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Solidarity and community interests in international environmental and natural resources law

Owen McIntyre, *School of Law & Environmental Research Institute, University College Cork. Email: o.mcintyre@ucc.ie*

The existence of an international community of states, requiring institutionalised cooperation based on solidarity, is evident in several fields of international law, including economic, social and cultural (ESC) rights and disaster risk governance. International water law, however, employs a pervasive solidarity-based notion of community interest, which is given effect by means of a general duty of institutionalised cooperation. This sub-field, in which the interdependence of watercourse states is immediately apparent, has long embraced a 'community of interest' approach to transboundary water cooperation, which informs every aspect of the cardinal principle of equitable and reasonable utilisation, which is itself characterised by a deeply distributive conception of equity. Sustainable and optimal utilisation of shared freshwaters requires moderation of uncompromising ideas of territorial sovereignty, upon which states' water-related entitlements have traditionally been founded. Solidarity amongst a community of watercourse states, based upon their substantive sovereign equality, regardless of their respective circumstances, plays a key role. It permeates international water law through, *inter alia*, a distributive conception of equity and the differentiation evident in expected standards of state conduct. Solidarity can shape cooperative transboundary water management, whereby the focus shifts from competing national interests to attaining optimised common benefits.

Keywords: Solidarity; community of interest; international watercourses law; differentiation; distributive equity; transboundary water co-operation

1. Introduction

Though there exists a long-running academic discourse regarding the legal existence of an international community of states,[1] it is probably in the field of international law concerned with the utilisation, cooperative management and environmental protection of shared international natural resources that such 'community' has truly

1 See eg H Lauterpacht, *The Function of Law in the International Community* (OUP 1933); H Mosler, *The International Society as a Legal Community (*Sijthoff and Noordhoff 1980); GM Danilenko, *Law-Making in the International Community* (Martinus Nijhoff, Dordrecht, 1993); G Abi-Saab, 'Whither the International Community?' (1998) 9(2) European Journal of International Law 248; B Simma and AL Paulus, 'The "International Community": Facing the Challenge of Globalization' (1998) 9(2) European Journal of International Law 266; B Fassbender, 'The United Nations Charter as Constitution of the International Community', (1998) 36 Colombia Journal of Transnational Law 529; PS Rao, 'The Concept of International Community in International Law: Theory and Reality', in I Buffard and others (eds), *International Law between Universalism and Fragmentation: Festschrift in Honour of Gerhard Hafner* (Brill Nijhoff 2008) 85; DC Ellis, 'On the Possibility of "International Community"' (2009) 11(1) International Studies Review 1

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begun to take legal shape.[2] In line with Friedmann's vision of the evolution of international law from a law of 'coexistence' to a law of 'cooperation',[3] the emergence of community involves an incremental transition from the Westphalian notion of a society of strictly self-interested states and reflects widespread recognition of the need for all states to engage in more stable cooperation for the protection of certain 'community interests'[4] or 'public goods', the benefits of which are indivisibly spread among the entire community.[5] Nowhere is this transition, and the related recognition of community interests, more apparent and more advanced than in the specialist sub-field of international water law. Practice related to this sub-field, in which the interdependence of states sharing international watercourses is immediately apparent, has long expressly exhorted a 'community of interest' approach to transboundary water cooperation,[6] which is intended to inform application of the cardinal overarching principle of equitable and reasonable utilisation of shared waters – a principle which is itself characterised by a deeply distributive conception of the notion of equity.[7] In addition to humanity's unique and total dependence upon water, to a greater degree than any other natural resource, the sense of community amongst states sharing a transboundary watercourse is further amplified by the fact that the circumstances pertaining in each and every international watercourse are quite unique, leading key commentators to identify transboundary water cooperation as an area of international legal activity particularly 'likely to be influenced by regional postures and implications'.[8] The sheer critical importance to states of access to adequate water resources, alongside the highly particularised requirements of each international watercourse regime, can only enhance recognition amongst states of their interdependence and of the imperative of meaningful inter-state cooperation concerning shared water resources.

The intensification of interaction amongst state actors regarding shared interests, which gives rise to an increasingly developed sense of community, is generally understood to imply a certain measure of solidarity amongst the members of that community.[9] Solidarity enjoys a degree of recognition in the practice of states and international

2 See eg P Sands, 'The Environment, Community and International Law' (1989) 30(2) Harvard International Law Journal 393

3 W Friedmann, *The Changing Structure of International Law* (Stevens & Son 1964), at 60–62 and 367

4 See generally U Fastenrath and others (eds), *From Bilateralism to Community Interest: Essays in Honour of Judge Bruno Simma* (OUP 2011)

5 S Vilalpando, 'The Legal Dimension of the International Community: How Community Interests Are Protected in International Law' (2010) 21(2) European Journal of International Law 387, at 391–92. This author points out, at 391, that Friedmann (n 3) 'explicitly links the law of cooperation with the recognition of a community of interests'

6 For example, such an approach to international watercourse management has received enduring and consistent international judicial endorsement. See *Case Relating to the Territorial Jurisdiction of the International Commission for the River Oder,* PCIJ (1929) PCIJ Series A 23, para 74; *Case Concerning the Gabčíkovo-Nagymaros Project,* ICJ (1997) ICJ Rep. 7, para 85; *Case Concerning Pulp Mills on the River Uruguay,* ICJ (2010) ICJ Rep. 14, para 281

7 See further O McIntyre, 'Utilisation of Shared International Freshwater Resources – The Meaning and Role of Equity in International Water Law' (2013) 38(2) Water International 112

8 J Crawford, *Chance, Order, Change: The Course of International Law* (Hague Academy of International Law General Course on Public International Law 2014), at 328

9 Vilalpando (n 5) at 391, 392 and 396. See generally R Wolfrum, 'Solidarity and Community Interests: Driving Forces for the Interpretation and Development of International Law' (2021) 416 Recueil des cours 9–479, at ch 1(D)(4) and (5)

institutions, both in specialist fields, such as international disaster law[10] or international climate law,[11] and in general international law,[12] prompting commentators to consider the existence and implications of a general 'principle of solidarity' in international law.[13] However, several key features of international water law demonstrate how values characteristic of this principle permeate every aspect of practice in the field. Such features include the dominance and pervasive influence of distributive equity throughout its application, the central importance of inter-state communication and cooperation in its implementation, and the increasingly urgent imperative of optimising the human benefits to be derived from an increasingly scarce resource, whilst ensuring protection of vital aquatic ecosystems.

