation and water required to produce adequate food,[21] it strongly suggests that the right is ancillary to and must be implied from other economic, social and cultural rights rather than an independent right under the ICESCR.[22] This issue is

[18] General Comment No. 15 (n 4) para. 8. See also, CESCR, General Comment No. 14, The Right to the Highest Attainable Standard of Health (Article 12), UN Doc. E/C.12/2000/4 (2000), at paras. 11, 12, 15, 34, 36, 40, 43, 51 and 65.

[19] Gleick (n 10) 492 citing a 1999 review of human rights progress over the past 50 years, Y. Danieli, E. Stamatopoulou and C. J. Diaz, *The Universal Declaration of Human Rights: fifty years and beyond* (Baywood Publishing Co. 1999).

[20] See, Salman and McInerney-Lankford *(*n 11) 65; M. Mahayni, 'The Human Right to Water: is the State's Capacity to Fulfil its Obligations Hindered under Public-Private Partnerships?', (2006) 17(3) Water Law 100, 101; For example, under Art. 14(2)(h) of the 1981 Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1249 UNTS 13 (30 September 1981), the right is expressed as a right of 'water supply', and under Art. 24 of the 1989 Convention on the Rights of the Child (CRC), 1577 UNTS 3 (20 November 1989), as a State obligation to ensure 'provision of … clean drinking water'. See further, Williams (n 8) 472-473.

[21] The Committee's understanding of the scope of the right to water appears to have expanded between 2000 and 2002, as General Comment 14 (n 18), had only included, at para. 4, 'access to safe and potable water' within the rubric of the right to health.

[22] UN General Assembly Resolution 70/16 (22 February 2016), UN Doc. A/RES/70/169, recalls that

of considerable practical significance because the normative content of a right to water that is ancillary to, and instrumental in the realisation of, other established rights will necessarily be determined by reference to the particular established right invoked. Noting that 'various connected rights may implicate different state obligations', Williams explains that a right to water derived from the right to life, and merely requiring the provision of drinking water, would impose lesser State obligations than a right to water derived from the right to health, requiring the provision of water for both drinking and sanitation.[23] Uncertainty also remains as to the true normative status and content of several economic, social and cultural rights listed under the ICESCR, from which the right to water may be derived, leading to further confusion as to its precise legal implications.[24] For example, though some commentators describe the right to food as well established,[25] it might be argued that it raises many questions regarding the enforceability of such welfare rights under the ICESCR. At any rate, though proponents of an independent right to water argue that it would result in greater interpretive consistency, State compliance, enforcement and remedies for violations,[26] such an independent right could only arise in international law by means of a dedicated treaty

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> 'the human rights to safe drinking water and sanitation are derived from the right to an adequate standard of living and are inextricably related to the right to the highest attainable standard of physical and mental health, as well as to the right to life and human dignity'.

See also, Human Rights Council Resolution 33/10 (27 September 2016), UN Doc. A/HRC/33/L.19

[23] Williams (n 8) 477. Williams also concludes that both CEDAW and CRC, (n 20), suggest that 'the right to water merits protection because of its connection to other rights'. See further, Bluemel, (n 8) 963.

[24] Bluemel ibid 971.

[25] Williams (n 8) 479.

[26] Bluemel, (n 8) 968-972; Hardberger (n 11) 360-362; See, Williams ibid 478; See also, Gleick (n 10) as an example of a commentator who argues, at 490 and 501, that an independent right to water exists in customary international law.

instrument or through customary international law.[27] There does not currently exist any such treaty instrument, nor any proposal therefor, by which States might bind themselves in this regard. Also, despite the sustained declaratory support of international conferences and UN agencies, as well as some legislative and constitutional State recognition, there is as yet insufficient generalised State practice to establish a right to water under customary international law that would bind those States that have not actively and formally recognised the right.[28] Williams therefore concludes that '[a]t best, this seems to give the independent right the current status of a normative ideal'.[29] Such legal uncertainty highlights the practical utility of the broad range of technical and performance standards currently emerging in relation to realisation of the right to water.

If the formal normative status and justiciability in international law of the human right to water remains in doubt, then even greater uncertainty bedevils the emergence and recognition of the closely related human right of access to sanitation.[30] As a leading proponent pointed out in 2010

> 'As yet, there is no single resolution of the UN General Assembly on the right to sanitation and no worldwide agreement supporting this right. There is no agreed description of core obligations on sanitation and no definition of the content of the right to sanitation.'[31]

[27] See, Hardberger ibid 361-362.

[28] D. J. Bederman, *International Law Frameworks* (2001), at 15, cited by Williams (n 8) 478.

[29] ibid.

[30] See generally, H. Smets (ed.), *L'Accès à l'assainissement, un Droit Fondamental* (2010 Editions Johanet).

[31] H. Smets, 'The Right to Sanitation: A New Human Right in Developed Countries' (2010) 40(2) and (3) *Environmental Policy and Law* 112 (at 3 of on-line version).

Though the UN General Assembly has since adopted a 2010 Resolution on 'The Human Right to Water *and Sanitation*',[32] Smets' observation that States 'in particular have not adopted a General Comment on the Right to Sanitation' remains valid.[33] Where it does include express mention of sanitation, General Comment No. 15 states that '[e]nsuring that everyone has access to adequate sanitation is not only fundamental for human dignity and privacy, but is one of the principal mechanisms for protecting the quality of drinking water supplies and resources'.[34] This suggests that it focuses primarily on problems of access to drinking water rather than the issue of access to sanitation, largely viewing the universal provision of adequate sanitation as necessary for, and ancillary to, provision of safe drinking water. More recently, commentators have noted that Sustainable Development Goal 6 (SDG 6), adopted in 2015 under the auspices of the 2030 Agenda for Sustainable Development,[35] includes Target 6.2 committing the international community to 'achieve access to adequate and equitable sanitation and hygiene for all and to end open defecation', which may play a formative role in crystalizing the commitment of States to the right to sanitation.[36]

Overshadowing any discussion of whether the human right to water and sanitation might exist as an ancillary or independent right is the fact that the ICESCR, and any rights derived

[32] UNGA Res 64/294 (26 July 2010), UN Doc. A/64/L.63/Rev.1 (emphasis added).

[33] Smets (n 31) (p. 3 of on-line version).

[34] Para. 29. See also, paras. 1 and 28.

[35] UNGA, 'Transforming our world: the 2030 Agenda for Sustainable Development', UNGA Res. 70/1 (25 September 2015), UN Doc. A/RES/70/1. The SDGs are available at <http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-6-clean-water-and-sanitation.html> accessed 11June 2018.

[36] See Owen McIntyre, 'International Water Law and SDG 6: Mutually Reinforcing Regimes', in D. French and L. Kotze (eds.), *Global Goals: Law, Theory and Implementation* (Edward Elgar 2018).

therefrom, suffers from a clear lack of immediate enforceability, with Article 2(1) merely requiring each State party 'to take steps … to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant'. Thus, '[t]he principal challenge is therefore linking the expectations of individuals as rights-holders with the duties owed by others.'[37] Regarding the justiciability of the obligations set out under the ICESCR, McCaffrey suggests the language of Article 2(1) would provide a lawyer acting for a State accused of breaching its obligations with 'ample bases for a defense'.[38] However, in relation to the package of obligations set out in General Comment No. 15 as inherent to the right to water, Tully argues that 'several obligations – namely non-discrimination and undertaking deliberate, concrete and targeted steps – are amenable to immediate implementation'.[39] The CESCR has earlier characterised a number of such 'core obligations, expressly identified in General Comment No. 15 as applying to the right to water,[40] as being non-derogable and of 'immediate effect'.[41] The obligation upon a State to 'take steps … to the maximum of its available resources', has been characterised as

[37] Tully (n 15) 103.

[38] McCaffrey (n 5) 97.

[39] Gleick (n 10) 104. Indeed, any State measure affecting access to water or sanitation which might be regarded as inherently discriminatory, might fall foul of Article 2(2) of the ICESCR.

[40] General Comment No. 15 (n 4), para. 37. However, an examination of the 'core obligations' identified under para. 37 would lead one to conclude that only those obligations listed under para. 37(a), (b) and (f) might plausibly be considered capable of requiring immediate effect. See Mahayni (n 20) 102.

[41] CESCR, General Comment No. 3: The Nature of States Parties' Obligations (Article 2(1)) (1990), UN Doc. E/1991/23.

one of 'due diligence',[42] and Hardberger hints at the role of the due diligence concept in the elaboration of practicable standards for realisation of the right:

> 'Although due diligence has the disadvantage of being an undefined standard, it provides an adjustable criterion that depends on a particular government's capabilities and resources. The flexibility of the due diligence standard could also be its downfall in implementation. It raises several questions regarding who gets to determine a state's capabilities and who determines what diligence is sufficient. In spite of its drawbacks, the usefulness outweighs the uncertainty by providing a start that, in theory, can incorporate all countries.'[43]

Regardless, however, of the formal legal status of the right to water and sanitation, the frenetic discourse launched by General Comment No. 15 has clearly had a significant impact on the practice of States and myriad other actors concerned, directly or indirectly, in the provision of water services or management of water resources. General Comment No. 15 correctly points out, at least insofar as it might apply in certain specific contexts, that '[t]he right to water has been recognized in a wide range of international documents, including treaties, declarations and other standards'.[44] Of greatest significance are several specialised binding instruments, including the 1979 CEDAW,[45] Article 14(2) of which requires that

[42] See, S. C. McCaffrey, 'A Human Right to Water: Domestic and International Implications'(1992) 5 Georgetown International Environmental Law Review 1, 13.

[43] Hardberger (n 11) 336.

[44] General Comment No.15 (n 4) para. 4.

[45] UNGA (n 20). See also, relevant declarations of intent, including the 1995 Beijing Declaration and Platform for Action, UN Doc A/CONF.177/20 (1995) and UN Doc. A/CONF.177/20/Add.1 (1995), 'Women and Health' paras. 92 and 106(x), cited in Tully (n 15) 105.

States parties ensure to women the right to 'enjoy adequate living conditions, particularly in relation to … water supply', and the 1989 CRC,[46] Article 24(2)(c) of which requires States parties to combat childhood disease and malnutrition 'through the provision of adequate nutritious foods and clean drinking water'. Williams points out that, in framing concluding observations in response to country reports submitted under the CRC and CEDAW, the respective monitoring bodies for each convention have tended to use language resonant of a right of access to water and sanitation.[47] Other relevant binding treaty instruments include the 1949 Geneva Convention (III) on the Treatment of Prisoners of War[48] and the 1949 Geneva Convention (IV) on the Treatment of Civilian Persons in Time of War.[49] While some commentators remain sceptical,[50] the significance of such clear treaty obligations for the development of the human right to water in general international law should not be underestimated. These obligations are set out in very widely ratified[51] and formally binding conventional instruments with rigorous reporting and monitoring procedures and institutional

[46] CRC (n 20).

[47] Williams (n. 8) 482-485.

[48] Articles 20, 26, 29 and 46. (1949) 75 UNTS 135. Entered into force 1950.

[49] Articles 23, 55, 59, 85, 89 and 127. (1949) 75 UNTS 287. See also, Additional Protocol to the Geneva Conventions Relating to the Protection of Victims of International Armed Conflicts (Protocol I), (1977) 1125 UNTS 3, at Articles 54 and 68-71, and Additional Protocol to the Geneva Conventions Relating to the Protection of Victims of Non-International Armed Conflicts (Protocol II), (1977) 1125 UNTS 609, at Articles 5 and 18.

[50] See, for example, McCaffrey (n 5) 98 and 107.

[51] For example, Smets notes that CEDAW has 170 ratifications, while the CRC is 'the most widely accepted human rights treaty ever' with 191 ratifications. See, H. Smets, 'Economics of Water Services and the Right to Water' in Brown Weiss, Boisson de Chazournes and Bernasconi-Osterwalder (eds.) *Freshwater and International Economic Law* (OUP 2005); McCaffrey (n 5) 173 and 174.

monitoring machinery with the mandate and capacity to issue persuasive interpretations of the State obligations contained therein. Also, while water entitlements set out under these conventions extend only to women and children, it would be difficult at a practical level to compel provision of basic water and sanitation services to children or women to the exclusion of other members of families or communities. Other instruments lend further support for core elements of the right to water. For example, ILO Convention 169[52] aims to protect the rights of indigenous and tribal peoples and includes clear obligations for member States.[53]

A number of regional human rights instruments support the existence of a right to water. Article 14 of the 1990 African Charter on the Rights and Welfare of the Child, expressly requires States to ensure the availability of safe drinking water for the 'best attainable state of health',[54] while Article 11 of the 1988 Additional Protocol to the American Convention of Human Rights in the area of economic, social and cultural rights provides that 'everyone shall have the right to live in a healthy environment and to have access to basic public services'.[55] Regional bodies responsible for monitoring compliance with human rights obligations have also inferred the existence of a right to water from core obligations of States under general regional human rights instruments. For example, the African Commission on Human and Peoples' Rights found in 1995 that Zaire (Democratic Republic of Congo) had

[52] Convention concerning Indigenous and Tribal Peoples in Independent Countries, 27 June 1989, 28 ILM 1382 (1989). Notably, Article 15(1) on the rights of indigenous peoples to use and management of natural resources.

[53] See generally, P. Cullet and A. Gowlland-Gaultieri, 'Local Communities and Water Investments', in Brown Weiss, Boisson de Chazournes and Bernasconi-Osterwalder (eds.) (n51); McCaffrey (n 5) 303, 323-325.

[54] OAU Doc. CAB/LEG/24.9/49 (1990) in force 1999.

[55] (San Salvador, 17 November 1988). <http://www.oas.org/juridico/english/Treaties/a-52.html > accessed 11 June 2018.

violated the right to health under Article 16 of the 1981 African Charter on Human and Peoples Rights[56] by failing 'to provide basic services such as safe drinking water'.[57] Similarly, the Inter-American Commission on Human Rights 1997 report on Ecuador found that the 'considerable risk posed to human life and health by oil exploration activities … through, *inter alia*, contamination of water supplies'[58] could impact upon the right to life and the duty to protect the physical integrity of the individual under the 1969 American Convention on Human Rights.[59]

Quite apart from international human rights law, values inherent to the right to water and sanitation are reflected in other fields of international law. For example, regarding those elements of the right which relate to the environmental protection of freshwater resources,[60] Williams concludes that 'principles and texts of international environmental law, while perhaps not sufficient to establish a right to water independently, do offer additional support for the right'.[61] More significantly, in the area of international water law the 1997 UN Watercourses Convention,[62] a general framework agreement widely regarded as a seminal

[56] African Charter on Human and Peoples Rights [1981] 21 ILM 58.

[57] African Commission on Human and Peoples' Rights, Comm. No. 25/89, 47/90, 56/91, 100/93, Decision taken at the 18th Ordinary Session, 1995; See McCaffrey (n 5) 99.

[58] Inter-American Commission on Human Rights, 'Report on the Situation of Human Rights in Ecuador' OEA/Ser.L/V/II.96, Doc. 10 rev. 1 (24 April 1997); See McCaffrey ibid.

[59] 1144 UNTS 123; (1969) 9 ILM 673; (1971) 65 AJIL 679 (22 November 1969)

[60] See General Comment 15(n 4), paras. 8, 10, 11, 12(b), 16(c) and (d), 21, 23, 28(b) and (e), 29, 44(a)(iii) and (b)(i).

[61] Williams (n 8) 476-477.

[62] United Nations Convention on the Law of Non-Navigational Uses of International Watercourses, (1997) 36 ILM 719 (21 May 1997).

codification of customary international law applying to shared international water resources,[63] qualifies the general position that 'no use of an international watercourse enjoys inherent priority over other uses' by providing that States must give 'special regard … to the requirements of vital human needs'.[64] Clearly, one would expect the 'requirements of vital human needs' to correspond closely with the obligations of States and the entitlements of individuals under the human right to water,[65] and McCaffrey points out that

> 'While this language falls short of an explicit recognition of a human right to water, it expresses a fundamental idea behind such a right, namely, that in making allocation decisions governments must not forget basic needs of humans for water.'[66]

Similarly, the 1992 UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes,[67] has given rise to a 1999 Protocol on Water and Health[68] which expressly requires the parties to take 'all appropriate measures for the purpose

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[63] See further, O. McIntyre, *Environmental Protection of International Watercourses under International Law* (Ashgate, 2007) 2.