This paper seeks to explore how the general of principle of solidarity frames and informs almost every facet of the normative content and application of international water law. It does so by tracing the inherent influence of values commonly associated with solidarity into each of the key established characteristics of international water law, including distributive equity, intensive inter-state cooperation, differentiation in the state duties imposed, and human rights-based entitlements. It commences with a discussion of solidarity as a general legal concept before examining solidarity as a principle of international law and, more specifically, as a principle that permeates international water law. It then highlights several key manifestations of solidarity-related values applying in the field of international water law, with a view to supporting the argument that solidarity is inherent to effective transboundary water cooperation. Furthermore, this paper suggests that, by acting to restrain short-term and self-interested unilateral action by watercourse states, consideration of the imperative of solidarity amongst a community of riparian states can only serve to enhance inter-state water cooperation and thereby to improve outcomes in terms of ecosystem conservation and resource optimisation.

2. Solidarity as a legal concept

The principle of solidarity has long been associated with progressive concepts and values that are increasingly relevant in legal relations at all levels of governance, including inter-state relations, which demonstrate growing recognition of the existence of a community of interdependent actors. In this context, solidarity is understood as a legal concept essential for any functioning community, and is closely associated with equality, fraternity, dignity, fundamental rights and individual and collective responsibility, all values that correspond to a shift away from the narrow and short-term self-interest traditionally pursued by sovereign actors. At each level of governance, solidarity recognises and

10 International Law Commission, *Report of the International Law Commission on the Work of Its Sixtieth Session* (2008), UN Doc A/63/10, Ch IX ('Protection of Persons in the Event of Disasters'), at para 241–50

11 N Schrijver, 'The Impact of Climate Change: Challenges for International Law', in Fastenrath and others (n 4) at 1278–97; U Natarajan, 'Climate Justice and Right to Solidarity', in CM Bailliet (ed), *Research Handbook on International Solidarity and the Law* (Edward Elgar 2024) 241

12 See eg the contribution of Ivory Coast to the 1968 Vienna Conference, which refers to 'a new solidarity of nations, based on the inter-dependence of States, international co-operation, peaceful coexistence and assistance by the wealthier to the less-favoured nations'. See further Vilalpando (n 5) at 403

13 Most notably, R St J Macdonald, 'Solidarity in the Practice and Discourse of Public International Law' (1996) 8(2) Pace International Law Review 259

emphasises social rights and social equality, so that it might be described as a 'constitutive principle of social ties and equal rights'.[14] This explains its very prominent express inclusion in the Preamble to the Charter of Fundamental Rights of the European Union, which states that the 'Union is founded on indivisible, universal values of human dignity, freedom, equality and *solidarity*', that it is 'resolved to share a peaceful future based on *common values*', and that the enjoyment of the rights contained therein 'entails responsibilities and duties with regard to other persons, to the *human community and to future generations*'.[15] The principle may also be afforded national constitutional recognition, such as under Article 2 of the Italian Constitution, where it is judicially understood to belong 'among the founding values of the legal system … to be formally recognised and guaranteed together with the inviolable rights of man'.[16] Solidarity has principally been associated with progressive and cosmopolitan human rights values, such as social welfare entitlements and migrant rights, and can thus lend itself quite easily to issues of environmental protection and sustainable natural resources management, including at the inter-state level. As Stefano Rodotà points out,

> it is quite evident that environmental protection responds to the logic of interdependence and, therefore, requires cooperation, and therefore solidarity between the various interested parties, which, considering the transnational nature of the phenomena, are still decisively the national States … the scope in which the principle of solidarity can operate is thus expanded in different directions.[17]

Solidarity therefore reflects the transboundary nature of many challenges in environmental and natural resources management and the reality of states' interdependence, thereby implying the need for meaningful inter-state cooperation which would operate to counter narrow and short-term self-interest.[18] The following sections explore whether, and to what extent, a principle of solidarity has emerged in international law as a normative requirement in response to increased awareness of the interdependence of states and the associated existence of a community of interest.

3. Solidarity in international law

Widely recognised values and practices that support the effective routine interaction of states have long been regarded by certain scholars as illustrative of the existence of a general principle of solidarity in international law. In his seminal study of the topic, Macdonald cites the eighteenth-century Swiss jurist Emmerich de Vattel to describe solidarity

14 A Russo, 'Law and Solidarity Nowadays in Europe' (2021) 2849 Academia Letters, at 2, citing (and translating) S Rodotà, *Solidarietà: un' utopia necessaria* (Editori Laterza 2014), at 90

15 OJ 2012/C 326/391 (26/10/2012) (emphases added). The Charter proceeds in Title IV on 'Solidarity', to elaborate a range of rights concerning employment, the family, social security, healthcare, consumer protection and the environment

16 Constitutional Court, No. 75 (28 February 1992), cited by Russo (n 14), at 2. art 2 of the Constitution of the Italian Republic provides: 'The Republic recognises and guarantees the inviolable rights of the person, both as an individual and in the social groups where human personality is expressed. *The Republic expects that the fundamental duties of political, economic and social solidarity be fulfilled*' (emphasis added).

17 Russo, *ibid*, at 3, citing (and translating) Rodotà, at 113

18 Rodotà (cited in Russo (n 14)) explains further that 'environmental protection sought without regard to the principle of solidarity would lack a foundation that could enable it to counter the force of national and economic interests and selfishness, which continually act as a brake on effective protection'

as 'the basic condition for the existence of a community of states' and, therefore, as 'a fundamental … principle of international law'.[19] On this conceptual basis, Macdonald suggests that it constitutes nothing less than a peremptory *jus cogens* norm of international law from which no derogation is permitted,[20] though this is almost certainly an overstatement of the principle's current formal status in law.[21] Some commentators reason that, because solidarity applies to relations amongst all states, it may comprise an obligation *erga omnes*,[22] while others suggest that it may, in certain circumstances, transform key rules of international law into generally applicable *erga omnes* obligations, at least in the field of international water law.[23] Whatever the precise character and status of the principle in general international law, recent scholarship suggests that solidarity lies behind the continuing normative development of a broad range of international law regimes including, *inter alia*, the law of development, anti-corruption law, trade law, environmental and climate law, marine law, and energy law.[24]

The notion of solidarity is rarely expressly endorsed in the texts of international legal instruments, though the closely related idea of a 'community of interest' existing among states sharing an international watercourse does find expression in some modern watercourse agreements.[25] Nevertheless, scholars can discern 'manifestations of the culture of community and solidarity' in the cooperative practice of watercourse states working within the framework of a successful basin agreement.[26] Wouters credits the critically important axiological role played by sustainable development, and by the closely related concept of equity, for the fact that solidarity appears to permeate and inform every aspect of international water law, and of the broader field of international environmental and natural resources law.[27]

As the overarching driving objective of international environmental and natural resources law ever since its global adoption under the Rio Declaration, sustainable development incorporates several visions of equity, including that of 'intra-generational equity' which takes legal form in the principle of 'common but differentiated responsibility' (CBDR) amongst states bearing different degrees of responsibility for