[64] Article 10.

[65] A statement of understanding on Article 10(2) of the UN Watercourses Convention was inserted into the Report of the Working Group on the UN Convention to the General Assembly, which provided that

> 'In determining "vital human needs", special attention is to be paid to providing sufficient water to sustain human life, including both drinking water and water required for production of food in order to prevent starvation.'

See the oral report of the coordinator of the informal consultations on Article 10(2), U.N. Doc. A/C.6/51/SR.57 (1997) 3; See further, A. Tanzi and M. Arcari, *The United Nations Convention on the Law of International Watercourses* (Kluwer Law International 2001) 139.

[66] McCaffrey *(*n 5) 100-101.

[67] (1992) 31 ILM 1312.

[68] U.N. Doc. MP.WAT/AC.1/1991/1 (17 June 1999).

of ensuring … adequate supplies of wholesome drinking water'[69] and further provides that the parties 'shall pursue the aims of … access to drinking water for everyone …'.[70] In addition, the International Law Association's 2004 Berlin Rules on Water Resources Law,[71] which revise and update the ILA's seminal 1966 Hensinki Rules,[72] give clear and formal priority to vital human needs,[73] which the ILA defines to mean 'waters used for immediate human survival, including drinking, cooking, and sanitary needs, as well as water needed for the immediate sustenance of a household'.[74] In conjunction with this formal priority for vital human needs in inter-State allocation of waters, the Berlin Rules include Article 17 on 'The Right of Access to Water', which provides, *inter alia*, that '[e]very individual has a right of access to sufficient, safe, acceptable, physically accessible, and affordable water to meet that individual's vital human needs'.

3. The Emergence of Standards

The CESCR presciently suggests the kind of standards required to realise the right to water by explaining that it consists of both freedoms and entitlements, the former including 'the

[69] Article 4(2)(a).

[70] Article 6(1)(a).

[71] ILA, Berlin Rules on Water Resources Law (2004) < www.asil.org/ilib/WaterReport2004.pdf > accessed 8 January 2018.

[72] ILA, Helsinki Rules on the Uses of Waters of International Rivers, 'Report of the Fifty-Second Conference' (Helsinki, 1966).

[73] Article 14(1) provides that:

> 'In determining an equitable and reasonable use, States shall first allocate waters to satisfy vital human needs.'

[74] Article 3(20).

right to be free from interference, such as the right to be free from arbitrary disconnections or contamination of water supplies', the latter including 'the right to a system of water supply and management that provides equality of opportunity for people to enjoy the right to water'.[75] Essentially, the various elements of the right to water 'must be *adequate* for human dignity, life and health, in accordance with articles 11, paragraph 1, and 12',[76] and General Comment No. 15 elaborates further, stating that the relevant factors in determining such adequacy include availability, quality and accessibility.[77] The requirement of availability stipulates that States ensure a sufficient and continuous supply of water for such personal and domestic uses as drinking, personal sanitation, washing of clothes, food preparation, and personal and household hygiene, in a quantity which corresponds to World Health Organisation (WHO) guidelines.[78] Quality refers to the safety of water, in terms of the absence of micro-organisms, chemical substances and radiological hazards potentially dangerous to human health, and to available water being of an acceptable colour, odour and taste for each personal and domestic use.[79] The requirement of accessibility stipulates that

[75] General Comment No. 15 (n 4) para. 10.

[76] ibid para. 11.

[77] ibid para. 12.

[78] ibid para. 12(a). As regards the minimum quantity of water required by individuals, the WHO suggests an absolute minimum of 7.5 litres per capita per day: <http://www.who.int/water_sanitation_health/emergencies/qa/emergencies_qa5/en/> accessed 11 June 2018. However, more in-depth WHO guidance recognises the need to distinguish between peoples' short-term, medium-term and long-term water needs. See WHO-WEDC, 'Technical Notes on Drinking-Water, Sanitation, and Hygiene in Emergencies' (July 2013) <http://www.who.int/water_sanitation_health/publications/2011/WHO_TN_09_How_much_water_is_needed.pdf?ua=1> accessed 11 June 2018.

[79] General Comment No. 15 (n 4) para. 12(b).

water facilities and services should be accessible to everyone without discrimination[80] and has regard to physical accessibility, including physical security, gender and cultural factors and proximity to households, educational institutions and workplaces;[81] to economic accessibility, including the issue of affordability;[82] to non-discrimination, including accessibility to the most vulnerable and marginalized sections of the population;[83] and to information accessibility, including the right to seek, receive and impart information on water issues.[84] The CESCR places special emphasis on the issues of non-discrimination and equality of access[85] and makes particular mention of a number of 'individuals and groups who have traditionally faced difficulties in exercising this right', including women; children; rural and deprived urban areas; indigenous peoples; nomadic and traveller communities; refugees, asylum-seekers, internally displaced persons and returnees; prisoners and detainees; groups facing difficulties with physical access, such as older persons and persons with disabilities, *etc.*[86] In connection with the "core obligation" of States '[t]o adopt and implement a national water strategy and plan of action', General Comment No. 15 stipulates that 'it should include methods, such as right to water indicators and benchmarks, by which

[80] The ICESCR gives special priority to non-discrimination, with Article 2(2) of the Covenant providing that

> 'The States Parties to the present Covenant undertake to guarantee that the rights enunciated in the present Covenant will be exercised without discrimination of any kind as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.'

[81] General Comment No. 15 (n 4), para. 12(c)(i).

[82] ibid para. 12(c)(ii). See further infra.

[83] ibid para. 12(c)(iii).

[84] ibid para. 12(c)(iv).

[85] ibid paras. 13-16.

[86] ibid para. 16.

progress can be closely monitored'.[87] Para. 53 advises that 'States parties may obtain guidance on appropriate indicators' from such intergovernmental bodies as WHO, FAO, ILO and UNEP, though such guidance is increasingly supplemented by standards established at the initiative of business and civil society actors.[88]

3.1 Health Standards

Regarding the quality of water required for personal or domestic use, General Comment No. 15 expressly refers to 1993 WHO guidelines[89] that are

> 'intended to be used as a basis for the development of national standards that, if properly implemented, will ensure the safety of drinking water supplies through the elimination of, or reduction to a minimum concentration, of constituents of water that are known to be hazardous to health.'[90]

The current 2017 edition of the relevant WHO guidelines[91] run to 631 pages and provide a great deal of detail on the microbial, chemical and radiological aspects of drinking water quality standards, as well as on "acceptability" aspects regarding taste, odour and appearance.

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[87] ibid para. 37(f). See also para. 47(d) and (e).

[88] See, for example, the Corporate Water Disclosure Guidelines (2014) adopted by the CEO Water Mandate, a network of business leaders established under the auspices of the UN Global Compact, the world's largest corporate sustainability initiative. See further, <https://ceowatermandate.org/disclosure/> accessed 11 June 2018.

[89] WHO, *Guidelines for Drinking Water Quality* (2nd ed. WHO 1993) Vols. 1-3.

[90] General Comment No. 15 (n 4), para. 12(b). WHO is also included among those organisations from whom 'State parties may obtain guidance on appropriate indicators', pursuant to General Comment No. 15, para. 53.

[91] WHO, *Guidelines for Drinking Water Quality* (4th ed., Incorporating the First Addendum, WHO 2017) <http://apps.who.int/iris/bitstream/10665/254637/1/9789241549950-eng.pdf?ua=1> accessed 11 June 2018.