19 See Macdonald (n 13, at 259, citing E. De Vattel, *Le Droit des Gens ou Principes de la Souveraineté* (1758, reprinted 1958), translated by J. Chitty (Sweet, Stevens & Maxwell, London, 1834), available at: <https://books.google.ie/books?id=pQFDAQAAMAAJ&pg=PR1&source=kp_read_button&redir_esc=y#v=onepage&q&f=false>. See further Wolfrum (n 9; R. Wolfrum and C. Kojima (eds.) *Solidarity: A Structural Principle of International Law* (Springer, Heidelberg, 2010)

20 Macdonald (n 13) at 260–61 and 263

21 See further O McIntyre, 'Embedding "Solidarity" in International Water Law: Framing "Equity" in Transboundary Water Governance' (2020) 51 Netherlands Yearbook of International Law 227, at 241

22 See eg P Wouters, S Vinogradov and BO Magsig, 'Water Security, Hydrosolidarity and International Law: A River Runs through It' (2008) 19 Yearbook of International Environmental Law 97, at 132

23 J Gjørtz Howden, *The Community of Interest Approach in International Water Law: A Legal Framework for the Common Management of International Watercourses* (Brill Nijhoff 2020) at 61

24 See Bailliet (n 11)

25 See eg art 3(9) of the 2010 Agreement on the Nile River Basin Cooperative Framework (Nile CFA); Preambular para 4 of the 1994 Agreement on the Establishment of a Permanent Okavango River Basin Water Commission (OKACOM Agreement)

26 In support of this argument, Gjørtz Howden (n 23) at 33–34 cites the joint development and operation of large-scale water infrastructure on the Senegal River, taking place under the auspices of the Organisation pour la Mise en Valeur du Fleuve Sénégal (OMVS), established under the 1972 Convention Establishing the Organization for the Development of the Senegal River (Nouakchott, 11 March 1972).

27 P Wouters, 'The Relevance and Role of Water Law in the Sustainable Development of Freshwater: From "Hydrosovereignty" to "Hydrosolidarity"' (2000) 25(2) Water International 202

environmental degradation and possessing different national capacities to contribute to solutions.[28] Leading authorities explain that a spirit of solidarity serves to inform every aspect of the differentiation lying at the heart of the CBDR principle, which is so essential for effective inter-state cooperation in the global climate and biodiversity regimes, amongst others.[29] The pursuit of sustainable development requires broad inclusivity, which is promoted by the CBDR principle by ensuring flexibility in inter-state cooperation having regard to three key factors, ie the extent of the needs of each state, the capacity of each to respond to a problem, and the causal responsibility or contribution of each state to the problem concerned.[30] Examining application of the principle across a number of global environmental and natural resources regimes, leading commentators explain that it involves equitable balancing of the interests of developed and developing states in at least two senses: by setting lower standards (at least temporarily) for developing states and by making the performance of those standards dependent upon the provision of assistance by developed states.[31] It is not difficult to envisage situations where negotiation of equitable regimes for the utilisation and protection of shared international watercourses, on either a regional or river basin basis, would involve states enjoying markedly different levels of development, and where CBDR could play an important role in securing the agreement of the less developed.[32] In fact, one of the earliest treaties specifically to have regard to the economic and technical capabilities of the parties to abate pollution concerns the use of shared freshwater resources. Article 3(4) of the 1958 Agreement between Czechoslovakia and Poland concerning the Use of Water Resources in Frontier Waters[33] provides that

> The Contracting Parties have agreed to abate the pollution of frontier waters and to keep them clean to such extent as is specifically determined in each particular case in accordance with the economic and technical possibilities and requirements of the Contracting Parties.

As is now characteristic of international water agreements, and the key principles of general international water law,[34] this provision employs a highly distributive conception of equity, involving a distribution of the benefits to be derived from finite resources on the basis of the essential needs and capacity of each party.[35] This demonstrates a clear axiological coherence with the concept of solidarity.

28 United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, UN Doc. A/CONF.151/26 (3–14 June 1992), Principle 7. See also Principles 3, 4, 5 and 6 regarding the right to development, poverty alleviation, etc.

29 L Rajamani, *Differential Treatment in International Environmental Law* (OUP 2006), at 134

30 See CD Stone, 'Common But Differentiated Responsibilities in International Law' (2004) 98(2) American Journal of International Law 276; E Brown Weiss, 'Environmental Equity: The Imperative for the Twenty-First Century', in W Lang (ed), *Sustainable Development and International Law* (Martinus Nijhoff 1995) 17; Rajamani (n 29)

31 P Birnie and A Boyle, *International Law and the* Environment (2nd edn, OUP 2002) at 101

32 Consider, for example, the riparian states of the Danube, the Nile or the Mekong

33 538 UNTS 89

34 See eg McIntyre, 'Utilisation of Shared International Freshwater Resources' (n 7); O McIntyre, 'The Principle of Equitable and Reasonable Utilisation' in A Tanzi and others (eds), *The UNECE Convention on the Protection and Use of Transboundary Watercourses and Lakes: Its Contribution to International Water Cooperation* (Brill Nijhoff 2015) 146, at 148–54

35 See eg B Saul, *Climate Change, Resource Scarcity and Distributive Justice in International Law* (Sydney Law School, Legal Studies Research paper No. 09/101, 2009) at 18

Another dimension of the broad concept of equity which is similarly central to the sustainable development paradigm is the principle of 'inter-generational equity', requiring a fair distribution of the benefits to be derived from natural resources use between present and future generations. Endorsed globally as Principle 3 of the Rio Declaration,[36] but consistently supported in the declarative practice of states since Stockholm,[37] the principle undoubtedly enjoys considerable support as an established principle of international law.[38] Articulations of inter-generational equity are particularly commonplace in conventions concerned with environmental protection and the management of natural resources, including international water agreements,[39] with the 1992 United Nations (UN) Water Convention giving it clear and emphatic expression.[40] Taking as a possible example of the principle's specific application to shared water resources one state's utilisation of international groundwaters in a manner or at a rate inconsistent with their natural capacity to be replenished, this could clearly prejudice the right of future generations in all aquifer states to enjoy the use of such waters. One must assume, therefore, that references in the UN Watercourses Convention to the goal of sustainable utilisation are intended to mitigate against such utilisation.[41] As conceived by a leading exponent,[42] the very idea of inter-generational equity infers an important role for solidarity, as it implies the existence of an inter-generational community and thus the relevance of solidarity between present and future generations in ensuring the equitable balancing of the interests of each.

4. Solidarity in international water law

It is increasingly apparent that the values inherent to solidarity are equally central to effective inter-state cooperation over shared international water resources and are thus

36 Rio Declaration (n 28). Rio Principle 3 states that 'The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations'.

37 Stockholm Declaration, Principle 2, *Report of the United Nations Conference on the Human Environment* (Stockholm 5–16 June 1972), part I, ch I, reprinted in (1972) 11 ILM 1416

38 The Expert Group on Environmental Law (EGEL) advising the UN (Brundtland) World Commission on Environment and Development, which first introduced and defined the concept of sustainable development, could conclude as early as 1987 that 'to the extent that this basic obligation concerns international or transboundary natural resources or environmental interferences, it already may in many respects be deemed to find substantial support in existing general international law'. See Experts Group on Environmental Law of the World Commission on Environment and Development, *Environmental Protection and Sustainable Development: Legal Principles and Recommendations* (1987), reprinted in RD Munro and J Lammers (eds), *Environmental Protection and Sustainable Development: Legal Principles and Recommendations Adopted by the Experts Group on Environmental Law of the World Commission on Environment and Development* (Graham & Trotman 1987), at 44–45

39 For a comprehensive list, see O McIntyre, *Environmental Protection of International Watercourses under International Law* (Ashgate 2007) at 254–55

40 art 5(c) of the 1992 UN Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992) 31 ILM 1312 (UN Water Convention) provides that 'Water resources shall be managed so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs'

41 United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (1997) 36 *ILM* 700 (UN Watercourses Convention), art 5(1). See further McIntyre, *Environmental Protection of International Watercourses* (n 39) at 259–60

42 Edith Brown Weiss understands the principle to mean that 'each generation has an obligation to pass on the natural and cultural resources of the planet in no worse condition than received and to provide reasonable access to the legacy to the present generation'. See E Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (UNU Press 1989) at 37–38

implicit to the normative intent of international water law.[43] This is increasingly the case as international water law becomes ever more focused upon promoting and facilitating the optimal beneficial utilisation of water as an increasingly precarious resource. Addressing transboundary water insecurity inevitably requires intensive and institutionalised inter-state cooperation, which will in turn require compromise on the part of all watercourse states.[44] Solidarity serves to assist in achieving such compromise by ameliorating states' exclusively self-interested expectations regarding their sovereign rights and interests in shared watercourses. States' claims have traditionally been based upon uncompromising conceptions of the rights conferred by virtue of outdated notions of territorial sovereignty or integrity. However, by encouraging states equitably to take account of the legitimate interests of other watercourse states, the principle of solidarity suggests that their narrow and short-term self-interest should be subordinated to the pursuit of mutually beneficial and optimal outcomes.

The community of interest existing among watercourse states, long recognised in treaty practice[45] and by international courts and tribunals,[46] incorporates many of the values inherent to the principle of solidarity 'due to their shared foundation on collective action and interdependence'.[47] Such values include the use of organisational structures to facilitate public participation and harness a broad range of relevant information in order to address the social implications of water resource use and to minimise its harmful impacts.[48] In this way, solidarity 'builds on the concept of sustainable development when it aims to promote human livelihood interests without unavoidable environmental consequences'.[49] The close interlinkage between the notion of a community of interest and the principle of solidarity was affirmed by a Permanent Court of Arbitration tribunal in the 2004 *Rhine Chlorides Arbitration*, where it emphatically acknowledged the community of interest existing among the riparian states of the Rhine in addressing the problem of chloride pollution, and recognised solidarity as a key factor framing the responsibilities of each state arising by virtue of this relationship:

> When the riparians of an international river decide to establish a common regime for the use of its water, they are recognising a 'community of interests' which leads to 'a community of law' (to cite the concepts used by the Permanent Court of International Justice in 1929 in the *Case Concerning the Territorial Jurisdiction of the International Commission of the Oder*, (P.C.I.J., Series A, No. 23, p. 27)). The solidarity existing among the riparians is undoubtedly an element of their community of interests.[50]

43 See eg Wouters, Vinogradov and Magsig (n 22); McIntyre, 'Embedding "Solidarity" in International Water Law' (n 21); P Stejskal, 'The Principle of Solidarity in the Law of Transboundary Groundwater', in E Kassoti and N Idriz (eds), *The Principle of Solidarity: International and EU Law Perspectives* (Asser Press/Springer 2023) 55

44 McIntyre, 'Embedding "Solidarity" in International Water Law' (n 21) at 228. See eg art 9(2) of the 1992 UN Water Convention (n 42)

45 Senegal Convention (n 26)

46 *River Oder*, *Gabčíkovo-Nagymaros* and *Pulp Mills* Cases (n 6)

47 Gjørtz Howden (n 23) at 57

48 *Ibid* at 58

49 *Ibid* at 59

50 *Case Concerning the Auditing of Accounts between the Kingdom of Netherlands and the French Republic pursuant to the Additional Protocol of 25 September 1991 to the Convention on the Protection of the Rhine against Pollution by Chlorides of 3 December 1976,* PCA (2004) ('*Rhine Chlorides Arbitration*'), para 97 (translated by the author). In the original French, para 97 provides: 'Lorsque les riverains d'un fleuve international décident de doter celui-ci d'un régime commun portant sur l'usage de son eau, ils

This statement, along with the cost-sharing arrangements entered into by the Rhine riparian states, provides some indication of the potential role of the principle of solidarity in helping to frame equitable, and where necessary differentiated, arrangements for the sharing of costs associated with environmental protection of an international watercourse. Equally, solidarity might play a key role in framing arrangements for the sharing of water-related benefits and, ultimately, for the equitable allocation of water quantum and uses.

Though the existence of a community of interest amongst states sharing an international watercourse has long been legally recognised, the advent of sustainable development as one of the international law system's overarching guiding principles stresses that community's interdependence and the utility of compromise in order to achieve optimal human benefits and effective ecological protection. The cooperation required to achieve such compromise can only be facilitated by strong and technically capacitated institutions, which can identify and communicate socially acceptable compromises by means of intensive exchange of information and broad stakeholder participation.[51] This helps to explain the proliferation, in the modern practice of international water law, of basin-level agreements and related cooperative institutional arrangements, which function to elaborate the supplemental guidelines and rules of procedures required for effective cooperative engagement.[52] Ultimately, such robust institutional and procedural frameworks can assist watercourse states in reaching a well-informed compromise based, for example, on sophisticated benefit-sharing arrangements which respect the hydro-climatic and socio-ecological limits of a shared basin.[53] By highlighting the notion of an interdependent community of riparian states and promoting basin-wide cooperation by means of cooperative arrangements and institutions, solidarity can undermine the sovereignty-based assertions of states' rights and interests that have traditionally been relied upon to justify self-interested and sub-optimal unilateral action.

While solidarity is not absolutely intrinsic to inter-state cooperation – states may of course choose to engage in minimalist, self-interested procedural cooperation with a view to enjoying reciprocal benefits therefrom – it can serve to deepen cooperative engagement and thereby enhance the resulting human benefits by promoting sustainable optimisation of finite water resources. Solidarity need not be driven by any form of utopian altruism. Rather, where the interdependence of co-basin states is unavoidable and readily apparent due to geophysical and hydrological realities, solidarity may be motivated by states' mutual long-term interest in maximising water resource utilisation in a politically, socially and ecologically sustainable manner.