In addition to specific technical parameters for an extensive list of commonly occurring waterborne pollutants, the guidelines advise on their application in a range of conditions and circumstances, including water scarcity and heavy rainfall, rainwater harvesting, vended water, desalination systems, emergencies and disasters, buildings and health-care facilities, drinking water for travellers, and aircraft and ships. Further, the guidelines also elaborate upon such issues as the respective roles of various actors involved in drinking water supply, water safety plans, and drinking water quality surveillance. Whereas the 3rd step of progressive monitoring for SDG Indicator 6.1.1 requires '[i]nclusion of water quality testing for faecal contamination and priority chemicals (arsenic and fluoride) by utilities and/or in household survey instruments',[92] it seems reasonable to assume that the results of such testing would be assessed against the values set down in the current WHO guidelines. Such specificity regarding the technical standards to be achieved, as well as the methodologies to be employed to that end, is centrally important in establishing the normative character of the core requirements of the human right to water.

3.2 Environmental Standards

It is clear that the right to water must encompass entitlements and obligations relating to protection of the natural environment, and aquatic ecosystems in particular, as the latter are increasingly understood to play a pivotal role in the provision of water-related ecosystem services. General Comment No. 15 declares that the right to water involves both the right of the individual to be free 'from unsafe and toxic water conditions'[93] and from 'contamination

[92] UN-Water, 'Integrated Monitoring Guide for SDG 6: Targets and Global Indicators' (19 July 2016) 5.

[93] General Comment No. 15 (n 4) para. 8.

of water supplies',[94] and the obligation of States to refrain from 'unlawfully diminishing or polluting water'[95] and to adopt legislative and other measures to restrain third parties from polluting water sources.[96] In addition, it stipulates that States parties should adopt strategies and programmes aimed at 'reducing and eliminating contamination of watersheds and water-related ecosystems' and 'assessing the impacts of actions that may impinge upon water availability and natural ecosystems watersheds, such as climate change, desertification and increased soil salinity, deforestation and loss of biodiversity'.[97] As regards the environmental standards to be applied pursuant to the right to water, General Comment No. 15 expressly lists UNEP[98] among the organisations from whom 'States parties may obtain guidance on appropriate indicators',[99] thereby stressing the direct relevance of UN Environment's work on water and freshwater ecosystems. This connection once again highlights the strong interlinkages between the right to water and SDG 6 as UN Environment's new *Freshwater Strategy 2017-2021* focuses on those SDG targets that relate to freshwater ecosystems, water quality and pollution, integrated water resources management (IWRM), and water-related conflict and disasters.[100]

[94] ibid para. 10.

[95] Ibid para. 21.

[96] ibid para. 23.

[97] ibid para. 28(b) and (e).

[98] Now UN Environment, see <http://www.unep.org/> accessed 11 June 2018.

[99] General Comment No. 15 (n 4) para. 53.

[100] Specifically SDG Targets 6.3, 6.5, 6.6, 11.5 and 16.1. See UN Environment, 'Freshwater Strategy 2017-2021' (2017) 6 <https://wedocs.unep.org/bitstream/handle/20.500.11822/19528/UNEP-full_report-170502.pdf?sequence=3&isAllowed=y> accessed 11 June 2018.

Official guidance on implementation of SDG 6 emphasises the use of existing environmental standards set out under relevant multilateral environmental agreements (MEAs), wherever available. For example, UN-Water guidelines relating to Target 6.3 on water quality and wastewater,[101] which aim to protect both ecosystem health and human health by eliminating, minimising and significantly reducing different streams of pollution into water bodies, advocate doing so in a manner consistent with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal,[102] the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade,[103] and the Stockholm Convention on Persistent Organic Pollutants.[104] Regarding standards stipulated thereunder, the latter Convention has established a Persistent Organic Pollutants Review Committee comprising 31 experts nominated by the parties, which reviews chemicals nominated for listing and control under the Convention having regard to detailed criteria relating to their persistence, bioaccumulation, potential for long-range environmental transport, and toxicity (Annex D), to the likelihood of these chemicals leading to significant adverse effects on human health or the environment (Annex E), and to socioeconomic considerations associated with possible control measures (Annex F). Similarly, regarding SDG Target 6.5 on water resources management and SDG Target 6.6 on water-related ecosystems, the same guidance refers,[105] respectively, to the 1992 UNECE Convention on the Protection and Use of Transboundary

[101] UN-Water, 'Integrated Monitoring Guide for SDG 6: Targets and Global Indicators' (n 92) 8.

[102] 1673 UNTS 126; (1989) 28 ILM 657.

[103] 2244 UNTS 337; (1999) 38 ILM 1.

[104] 2256 UNTS 119; (2001) 40 ILM 532.

[105] UN-Water (n 101) 16-20.

Watercourses and International Lakes[106] and the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses,[107] and to the Ramsar Convention on Wetlands of International Importance[108] and the highly specific Aichi Biodiversity Targets adopted under the Convention for Biological Diversity Strategic Plan for Biodiversity 2011-2020.[109] The UNECE Water Convention, which is supported by a Secretariat, has been a very important source of technical guidance on all aspects of transboundary water resources management,[110] while the Ramsar Convention's Scientific and Technical Review Panel (STRP), established to provide objective and high quality scientific and technical guidance to the Convention Parties and Secretariat, has over decades elaborated and refined the concept of "wise use of wetlands" as a key standard of ecosystems protection.[111]

Therefore, the wealth of standards and practice developed under the auspices of established MEAs assists in informing the precise normative implications of the human right to water and sanitation. The relatively highly developed domestic legal frameworks for environmental protection of water resources also provide a rich source of environmental standards which function to assist realisation of the right to water. Notably, the European Union (EU) has

[106] 1936 UNTS 269; (1992) 31 ILM 1312.

[107] (1997) 36 ILM 700.

[108] 996 UNTS 245; (1972) 11 ILM 963.

[109] CBD 'Strategic Plan for Biodiversity 2011-2020' <https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf > accessed 11 June 2018.

[110] Including, notably, 1993 'Guidelines on the Ecosystem Approach in Water Management' (UN Doc. ECE/ENV/WA/31, 1993) and UNECE, 'Recommendations on Payments for Ecosystems Services in Integrated Water Resources Management' (UNECE, 2007).

[111] See Ramsar Convention, *Handbooks for the Wise Use of Wetlands* (4th ed., 2010) <http://www.ramsar.org/resources/ramsar-handbooks> accessed 11 June 2018.

long legislated for the management and protection of water resources, prescribing detailed standards such as the limit values introduced for List I substances under the 1976 EU Directive on Pollution Caused by Certain Dangerous Substances Discharged into the Aquatic Environment.[112] Such limit values were not to be exceeded by EU Member States when setting national emission standards for discharges into the aquatic environment. Over time the EU adopted a comprehensive suite of Directives establishing limit values and water quality objectives relating to all List I substances.[113] The relevance of such a diversity of legal and non-legal environmental standards for understanding the precise normative implications of the right to water provides an illustration of the phenomenon of growing normative convergence in environmental regulation at all levels commonly referred to as "global environmental law"[114] or "global administrative law".[115]

[112] Directive 76/464/EEC of 18 May [1976] OJ L 129/23.

[113] Including: Directive 82/176/EEC of 27 March 1982 concerning the Discharge of Mercury by the Chlor-Alkali Electrolysis Industry [1982] OJ L81; Directive 84/156/EEC of 17 March 1984 concerning the Discharge of Mercury by the Chlor-Alkali Electrolysis Industry [1984] OJ L74; Directive 83/513/EEC of 24 October 1983 concerning the Discharge of Cadmium [1983] OJ L291/1; Directive 84/491/EEC of 9 October 1984 on Limit Values and Quality Objectives for Discharges of Hexachlorocyclohexane [1984] OJ L274/11; Directive 86/280/EEC of 12 June 1986 on Limit Values and Quality Objectives for Discharges of Certain Dangerous Substances Included in List I of the Annex to Directive 76/464/EEC, including Carbon Tetrachloride, DDT and Pentachlorophenol, [1986] OJ L181/16; Directive 88/347/EEC of 25 June 1988 on Limit Values and Quality Objectives relating to Aldrin, Dieldrin, Endrin, Isodrin, Hexachlorobenzene, Hexachlorobutadine, and Chloroform, (1988) OJ L158/35.

[114] See further, T. Yang and R. Percival, 'The Emergence of Global Environmental Law' (2009) 36 Ecology Law Quarterly 615-664.

[115] See further, O. McIntyre, 'The Human Right to Water as a Creature of Global Administrative Law' (2012) 37(6) Water International 654-669.