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rendent témoignage à une "communauté d'intérêts" qui conduit à "une communauté de droit" (pour citer les notions dont s'est servies la Cour Permanente de Justice internationale en 1929 dans l'Affaire relative à la Juridiction territoriale de la Commission internationale de l'Oder (C.P.J.I., série A, no 23, p. 27)). La solidarité des riverains est sans doute un élément de leur communauté d'intérêts'

51 Gjørtz Howden (n 23) at 58–59

52 On the proliferation of such institutional arrangements, see S Schmeier, *Governing International Watercourses: River Basin Organizations and the Sustainable Governance of Internationally Shared Rivers and Lakes* (Routledge 2013); I Dombrowsky, *Conflict, Cooperation and Institutions in International Water Management: An Economic Analysis* (Edward Elgar 2007); O McIntyre, 'The Legal Role and Context of River Basin Organisations', in A Kittikhoun and S Schmeier (eds), *Water Diplomacy and Conflict Management* (Routledge 2021) 25–48

53 See further BO Magsig, *International Water Law and the Quest for Common Security* (Routledge 2015), at 69; McIntyre, 'Embedding "Solidarity" in International Water Law' (n 21) at 229

Thus, whereas seminal sociological thinkers 'conceived of solidarity as the social glue that stimulates individuals to share with, and collaborate in, a larger collective',[54] it has clear relevance and utility in the modern practice of international environmental and natural resources law as 'an understanding among formal equals that they will refrain from actions that would significantly interfere with the realisation and maintenance of common goals or interests'.[55] In this context, solidarity can be understood as a principle of modern international law, which is 'beginning to inform the entire system … similar to the concept of equity … '.[56] As a principle founded upon recognition of the essential interdependence of the community of states, and thus the need for meaningful cooperation amongst states in order to maximise welfare, it has clear relevance for the progressive elaboration of international environmental and natural resources law and practice, where a commitment to solidarity can act as a counterweight to short-term and narrowly self-interested conceptions of the rights of states flowing from territorial sovereignty.[57]

5. Manifestations of solidarity in international water law

Despite few express endorsements in key international water law instruments, one can readily trace the values inherent to solidarity throughout the key normative elements of general international water law and a rich variety of related practice. These include the central imperatives of ensuring the equitable sharing of water-related benefits amongst watercourse states along with optimal and sustainable utilisation of an increasingly scarce resource, the closely related focus on inter-state communication and cooperation with a view to achieving these imperatives, the increasing willingness to facilitate broad stakeholder participation and civil society engagement in water management decision-making in order to optimise human benefits and protect vital aquatic ecosystems, and the commitment to differentiation in the implementation of the rules and principles of international water law.[58]

5.1 *Equitable sharing*

The overarching and cardinal international water law principle of equitable and reasonable utilisation employs a profoundly distributive conception of equitable sharing, which recognises the need to identify and address the water-related needs and concerns of each watercourse state, having particular regard to the capacity and level of social and economic development of each. Among the factors expressly listed under the UN Watercourses Convention as relevant to any determination of the

54 M Loopmans and J Hoogesteger, 'Hydrosolidarity: A Socio-Political Reading of a Moral Concept' (2004) 17(3) Water Alternatives 688, summarising, at 690, the work of Comte, Durkheim and Tönnies in theorising solidarity

55 P Cullet, *Differential Treatment in International Environmental Law* (Ashgate 2003) at 18

56 Macdonald (n 13) at 262

57 McIntyre, 'Embedding "Solidarity" in International Water Law' (n 21) at 233

58 Several authors highlight the role of these key features of international water law in institutionalising interdependencies, including F Rocha Loures, 'Community-of-Interests across Source-to-Sea Systems: An International Law Perspective' (2021) 46(2) Water International 224; P Wouters, *Water Security: Global, Regional and Local Challenges* (Institute for Public Policy Research 2010) at 11; Gjørtz Howden (n 23) at 58–60; McIntyre, 'Embedding "Solidarity" in International Water Law' (n 21) at 236

equitable entitlements of each watercourse state are included 'the social and economic needs of the watercourse States concerned' and 'existing and potential uses of the watercourse', with neither of the latter classes of use given any inherent priority, thus recognising varying degrees of social and economic dependence and vulnerability and the needs of late-developing states, notwithstanding any potential disruption of established patterns of use.[59] Indeed, the framework provided by modern international water law was elaborated with the aim of facilitating the development of shared water resources,[60] and leading commentators point out that solidarity may be 'considered to be an ideological source for the law of development' and as the 'very foundation [and] … [t]rue justification of the right to development'.[61] Though the Convention also lists 'economy of use of the waters of the watercourse' as a relevant factor, it expressly includes 'the costs of measures taken to that effect', thus having regard to watercourse states' capacity to bear such costs.[62] Analysis of the relative weight attributed in state and judicial practice to each of the factors listed as relevant to equitable and reasonable utilisation suggests that the importance of efficient utilisation is in any case quite limited,[63] thereby avoiding any inherent advantage to more technically developed states. It must be remembered that, in articulating the principle of equitable and reasonable utilisation, the UN Watercourses Convention focuses on 'attaining optimal and sustainable utilization thereof and *benefits therefrom*',[64] suggesting a potentially significant role for a broad range of so-called 'benefit-sharing' arrangements, in the framing of which considerations of solidarity would inevitably weigh heavily.[65]

While no relevant factor enumerated under the UN Watercourses Convention is accorded any inherent priority in determining the equitable entitlements of watercourse states,[66] Article 10 of the Convention provides that 'a conflict between uses of an international watercourse … shall be resolved … with special regard being given to the requirements of vital human needs'.[67] The concept of vital human needs is understood to correspond generally with key entitlements and obligations arising under the emerging human right to water, and thus to prioritise the immediate

59 UN Watercourses Convention, art 6(1)(b) and (e). As it was elaborated over several decades by the International Law Commission and very widely endorsed by states in the UN General Assembly, the UN Watercourses Convention is widely regarded to be an authoritative articulation of the position in general international law in relation to most legal issues arising therein

60 Hence the pronounced emphasis in many water resources agreements at the global, regional and basin levels, on rules regarding prior notification of planned measures and the conduct of follow-on consultation and negotiation with a view to addressing any concerns or differences that might arise, as typified by art 11–19 of the UN Watercourses Convention

61 Rajamani (n 29) at 16

62 art 6(1)(f)

63 See X Fuentes, 'The Criteria for the Equitable Utilization of International Rivers' (1996) 67 British Yearbook of International Law 337; McIntyre, *Environmental Protection of International Watercourses* (n 39) at 173

64 art 5(1) (emphasis added)

65 See further R Paisley, 'Adversaries into Partners: International Water Law and the Equitable Sharing of Downstream Benefits' (2002) 3(2) Melbourne Journal of International Law 280; O McIntyre, 'Benefit-Sharing and Upstream/Downstream Cooperation for Ecological Protection of Transboundary Waters: Opportunities for China as an Upstream State' (2015) 40(1) Water International 48

66 art 6(3)

67 art 10(2)

and urgent needs of vulnerable communities and water-scarce states.[68] As the Convention is the product of an extensive codification of relevant practice by the International Law Commission[69] and is widely regarded as indicative of the position in general international law, its framing of the principle of equitable and reasonable utilisation appears to reflect the inclusive and distributional values of a community of states based on a pronounced sense of solidarity. Thus, it would appear that solidarity-related values have long guided, informed and qualified the key normative objective and obligation of international water resources law.