3.3 Service Standards

As this human right is largely concerned with equitable access to adequate water and sanitation services, the emergence of performance standards for utilities charged with provision of such services is centrally relevant. Since 2007 ISO Technical Committee 224 has been busy developing a range of general service quality standards covering various aspects of the work of water and sanitation services utilities, whether public or private. Standards adopted thus far include those for the quality of water supply and sanitation services provided to users,[116] for the management of wastewater utilities and the assessment of wastewater services,[117] for the management of drinking water utilities and the assessment of drinking water services,[118] for the management of drinking water distribution networks,[119]

[116] ISO 24510:2007 'Activities relating to drinking water and wastewater services – Guidelines for the assessment and for the improvement of the service to users'. <https://www.iso.org/standard/37246.html?browse=tc> accessed 11 June 2018.

[117] ISO 24511:2007 'Activities relating to drinking water and wastewater services – Guidelines for the management of wastewater utilities and for the assessment of wastewater services' <https://www.iso.org/standard/37247.html?browse=tc > accessed 11 June 2018.

[118] ISO 24512:2007 'Activities relating to drinking water and wastewater services – Guidelines for the management of drinking water utilities and for the assessment of drinking water services' <https://www.iso.org/standard/37248.html?browse=tc> accessed 11 June 2018.

[119] ISO 24516-1:2016 'Guidelines for the management of assets of water supply and wastewater systems – Part 1: Drinking water distribution networks' <https://www.iso.org/standard/64117.html?browse=tc> accessed 11 June 2018.

for crisis management of water utilities[120] and for benchmarking of water utilities.[121] A host of additional standards are currently under development relating to, *inter alia*, stormwater management, use of performance indicators, the management of water supply and wastewater system assets, water quality event detection processes, technical specifications for flushable products, and water loss reduction and management projects.[122] Development of the ISO standards by Technical Committee 224 involves 35 participating States and 17 observer States, in liaison with a range of interested international organisations, including the WHO, the World Bank and the International Water Association, along with leading industry interests. These standards even attempt to deal with the difficult issue of the "cost" or "price" of water services under the rubric of the "standard of service" to be provided. Clearly the ongoing elaboration and adoption of such globally applicable practice standards, though essentially voluntary, will prove influential in determining an acceptable level of service provision and will help to clarify the nature of due diligence obligations owed by States pursuant to the human right to water and sanitation,[123] whether themselves acting as public service providers or as regulators of public or private-sector service providers.[124] Commentators have cited this elaboration of quasi-normative standards by a body such as the

[120] ISO 24518:2015 'Activities relating to drinking water and wastewater services – Crisis management of water utilities' <https://www.iso.org/standard/64118.html?browse=tc> accessed 11 June 2018.

[121] ISO 24523: 2017 'Service activities relating to drinking water supply systems and wastewater systems – Guidelines for benchmarking of water utilities' <https://www.iso.org/standard/59814.html?browse=tc> accessed 11 June 2018.

[122] See <https://www.iso.org/committee/299764/x/catalogue/ > accessed 11 June 2018.

[123] On the 'due diligence' nature of the key obligations imposed under the human right to water and sanitation, see McCaffrey (n 42) 13; and Hardberger (n 11) 336.

[124] For a discussion of the significance of the adoption of ISO standards, see B. Morgan, 'The Regulatory Face of the Human Right to Water', (2004) 15(5) Water Law 179, 182-183.

ISO as an example of the "global administrative law" phenomenon, which describes arrangements comprising 'hybrid blends of public and private actors linked in routines of both formal and informal participation at multiple levels of governance',[125] where the adoption of informal transnational regulatory standards is facilitated by the application of good governance standards reminiscent of national systems of administrative law.[126]

Consistent with this inclusive view of the processes of transnational, globalised regulatory activity, and with the broad relevance and applicability of regulatory norms and standards developed thereunder, the implications of the human right to water and sanitation for the service obligations of water services utilities has already emerged as a central issue of contention in a number of investor-State arbitrations. Several decisions of tribunals acting under the auspices of the International Centre for the Settlement of Investment Dispute (ICSID)[127] would appear to have recognised the key relevance of human rights concerns to

[125] B. Morgan, 'Turning Off the Tap: Urban Water Service Delivery and the Social Construction of Global Administrative Law' (2006) 17(1) European Journal of International Law 215, 216 and 224-227.

[126] See further, McIntyre (n 115).

[127] See, for example, ICSID Case No. ARB/03/19 *Aguas Argentinas S.A., Suez, Sociedad General de Aguas de Barcelona S.A. and Vivendi Universal S.A. v. The Argentine Republic, Order in Response to a Petition for Transparency and Participation as Amicus Curiae* [2005]; ICSID Case No. ARB/03/17 *Aguas Provinciales de Santa Fe S.A., Suez, Sociedad General de Aguas de Barcelona S.A. and InterAguas Servicios Integrales del Agua S.A. v. The Argentine Republic, Order in Response to a Petition for Participation as Amicus Curiae* [2006]; ICSID Case No. ARB/03/19 *Suez, Sociedad General de Aguas de Barcelona S.A. and Vivendi Universal S.A. v. The Argentine Republic, Order in Response to a Petition by Five Non-Governmental Organizations for Permission to Make an Amicus Curiae Submission* [2007]; and ICSID Case No. ARB/05/22 *Biwater Gauff (Tanzania) Ltd. V. United Republic of Tanzania*, Procedural Order No. 5 [2007]. See further, B. Farrugia, 'The Human Right to Water: Defences to Investment Treaty Violations', (2015) 31 Arbitration International 261-282; O. McIntyre, 'The Emergence of the Human Right to Water in an Era of Globalization and its Implications for International

contracts for the provision of water and sanitation services.[128] The ISO standards introduced above might in time prove helpful in clarifying the nature of any human rights obligations relevant to international investors in utilities providing water and sanitation services.

Of course, ISO service standards are also likely to inform the behaviour expected under voluntary codes of corporate conduct[129] where water utility companies refer to human rights commitments in their own corporate social responsibility policies.[130] This may also be true where they sign up to global codes such as the UN Global Compact, which requires that participating companies should comply with international human rights norms,[131] or the OECD Guidelines for Multinational Enterprises, which consist of voluntary principles and

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Investment Law', in J. F. Addicott, M. J. H. Bhuiyan and T. Chowdhury (ed.), Globalization, International Law and Human Rights, (Oxford University Press 2011) 147-176.

[128] Morgan (n 125) 216, notes that

> 'Private sector participation from outside national borders in the provision of basic goods makes urban water services a fascinating case study for exploring the potential ambit of what scholars have provocatively called "global administrative law".'

[129] See further, S.D. Murphy, 'Taking Multinational Corporate Codes to the Next Level', (2005) 43 Columbia Journal of Transnational Law, 388-433.

[130] For example, Suez commits its support to the right to water and sanitation, declaring that

> 'Suez fully assumes its role in promoting and implementing the right to water and sanitation. Thanks to its expertise, it is able to offer a full range of solutions in response to all issues faced by both developed and developing counries.'

See <https://www.suez.com/en/Who-we-are/A-commited-group/Support-the-right-to-water-and-sanitation> accessed 8 January 2018.

[131] UN Global Compact. <https://www.unglobalcompact.org/what-is-gc/mission/principles> accessed 8 January 2018; See further, Williams (n 8) 488-491. See also the water stewardship standards promoted by the CEO Water Mandate (n 88).

standards for responsible business conduct in such areas of relevance to implementation of the right to water as human rights, environment, information disclosure, the combating of bribery, and consumer interests.[132]

3.4 Affordability

It has long been clear that the difficult and contentious issue of economic accessibility is absolutely central to realisation of the human right to water and sanitation and so, in addition to technical health and environmental standards and service standards for utilities, standards are also beginning to emerge in respect of the affordability of water services. The requirement of ensuring affordability[133] with a view to protecting vulnerable people[134] has found its way into the governance frameworks of a range of actors concerned with water services, such as MDBs, which are commonly called upon to finance water supply and sanitation system upgrades.[135] Typically, Paragraph 11 of the 2014 Environmental and

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[132] OECD Guidelines for Multinational Enterprises <http://www.oecd.org/corporate/mne/1922428.pdf> accessed 8 January 2018; See further, McIntyre (n 115) 665.

[133] General Comment No. 15(n 4) para. 12(c)(ii) provides:

> '*Economic accessibility:* Water, and water facilities and services, must be affordable for all. The direct and indirect costs and charges associated with securing water must be affordable, and must not compromise or threaten the realization of other Covenant rights' (original emphasis).

[134] See General Comment No. 15 (n 4), para. 12(c)(iii).

[135] See, for example, the 2004 World Bank 'Water Resources Sector Strategy' <http://siteresources.worldbank.org/INTINFNETWORK/Resources/water.pdf> accessed 11 June 2018, which emphasises, at 2,

> 'poverty-targeted water service interventions (such as water and sanitation and irrigation services for the unserved poor)'.

Social Policy adopted by the European Bank for Reconstruction and Development (EBRD), stipulates that:

> 'The EBRD will assess to what extent tariff changes caused by projects may create problems of affordability of basic levels of services for disadvantaged and/or vulnerable groups of the population, and satisfy itself that effective schemes to address this issue are developed and put in place.'[136]

Highly specific guidance has been developed by MDBs on the nature of the actions required to ensure economic accessibility to water and sanitation services. For example, since 2010 the African Development Bank has published such guidelines which helpfully distinguish between cost recovery in respect of urban, networked and rural, non-networked water supply and sanitation services.[137]

Difficulties in ensuring compliance with the requirement of affordability in the face of austerity measures were highlighted in a 2013 report submitted to the Human Rights Council by the former UN Special Rapporteur on the human right to safe drinking water and

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[136] EBRD, 'Environmental and Social Policy' (May 2014) <http://www.ebrd.com/news/publications/policies/environmental-and-social-policy.html> accessed 11 June 2018.

[137] See, for example, African Development Bank, 'Guidelines for User Fees and Cost Recovery for Urban Water and Sanitation' (AfDB, 2010) <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/brochure%20cost%20recouvry%20urban%203_11_2010.pdf> accessed 11 June 2018.
African Development Bank, 'Guidelines for User Fees and Cost Recovery for Rural, Non-Networked, Water and Sanitation Delivery' (AfDB, 2010) <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/2011_03%20Guidelines%20for%20User%20Fees%20Cost%20Recovery_Rural.pdf> accessed 11 June 2018.

sanitation.[138] The report focuses on the aggravated risks to realisation of the right to water arising in times of economic and financial crisis by virtue of retrogressive austerity measures, and spells out the action necessary to ensure compliance with the non-derogable core obligations arising thereunder. It highlights the problem of 'increased prices and unaffordability-related disconnections',[139] including disconnections in the case of private service provision,[140] and recommends, *inter alia*, '[a] social protection floor, especially for disadvantaged and marginalized groups and individuals'.[141] For the purpose of measuring affordability, the former Special Rapporteur recommended '[c]omparing per capita incomes against water and sanitation indicators among countries with comparable levels of development [which] provides a more objective benchmark'.[142] Thus, she provides a useful analysis of the human right to water and sanitation affordability benchmarks against which a national regime can be measured in a time of austerity.

However, the level of affordability which should guide service providers, or public welfare interventions, is essentially a question of policy to be determined by the national authorities

[138] C. de Alburquerque, 'Report of the Special Rapporteur on the Human right to Safe Drinking Water and Sanitation' 11 July 2013, UN Doc. A/HRC/24/44 <http://www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session24/Documents/A-HRC-24-44_en.pdf> accessed 8 January 2018. The link between fiscal austerity and States' commitments to economic , social and cultural rights has also been recognised by civil society organisations in the 'Vienna+20 CSO Declaration', adopted on 26 June 2013. See further, O. McIntyre, 'The Human Right to Water and Reform of the Irish Water Sector' (2014) 5(1) Journal of Human Rights and the Environment, 74-101, at 75-76.

[139] de Alburquerque ibid para. 32.

[140] ibid para. 44.

[141] ibid paras. 15(b) and 73-74.

[142] ibid para. 61.

charged with water services governance, and the methodologies that such actors might employ to assess affordability continue to evolve. For example, most agencies in the US have for the past 20 years relied on an influential methodology developed in 1997 by the Environmental Protection Agency (EPA), which compares median household income (MHI) for the utility's service area to the area's average water and sewage bills.[143] As a general rule of thumb, the average sewage bill should not exceed 2 percent of MHI, while the average drinking water bill should not exceed 2.5 percent of MHI.[144] However, critics of this methodology point out that it is quite rudimentary and arbitrary. For example, by only looking at average demand across the community, it fails to take account of greater water consumption by rich households, which inflates estimates of essential household needs. Also, by using median income it obscures severe financial pressure on poorer households. Further, the EPA measure ignores the local cost of living, which might exacerbate financial pressure on poor households. Recently, the US Congress has instructed the National Academy of Public Administration (NAPA) to study alternative ways of measuring household water affordability with a view to assisting the EPA in revising its outdated community affordability guidelines, with the resulting report presented to Congress in October 2017.[145] US scholars have been busy developing alternative approaches, including

[143] See generally, EPA, 'Pricing and Affordability of Water Services' <https://www.epa.gov/sustainable-water-infrastructure/pricing-and-affordability-water-services> accessed 11 June 2018.

[144] See generally, B. Walton, 'When It Comes to Water Service How Expensive Is Too Expensive?', *Circle of Blue* (24 August 2017) < http://www.circleofblue.org/2017/water-management/comes-water-service-expensive-expensive/> accessed 11 June 2018.

[145] National Academy of Public Administration, 'Developing a New Framework for Community Affordability of Clean Water Services' (5 October 2017) <https://www.napawash.org/uploads/Academy_Studies/NAPA_EPA_FINAL_REPORT_110117.pdf> accessed 11 June 2018.

one that links water bills to workers' wages by estimating the number of hours at the local minimum wage that a person would need to work in order pay their water bill, and another, called the affordability ratio, which compares a water bill to disposable income for households at the twentieth percentile (lower fifth) of the income distribution.[146] In each case, a monthly water bill would be based on consumption of 50 gallons per person per day, which is an estimate of water needed for basic hygiene, drinking and cooking.

3.5 Monitoring Standards

Acutely aware that monitoring compliance with the various facets of the right to water and sanitation is both complex and essential to realisation, General Comment No. 15 expressly stipulates that the strategy and plan of action to be adopted and implemented by States as a core obligation arising under the right to water 'should include methods, such as right to water indicators and benchmarks, by which progress can be closely monitored'.[147] Accordingly, the former UN Special Rapporteur published detailed guidance on monitoring in 2014.[148] In addition to setting out clearly the international framework for monitoring compliance with human rights, it details the respective roles of State bodies, service providers and civil society. The guidance advises States on defining structural, process and outcome

[146] See M.P. Teodoro, 'Measuring Water and Sewer Utility Affordability' – (Texas A&M University Working Paper August 2017) <http://mannyteodoro.com/wp-content/uploads/2017/08/MTeodoro_Affordability-Method-Working-Paper-Aug2017.pdf > accessed 11 June 2018.

[147] General Comment No. 15 (n 4), para. 37(f). See further, paras. 47, 53 and 54.

[148] C. de Albuquerque, 'Monitoring Compliance with the Human Rights to Water and Sanitation' (OHCHR, 2014) <http://www.ohchr.org/Documents/Issues/Water/Handbook/Book5_Monitoring.pdf> accessed 8 January 2018.

indicators of progress towards realisation of the right[149] and addresses in detail the monitoring of water and sanitation availability, accessibility, quality, affordability, acceptability and sustainability. For example, in relation to monitoring the quality of sanitation provision, the guidance explains that '[t]o safeguard the health benefits of access to sanitation and protect water resources, the full cycle of sanitation provision must be monitored, from collection to transport, treatment and disposal of waste', though it also readily acknowledges that '[a]t present, there is no agreed global indicator for monitoring this full provision'.[150] Therefore, though real progress has been made to date, it is clear that in several respects monitoring standards for compliance with the right to water and sanitation are at an early stage in their evolution.