5.2 *Inter-state cooperation*

Furthermore, it is clear that all key international water law instruments envisage equitable and reasonable utilisation more as an ongoing process of inter-state cooperation in pursuit of equitable outcomes than as a substantive rule dictating particular outcomes in terms of state entitlements.[70] This explains the marked emphasis placed on every watercourse state's duty to cooperate in the management of shared waters,[71] particularly by means of procedural[72] and institutional engagement.[73] Such emphasis on cooperation is a clear hallmark of community and solidarity, as this 'proceduralization' and 'institutionalization' of international water law is intended to promote inclusive cooperative participation by all watercourse states in a spirit of solidarity.[74] As time goes on, this is likely to prove ever more useful, even essential, in facilitating the intensive, long-term and increasingly institutionalised cooperation which will be required amongst international watercourse states in order to optimise the use of scarce water resources and thereby address the looming global water crisis.[75] As water scarcity, pollution and climate-related water problems impact ever more significantly on international watercourses, the inclusive participation of all watercourse states in increasingly ambitious cooperative

68 See eg O McIntyre, 'The Human Right(s) to Water and Sanitation and the Relentless Development of Standards', in S Turner and others (eds), *Environmental Rights: The Development of Standards* (CUP 2019) 147

69 International Law Commission, *Report of the International Law Commission to the General Assembly on the Work of its Forty-Sixth Session*, UN Doc. A/49/10 (1994)

70 On the legal nature and normative implications duty to cooperate in international water law, see C Leb, *Cooperation in the Law of Transboundary Water Resources* (CUP 2013)

71 See eg art 8 and 9 of the UN Watercourses Convention and art 2(6) and 9 of the UN Water Convention. Indeed, the Preamble of the latter instrument declares unequivocally that its objectives 'can only be ensured by enhanced cooperation'

72 See eg the stress placed on notification of planned measures and on related consultation and negotiation in art 11–19 (Part III) of the UN Watercourses Convention. See further O McIntyre, 'The Contribution of Procedural Rules to the Environmental Protection of Transboundary Rivers', in L Boisson de Chazournes, C Leb and M Tignino (eds), *Freshwater and International Law: The Multiple Challenges* (Edward Elgar 2013) 239; 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

73 See eg the requirement under art 9(2) of the UNECE Water Convention for State parties to enter into agreements or arrangements providing for the establishment of joint bodies. See further McIntyre, 'The Legal Role and Context of River Basin Organisations' (n 52)

74 Consider, for example, the requirement under art 5(2) of the UN Watercourses Convention, which elaborates upon the principle of equitable and reasonable utilisation, to the effect that '[w]atercourse States shall *participate* in the use, development and protection of an international watercourse in an equitable and reasonable manner' (emphasis added)

75 See generally E Brown Weiss, *International Law for a Water-Scarce World* (Martinus Nijhoff 2013) at 1–10

arrangements will be required in order to identify and deliver truly equitable and sustainable water utilisation regimes.[76] For example, sophisticated benefit-sharing arrangements are likely to prove increasingly useful, both in order to optimise the human benefits to be derived from scarce water resources and to ensure conservation of water-related ecosystems and maintenance of related vital ecosystem services, which will require robust and permanent legal and institutional frameworks for intense procedural inter-state engagement.[77] Scholarly analysis of benefit-sharing arrangements around the world emphasise the importance of structured engagement with all stakeholders and the related 'institutionalisation' of transboundary water cooperation.[78] Indeed, commentators tend to attribute the failure of such arrangements to a lack of effective procedural engagement and of competent institutional frameworks for water cooperation.[79] Such procedural and institutional engagement recognises interdependence and relies, at least implicitly, upon a notion of solidarity which takes account, *inter alia*, of the differentiated needs and capacities of participating watercourse states. In this way, the principle of solidarity might come to play a very significant role in the equitable allocation of the uses of and benefits derived from shared water resources as it offers 'to enhance significantly the conceptual vocabulary available to give expression to the common language of equity in international water law'.[80]

The dearth of formal articulation of the principle of solidarity in international water law agreements hasn't prevented watercourse states from engaging in patterns of routine hydro-diplomatic cooperation typifying the notion of a community of interest demanding solidarity. For example, arrangements are commonly entered into under international basin agreement regimes for non-party watercourse states, and occasionally other non-state actors, to enjoy 'observer' status at the cooperative international institutions created under such regimes. Such observer status is a privilege sometimes granted by watercourse states, usually through river basin organisations (RBOs), to non-parties who are interested in, or potentially affected by, the work of the organisation. Such arrangements are intended to give the non-party states a platform to participate in the organisation's activities, albeit with limited rights as compared to the parties in the organisation's day-to-day functioning, voting and decision-making. Allowing participation rights to extend beyond the parties to a basin agreement regime can only be explained by a sense of community and associated solidarity. Arrangements providing for the cooperative participation as observers of non-party states, as well as other interested actors, such as civil society organisations, are routinely established under the auspices of international water resources and river basin agreements,[81] demonstrating a highly developed

76 See further Leb (n 70) at 221–50

77 See Paisley (n 65); McIntyre, 'Benefit-Sharing and Upstream/Downstream Cooperation for Ecological Protection of Transboundary Waters' (n 65)

78 See D Phillips and others, *Transboundary Water Cooperation as a Tool for Conflict Prevention and Broader Benefit-Sharing* (Ministry of Foreign Affairs: Global Development Studies No. 4 2006) at 172. On benefit-sharing arrangements between the US and Canada regarding the Colombia River, see McIntyre, 'Benefit-Sharing and Upstream/Downstream Cooperation for Ecological Protection of Transboundary Waters' (n 65), who suggests, at 51, that 'due to the novelty of benefit-sharing as a cooperative paradigm and the inherent complexity of the considerations and calculations involved, a sophisticated legal and institutional framework for cooperation would be required for formulating related proposals'.

79 AD Tarlock and P Wouters, 'Are Shared Benefits of International Waters an Equitable Apportionment?' (2007) 18(3) Colorado Journal of International Law and Policy 523

80 McIntyre, 'Embedding "Solidarity" in International Water Law' (n 21) at 232

sense of solidarity amongst the watercourse states, amounting to an acknowledgment of their community of interest in the watercourse and in its use and protection.

5.2.1 Stakeholder engagement and participation

Though international water agreements tend to emphasise inter-state engagement,[82] with few expressly requiring the participation of stakeholders or of the public in decision-making, or even the sharing of relevant information with non-state actors,[83] practice in the field clearly seems to be moving steadily towards broad stakeholder participation and civil society engagement. Reflecting the general principle of public participation proclaimed in Rio Principle 10,[84] an increasing number of watercourse agreements stipulate inclusive engagement with non-state actors.[85] Even in the case of those agreements that do not so provide, it nevertheless seems that where permanent institutions for transboundary water cooperation are in place many are sufficiently flexible to facilitate structured stakeholder engagement. As Schmeier notes in her authoritative study of such institutions, 'RBOs do not act in isolation in their respective river and lake basins', but instead engage with a range of external actors including 'NGOs [non-governmental organisations], civil society groups, knowledge groups and research networks … as well as other regional institutions either directly dealing with water resources issues … or implicitly influencing river basin governance through their regional principles, norms, rules and activities'.[86] This trend is evident in instruments framing water cooperation at the regional and global levels. Though the UN Water Convention only requires state parties to make information relating to the management of transboundary freshwater resources available the public,[87] requiring nothing in relation to public or stakeholder participation, routine practice developed under the Convention is regarded as 'arguably leading the charge on producing instruments which strengthen joint institutions and stakeholder participation'.[88] Such engagement is especially important in seeking to achieve the environmental and social sustainability with which hydro-solidarity is associated, as 'effective governance requires a bottom-up approach, and one that

81 Including, for example, observer arrangements established under: the Convention on Cooperation for the Protection and Sustainable Use of the River Danube (Sophia, 29 June 1994); the Convention on the Protection of the Rhine (Rotterdam, 22 January 1998); the Agreement on the Establishment of the Orange–Senqu Watercourse Commission (Windhoek, 3 November 2000); the Agreement on the Establishment of the Zambezi Watercourse Commission (13 July 2004); the Tripartite Interim Agreement for Cooperation on the Protection and Sustainable Utilisation of the Water Resources of the Incomati and Maputo Watercourses (Johannesburg, 29 August 2002); the Agreement on Cooperation for the Sustainable Development of the Mekong River Basin (5 April 1995); and the Nile Basin Initiative

82 See eg UN Watercourses Convention Part III, art 11–19

83 UN Watercourses Convention, art 9

84 Rio Declaration (n 28)

85 For example, Convention on the Protection of the Rhine (Bern, 12 April 1999), art 14; Agreement on the Establishment of the Zambezi Water Commission (Kasane, 13 July 2004), art 16(8); Convention on Sustainable Management of Lake Tanganyika (Dar es Salaam, 12 June 2003) ('Lake Tanganyika Convention'), art 5(2)(d) and art 17

86 Schmeier, *Governing International Watercourses* (n 52) at 108

87 art 16

88 See R Moynihan, 'Inland Water Biodiversity: International Law on Protection of Transboundary Freshwater Ecosystems and Biodiversity', in E Morgera and J Razzaque (eds), *Biodiversity and Nature Protection Law* (Edward Elgar 2017) at 200

often sits more easily with non-governmental organisations, working at the interface between state and society'.[89] In her authoritative study of the nature and normative implications of the community of interest approach in International water law, Gjørtz Howden concludes that a key 'premise for hydrosolidarity is broad stakeholder participation in the management process … [as] … stakeholder participation is central when it comes to making compromises socially acceptable'.[90]

Quite apart from any express requirement for engagement with non-state actors, many water-related treaty regimes either require[91] or promote reliance upon[92] procedures for environmental impact assessment (EIA) of planned projects with a view to avoiding and minimising adverse transboundary impacts and in order to facilitate meaningful inter-state notification and engagement. Moreover, the International Court of Justice (ICJ) has described EIA in respect of a project likely to impact an international watercourse as a 'requirement under general international law',[93] suggesting that the obligation to conduct an EIA no longer requires a legal basis in an applicable treaty provision. Though in that case the Court found that 'no legal obligation to consult the affected populations arises for the Parties', at least in international law, it suggested that they should rely on their domestic EIA regimes in giving effect to their international obligation to conduct EIA. Such domestic EIA regimes would almost universally be expected to include public or stakeholder participation as a central element of the EIA process.[94] Consider, for example, the relevant requirement under the 1991 Espoo Convention on Transboundary EIA, which has been ratified by 44 states and the European Union and is regarded as providing a global benchmark for the development of national EIA rules intended to include assessment of transboundary impacts.[95] Further, in the context of the ecosystems protection obligations which pervade modern international water law, public participation has long been universally recognised as essential for adoption of the so-called 'ecosystem approach', notably in practice guidance developed under the auspices of the Convention on Biological Diversity.[96] Despite first impressions, therefore, international water law does not appear to be quite so out-of-step with the general

89 A Rieu-Clarke and C Spray, 'Ecosystem Services and International Water Law: Towards a More Effective Determination and Implementation of Equity' (2013) 16(2) Potchefstroom Electronic Law Journal 12, at 46

90 Gjørtz Howden (n 23) at 59, citing M Fallenmark, *Towards Hydrosolidarity: Ample Opportunities for Human Ingenuity* (SIWI 2005) at 27

91 Lake Tanganyika Convention, art 15

92 UN Watercourses Convention, art 12

93 *Pulp Mills* (n 6) para 204

94 See eg A Shepherd and C Bowler, 'Beyond the Requirements: Improving Public Participation in EIA' (1997) 40 Journal of Environmental Planning and Management 725, who could conclude (in 1997) that '[p]ublic participation is required in most environmental impact assessment programmes around the world'. See further AN Glucker and others, 'Public Participation in Environmental Impact Assessment: Why, Who and How?' (2013) 43 Environmental Impact Assessment Review 104; MC O'Faircheallaigh, 'Public Participation and Environmental Impact Assessment: Purposes, Implications and Lessons for Public Policy-Making' (2010) 30(1) Environmental Impact Assessment Review 19

95 UNECE (Espoo) Convention on Environmental Impact Assessment in a Transboundary Context (1991), 30 ILM 802, art 3(8)

96 CBD Decision V/6, Ecosystem Approach (UN Doc. UNEP/CBD/COP/5/23, 22 June 2000), at 1; Goal 2.5 of the CBD's Revised Programme of Work on Inland Water Biological Diversity, CBD Decision VII/4 (2004), Annex, at 22; Guidelines on Implementing the Ecosystem Approach, CBD Decision VII/11, para 10, at 2 (UN Doc. UNEP/CBD/COP.7/21, 13 April 2004); Voluntary Guidelines for Biodiversity-Inclusive Impact Assessment, CBD Decision VIII/28, Annex (UN Doc. UNEP/CBD/COP/8/27/Add.2)

requirement for broad public or stakeholder participation which is rapidly becoming established in customary international law,[97] and which applies equally to the management of shared transboundary water resources.[98] It seems, therefore, that elements of solidarity, and thus values associated with broad recognition of community interests, can be detected in international water law's increasing willingness to facilitate broad stakeholder participation and civil society engagement.