However, it is likely to prove significant that a global programme for monitoring implementation of SDG 6 on water and sanitation was launched in 2017 following the development, testing and evaluation of methodologies for monitoring the indicators identified under each target set out thereunder.[151] As Target 6.1, concerning 'universal and equitable access to safe and affordable drinking water', and Target 6.2, concerning 'access to adequate and equitable sanitation and hygiene for all and to end open defecation', closely reflect the core values enshrined in the human right to water and sanitation, the monitoring

[149] ibid at 7. '"Structural indicators" monitor whether the legislative, policy and regulatory frameworks of a State or government (at all levels) provide an environment that encourages realisation of human rights. "Process indicators" monitor the action taken to realise human rights; for example, the allocation of resources to services for disadvantaged individuals and groups. "Outcome indicators" monitor actual access to water and sanitation services; for example, whether households have access to a latrine or whether water is of adequate quality.'

[150] ibid 18.

[151] See further <http://www.sdg6monitoring.org/home> accessed 11 June 2018.

methodologies developed thereunder are likely to set robust and informed standards for measuring compliance with and realisation of the right. Target 6.1 has a single associated indicator relating to the 'proportion of population using safely managed drinking water services'. Guidance published by UN-Water elaborates further upon use of this indicator, advising, for example, that '[t]his indicator can be disaggregated by service level: no service, basic services and safely managed services'.[152] It also includes detailed guidance on the particular testing to occur in household surveys at each of three steps of progressive monitoring of Indicator 6.1.1.[153] Similarly, Target 6.2 is also measured against a single indicator relating to the 'proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water'. UN-Water guidance on Indicator 6.2.1 elaborates on the meaning of "improved sanitation facilities" and "handwashing facilities", and advises on disaggregation by service level and on the data to be gleaned from household surveys and from service providers at each step of progressive monitoring.[154] In the case of both indicators, data received annually from national officials will be compiled by WHO and UNICEF, which will together act as the responsible custodian.[155] Of course, integrated monitoring for SDG 6 covers the entire range of targets relevant to realisation of the right to water and sanitation as set out under General Comment No. 15, including water

[152] UN-Water (n 101) 5.

[153] ibid.

[154] ibid 7.

[155] The WHO/UNICEF Joint Monitoring Programme has published its first report using these newly developed indicators. See WHO/UNICEF JMP, 'Progress on drinking water, sanitation and hygiene: 2017 update and SDG baselines' (12 July 2017) <https://data.unicef.org/wp-content/uploads/2017/07/JMP-2017-report-launch-version_0.pdf> accessed 11 June 2018.

quality and wastewater management, water use and scarcity, water resources management, water-related ecosystems, international cooperation, and stakeholder participation.[156]

Other multilateral organisations, such as the European Union,[157] have also developed sets of indicators for monitoring compliance with and realisation of SDG 6, which will similarly inform and hasten development of monitoring standards for the right to water and sanitation. In January 2017 the UNESCO International Hydrological Programme (IHP) launched its Water Information Network System (WINS), which aims to provide UNESCO Member States with an open source, open access, web-based information platform to serve as a global reference for decision-makers and stakeholders on water-related issues at all levels.[158] It consists of three main components, providing:

1. Geo-referenced data (GIS) on the state of water resources at global, regional, national and local level, allowing users to visualise and generate maps;
2. A platform for inter-disciplinary collaboration and knowledge-sharing among water-related stakeholders (*e.g.* databases, reports, graphs, tables, videos, webinars, *etc*.), and
3. A platform for water-related stakeholders to build social networks and interrelations (*i.e.* discussion groups).

Significantly, the UNESCO-IHP WINS initiative is a response from the IHP Secretariat to a request from UNESCO Member States to 'provide support to Member States to build their

[156] Respectively, SDG Targets 6.3, 6.4, 6.5, 6.6, 6.a & 6.b

[157] See EU Eurostat, 'EU SDG Indicator Set' (28 April 2017) <http://ec.europa.eu/eurostat/documents/276524/7736915/EU-SDG-indicator-set-with-cover-note-170531.pdf> accessed 11 June 2018.

[158] See further, <http://en.unesco.org/ihp-wins> accessed 11 June 2018.

institutional capacities, human resources and a sound basis in science capacity for the monitoring and implementation of Sustainable Development Goal 6 (SDG 6) and other water-related goals'.[159]

Also relevant to monitoring implementation of the human right to water and sanitation is guidance developed by UNECE and WHO on target-setting and reporting[160] under the auspices of the 1999 UNECE Protocol on Water and Health,[161] which imposes obligations upon States parties in relation to the provision of universal access to adequate supplies of wholesome drinking water.[162] Recognising that the Protocol 'is a powerful tool to promote and operationalize the achievement of the 2030 Agenda' and that 'the Protocol's provisions and principles fully align with SDG 6', the UNECE/WHO guidance gathers together case studies showcasing good practices and lessons learned in order 'to assist efforts by Parties to the Protocol and other States to effectively shape their target-setting processes'.[163] The guidance showcases best practice in relation to, *inter alia*, institutional arrangements, baseline analysis and prioritisation of issues, development of targets and their financial and economic implications, public involvement in target-setting, publication and promotion of targets,

[159] UNESCO Press Release, 25 January 2017.

[160] UNECE/WHO, 'Collection of good practices and lessons learned on target setting and reporting under the Protocol on Water and Health' (UN 2016).

[161] U.N. Doc. (n 68). See further, UNECE/WHO, 'A Healthy Link: The Protocol on Water and Health and the Sustainable Development Goals' (November 2016), UN Doc. ECE/INF/NONE/2016/16 <http://www.unece.org/fileadmin/DAM/env/water/mop4/Informal_doc/1623151_E_FinalWEB_rev.pdf> accessed 11 June 2018.

[162] Protocol Articles 4(2)(a) and 6(1)(a).

[163]UNECE/WHO (n 160) iii.

development of programmes of measures and action plans for implementation, and review and assessment of progress and reporting.

3.6 Procedural Governance Standards

Effective implementation of the right to water and sanitation clearly involves adherence to a suite of procedural standards widely regarded as inherent to its realisation. In addition to the specific provisions of global and regional human rights instruments which might be considered to support the right, all such instruments would now be interpreted and applied so as to require that States generally facilitate a participative approach in respect of projects or policies that might impact on human rights. Such an approach requires the adoption of procedures by which interested groups, or individuals or communities likely to be affected by such projects or policies, can receive and access relevant information, meaningfully participate in decision-making and, if necessary, have access to some appropriate means of legal recourse.[164] Such a participatory approach to guaranteeing human rights would equally apply to projects or policies which might impact on the availability of water resources, particularly where this might arise by virtue of environmental risk, as participatory rights are now central to environmental law frameworks at both the national and international levels. Procedural and participative rights are a very significant element of the normative content of the human right to water as set out in General Comment No. 15.[165] Indeed, the requirement for States parties to the ICESCR to ensure a participatory and transparent process for the

[164] See generally, Cullet and Gowlland-Gaultieri, (n 53).

[165] See, for example, General Comment No. 15 (n 4), paras. 12(c)(iv), 16(a), 24, 37(f), 48, 55 and 56.

adoption and implementation of a national water strategy and plan of action is included among the non-derogable 'core obligations' of States under General Comment No. 15.[166]

Such a requirement was highlighted, prior to the present discourse on the human right to water, in the 2001 *Ogoni* case, where water pollution was a central issue. The African Commission on Human and Peoples' Rights gave a broad participative reading to Article 24 of the African Charter on Human and Peoples' Rights, which acknowledges all peoples' right to 'a general satisfactory environment favourable to their development', to include specific procedural guarantees concerning the carrying out of environmental and social impact assessment.[167] Such procedural requirements, which correlate closely with the procedural and informational requirements of the human right to water as set out under General Comment No. 15, would equally apply under existing regional human rights instruments to any major project or policy initiative which threatened the quality or availability of water supply or sanitation services. Similarly, the Inter-American Commission on Human Rights has, in the context of Article 11 of the 1988 Additional Protocol guaranteeing the right to a healthy environment, repeatedly recommended the adoption of domestic legislation providing for meaningful and effective participatory mechanisms for indigenous peoples in the adoption of political, economic and social decisions that affect their interests.[168] The European Court of

[166] ibid para. 37(f); General Comment No. 15, para. 40, describes the core obligations set out in para. 37 as 'non-derogable'.