5.3 *Capacity and differentiation*

As noted above, the notion of intra-generational equity and the CBDR principle, as well as that of inter-generational equity, as core elements of sustainable development, aptly illustrates the practical application of the principle of solidarity. Both notions might reasonably be expected to exert particular influence upon the practice of international water law, where equity and sustainability are such centrally important guiding values. Thus, in any role either principle would pursue, and be informed by, solidarity-related values. However, intimations of the values associated with solidarity and with equitable differentiation can also be detected in other substantive aspects of international water law. For example, in the context of the general duty applying to watercourse states to take all appropriate measures to prevent significant transboundary harm to other watercourse states,[99] and possible resulting state responsibility for breach thereof, considerable variance in the standards of due diligence expected of watercourse states has long been accepted in international water law (as elsewhere in international environmental and natural resources law). The appropriateness of the conduct of a state causing transboundary harm is likely to be assessed with regard to a range of relevant factors, including that state's relative level of economic and social development and technical and administrative capacity.[100] Such practice provides yet another practical illustration of the pervasive solidarity values underlying the CBDR principle.

Providing a rare example of express articulation of core solidarity values in a formal legal instrument concerned with shared international water resources, the 2008 International Law Commission (ILC) Draft Articles on Transboundary Aquifers include an Article 16 on '[t]echnical cooperation with developing States', requiring that 'States shall, directly or through competent international organizations, promote scientific, educational, legal and other cooperation with developing States for the protection and management of transboundary aquifers or aquifer systems'.[101] Article 16 proceeds to set out in detail what forms such cooperative assistance to developing states should

97 J Razzaque, 'Information, Public Participation and Access to Justice in Environmental Matters', in S Alam and others (eds), *Routledge Handbook of International Environmental Law* (Routledge 2012) 137, at 140; J Ebbesson, 'Principle 10: Public Participation', in JE Viñuales (ed), *The Rio Declaration on Environment and Development: A Commentary* (OUP 2015) 287, at 287

98 C Bruch, 'Evolution of Public Involvement in International Watercourse Management', in C Bruch and others (eds), *Public Participation in Governance of International Freshwater Resources* (UNU Press 2005) 21, at 21–22 and 28

99 UN Watercourses Convention, art 7

100 See further O McIntyre, 'State Responsibility in International Law for Damage to Transboundary Freshwaters: The Emergence of a New Ecosystems-Based Paradigm' (2020) 29(3) Review of European, Comparative and International Environmental Law 430; O McIntyre, 'The Current State of the Development of the Principle of no Significant Harm: How Far Have We Come? (2020) 20 International Environmental Agreements: Politics, Law and Economics 601

101 International Law Commission, *Report of the International Law Commission on the Work of its Sixtieth Session*, UN GAOR, 62nd Sess., Suppl. No. 10, UN Doc. A/63/10 (2008)

take, including capacity-building and enhancement, facilitating international participation, supplying equipment and facilities, providing technical and practical advice, and supporting the exchange of technical knowledge and experience. Such assistance is highly characteristic of the CBDR principle in international law and implies the existence of community, not alone amongst states sharing a particular transboundary aquifer (or international watercourse), but even amongst all states globally.

Broadly similar values are reflected by the UN Committee on Economic Social and Cultural Rights (CESCR), which in 2002 adopted General Comment No. 15, elaborating upon the legal basis and implications of the (then) nascent human right of access to water, which is purportedly implicit in rights set out under the 1966 International Covenant on Economic, Social and Cultural Rights.[102] Regarding the obligations arising for international watercourse states by virtue of the human right to water, and expressly referring to supportive corresponding requirements contained in the UN Watercourses Convention, and thus likely to arise under general international water resources law, General Comment No. 15 explains that

> To comply with their international obligations in relation to the right to water, States parties have to respect the enjoyment of the right in other countries. International cooperation requires States parties to refrain from actions that interfere, directly or indirectly, with the enjoyment of the right to water in other countries. Any activities undertaken within the State party's jurisdiction should not deprive another country of the ability to realize the right to water for persons in its jurisdiction.[103]

Such solidarity amongst states as regards realisation of the human right of access to water appears to extend beyond the immediate shared international watercourse or basin to embrace the wider global community of states, all of whose citizens depend equally upon such access. General Comment No. 15 unequivocally advises that

> Depending on the availability of resources, States should facilitate realization of the right to water in other countries, for example through provision of water resources, financial and technical assistance, and provide the necessary aid when required. In disaster relief and emergency assistance, including assistance to refugees and displaced persons, priority should be given to Covenant rights, including the provision of adequate water. International assistance should be provided in a manner that is consistent with the Covenant and other human rights standards, and sustainable and culturally appropriate. *The economically developed States parties have a special responsibility and interest to assist the poorer developing States in this regard*.[104]

It would appear, therefore, that each key imperative set out under the general international legal framework for the management of shared transboundary freshwater resources – the equitable allocation of water and related benefits, the prevention of transboundary environmental and other harm, meaningful good faith cooperation amongst watercourse states, and realisation of water-related human rights entitlements – requires

102 Committee on Economic, Social and Cultural Rights, *General Comment No. 15 (2002): The Right to Water (arts. 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)*, UN Doc. E/C.12/2002/11 (20 January 2003)

103 *Ibid* para 31

104 *Ibid* para 34 (emphasis added)

consideration of the differentiated needs and capacities of states and is thus informed by solidarity-related values.

6. Conclusion

The foregoing examination of the practice of international water law, as a rapidly evolving sub-field of international environmental and natural resources law, plainly indicates that a general principle of solidarity frames and informs almost every facet of its normative content and application. At the very least, key values which are closely associated with solidarity – including distributive equity, differentiation, community interests, inter-generational interests, institutionalised intense co-operation, ecosystem conservation and resource optimisation – have permeated every corner of this corpus of specialist rules, principles and practice. Rather than a forlorn utopian fantasy, therefore, the existence and legal significance of a principle of solidarity within the montage of rules of international environmental and natural resources law appears an objective reality. This principle can only have any meaningful role, however, where the relevant state actors can be understood to form a legal community of some sort, which involves each member of that community shouldering community-related responsibilities informed by the values associated with solidarity. Thus, the idea that there exists a legally significant community of interest amongst international watercourse states, as repeated in judicial deliberation on shared water resources for almost 100 years, infers the existence of a principle of solidarity, which informs the resulting community-related responsibilities of states, and thus almost every aspect of international water law and practice. Indeed, leading commentators go so far as to describe this 'focus on building legal regimes around the core substantive norms of equity and reasonableness' as 'hydrosolidarity in the making'.[105]

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105 Wouters and others (n 22) at 130