[167] See Cullet and Gowlland-Gualtieri (n 53) 313-314, citing Communication No. 155/96, *The Social and Economic Rights Action Center and the Center for Social and Economic Rights v. Nigeria*, African Commission on Human and Peoples' Rights, 30th Ordinary Session, (13-27 October 2001) para. 53; See chapter 5 of this volume by Louis Kotzé & Anel du Plessis relating to the African Charter on Human and Peoples Rights.

[168] See, Chapter X to the Second Report on the Situation of Human Rights in Peru, Inter-American Commission on Human Rights; Chapter IX to the Report on the Situation of Human Rights in Ecuador, Inter-American

Human Rights has taken a broadly similar approach in its interpretation and application of relevant provisions of the European Convention on Human Rights.[169]

These procedural requirements appear even more universally accepted and applied when one considers that broad informational and participatory rights are generally also included under regional and global environmental instruments. The requirement for public participation in international environmental law is exemplified by the 1998 UNECE Aarhus Convention[170] and such participation requirements are also central to the carrying out of an adequate environmental impact assessment (EIA) consistent with the standards established under international law.[171] More generally, in the field of sustainable development all seminal

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Commission on Human Rights, OEA/Ser.L/V/II.96, doc. 10 rev. 1 (Recommendations) (24 April 1997); Case 7615 (Brazil), Inter-American Commission on Human Rights, 1984-1985 Annual Report 24, OEA/Ser.L/V/II.66, doc. 10, rev. 1 (1985), the *Yanomami* case; See Cullet and Gowlland-Gaultieri, ibid 314-315; See further, *Awas Tingni Mayagna (Sumo) Indigenous Community v. Nicaragua*, Judgment of 31 August 2001, IACHR, (Ser. C), No. 79 (2001); See chapter 4 of this volume by Evadne Grant relating to the American Convention on Human Rights.

[169] European Convention for the Protection of Human Rights and Fundamental Freedoms (Rome 1950), 213 UNTS 221. See, for example, *Guerra and Others v. Italy* (1998) 26 European Human Rights Reports 357; *Zander v. Sweden* (1993) 18 European Human Rights Reports 175.

[170] Convention on Access to Information, PublicParticipation in Decision-Making and Access to Justice in Environmental Matters, (Aarhus, 25 June 1998), 38 ILM 517 (1999). See chapter 6 of this volume by Aine Ryall relating to the Aarhus Convention.

[171] See, for example, Arts. 2(2), 2(6), 3(8) and 4(2) of the 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Context, (Espoo, 25 February 1991), 30 ILM 800 (1991); See also, the Protocol on Strategic Environmental Assessment (Kiev, 21 May 2003); A general requirement for EIA in respect of major projects impacting on shared transboundary freshwaters was recognised by the International Court of Justice in the *Pulp Mills* case, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, 20 April

instruments purport to establish participatory standards which apply not only to States but also to international organisations, including MDBs. Participatory rights are absolutely central to Chapter 18 of Agenda 21 on freshwater resources.[172] Therefore, the accumulated practice of regional human rights enforcement bodies strongly suggests that the CESCR's General Comment No. 15 largely involves a codification of existing State obligations under general international human rights law and general international environmental and sustainable development law, rather than an attempt at the progressive development of participatory principles applying to matters of access to water. Such practice also provides a rich source of continually evolving standards regarding adequate and effective public participation and procedural engagement. Notably, the Aarhus Convention regime has established a "clearinghouse", which showcases good practice in terms of national legislative implementation of the rights created under the Convention,[173] while the Aarhus Convention Compliance Committee maintains a detailed record of requests, submissions, communications and referrals received from the Parties, the public and the Secretariat, as well as decisions on compliance and the details of their implementation.[174] Of course, this focus on procedural obligations arising from diverse sources enjoying varying degrees of

2010, paras. 119-121; See further, O. McIntyre, 'The Proceduralization and Growing Maturity of International Water Law: *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*' (2010) 22(3) Journal of Environmental Law 475-497; O. McIntyre, 'The World Court's Emphasis on Procedural Rules in the Recent *Pulp Mills* Case: Contributing to the Progressive and Coherent Development of International Water Law', (2011) 4(2) Water Alternatives 124-144.

[172] Agenda 21, (Rio de Janeiro, 13 June 1992), U.N. Doc. A/CONF.151/26 (Vols. I, II & III) (1992); See Cullet and Gowlland-Gaultieri (n 53) 305.

[173] See <https://aarhusclearinghouse.unece.org/> accessed 11 June 2018.

[174] See <http://www.unece.org/env/pp/cc.html> accessed 11 June 2018. See in particular chapter 6 of this volume by Aine Ryall.

legal authority further intimates that the human right to water and sanitation can usefully be understood as a 'creature of global administrative law'.[175]

4. Conclusion

Irrespective of the formal legal nature or status of the putative human right(s) to water and sanitation, a comprehensive framework of normative standards is emerging which informs almost every aspect of the right's implementation and realisation. Thus, the human rights discourse surrounding the imperative of universal access to adequate water and sanitation services would appear to be having a significant progressive effect. This discourse lends added urgency to efforts in pursuit of this worthy aim, but also creates a unified set of broad objectives, around which the various water-related activities of a wide and diverse range of actors, public and private, national and international, can coalesce in a wide-ranging consensual global effort. In this way, the de-centred, hybrid elaboration of diverse types of right to water-related standards appears to fall within the rubric of global or transnational governance, comprising an intricate mix of public and private normative mechanisms interacting in a complex manner in a dynamic regulatory setting. This complex mix of rules and standards adopted by both State and non-State actors, and the interaction between such rules and standards, may be explained by the phenomenon of "global administrative law", an analytical approach employed to address the rapidly changing realities of transnational regulation, which increasingly involves, *inter alia*, various forms of industry self-regulation, hybrid forms of private-private and public-private regulation, network governance by State officials, and governance by inter-governmental organizations with direct or indirect

[175] See generally, McIntyre (n 115).

regulatory powers.[176] Not only does this eclectic mix of normative standards exert a voluntary compliance pull on a range of key actors involved in the provision or regulation of water and sanitation services, it can also play a significant role in the progressive evolutionary development of formal, legally-binding standards at the national level, both legislative and judicial.[177]

Perhaps the incremental emergence across different sectors and levels of administration of standards relating to the right to water and sanitation highlights one possible normative path towards effective realisation of a number of economic, social and cultural rights, which has long been retarded by a lack of justiciability. In defence of 'the idea of global law', Walker argues that this discourse 'echoes an underlying series of changes in the pattern of formation, distribution and circulation of law' and that the associated language 'both reflects and encourages an important shift at the margins in the very way that we think about legal authority and strive to refashion law on the basis of that knowledge'.[178] At a practical level, there are several advantages to locating the broad range of global administrative bodies involved in water governance within a single "community of practice" bound by the precepts of global administrative law. Quite apart from the desirability of ensuring that such bodies are subjected to standards of good administrative governance, this analytical perspective

[176] See B. Kingsbury, 'Global Environmental Governance as Administration: Implications for International Law', in D. Bodansky, J. Brunnée and E. Hey (eds) *The Oxford Handbook of International Environmental Law* (OUP 2007) 63-84.

[177] See, for example, J. McNally, 'Incorporating Voluntary Standards into National Law: An Overview of the Scandinavian Experience', in L. Leonard and M. A. Gonzalez-Perez (eds.), *Beyond the UN Global Compact: Institutions and Regulations* (Emerald 2015) 67-92.

[178] Walker, *Intimations of Global Law* (n 3) 10.

makes available to the actors involved a wealth of established standards and practice which can help to inform the elaboration and interpretation of water governance standards through a process of cross-fertilisation of ideas and approaches. Such "mutual learning" can only function to reinforce the legitimacy of informal governance rules and standards and to enhance their increasingly significant role in promoting compliance with the evolving requirements of formal human rights law. This may, in time, come to be seen as the single greatest contribution of the recent discourse on the human right to water and sanitation.