Road to Stockholm+50 (2022) and Beyond

Convergence in International Environmental and Natural Resources Law

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Abstract.

Despite the extraordinary proliferation of instruments of international environmental law since the 1972 UNCHE Conference in Stockholm, it appears that diverse forces are acting to maintain the internal coherence of this sub-field of international law, as well as its position firmly within the international law system. A range of institutions and processes ensure the continuing unitary nature of international environmental law within a unitary system of international law, notably including the universalist instincts of the International Court of Justice, the codification routinely undertaken by the International Law Commission, and the universal, pervasive and indivisible character of increasingly relevant human rights norms. These processes of "convergence" act to unify and enrich the fabric of the increasingly elaborate and sophisticated complex of rules, principles and institutional structures comprising international environmental law, while suggesting its growing developmental maturity after 50 years of frenetic evolution and supporting its continuing coherent elaboration.

Keywords: fragmentation; convergence; treaty congestion; legal coherence; systemic unity of international law

1. Introduction

The broad corpus of rules, principles and objectives comprising international environmental law has grown exponentially in the 50 years since the United Nations Conference on the Human Environment (UNCHE)[1] was convened in Stockholm in June 1972, not least due to the adoption of several hundred agreements and other instruments, ranging from highly focused bilateral arrangements through to global framework conventions. These instruments are further supplemented by the wealth of soft law declarations, resolutions and guidance, best exemplified by the Declarations adopted at 1972 Stockholm and at Rio+20 years later. However, serious questions persist regarding whether

> 'the goals, principles and instruments adopted in international environmental agreements [have] established a solid basis for cooperation between states that will enable the global community to address environmental problems in time to prevent the most irreversible impacts ...'.[2]

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[1] United Nations (1972), *Report of the United Nations Conference on the Human Environment*, 5-16 June 1972, Stockholm; UN Doc. A/Conf. 48/14/Rev.1; United Nations Conference on the Human Environment, Stockholm 1972 | United Nations; NL730005.pdf (un.org) (accessed on 22 May 2022).

[2] J. Gupta, C. Vegelin and N. Pouw, 'Lessons learnt from international environmental agreements for the Stockholm+50 Conference: celebrating 20 Years of *INEA*', (2022) 22 *International Environmental Agreements* 229-244, at 230.

Commentators highlight a wide range of problems impacting upon the efficacy of international environmental law, including 'the reincarnation of the concept of "full permanent sovereignty" which provides a route for countries to back-out from cooperation with others and not take responsibility for harm caused to others'[3] and 'the lack or deficiency in enforcement mechanisms'.[4] Generally, expert commentators have concluded that 'international environmental law, in spite of its impressive development at the level of treaty law and notwithstanding the abundance of soft law instruments, declarations and "understandings", remains an immature and underdeveloped body of law'.[5]

To a certain extent international environmental law may be considered a victim of its own success, at least in terms of the treaty process, where there exists a clear risk of treaty proliferation, congestion and fragmentation. Commentators note that 'the international arena is now congested with agreements from bilateral through to global levels, often addressing each issue individually (e.g. mercury), and using a set of inconsistent principles and instruments to address related problems'.[6] Such fragmentation can give rise to a range of difficulties beyond normative incoherence and inconsistency. For example, fragmentation within the various international environmental regimes can lead to overlapping responsibilities and negative competition and inefficiency in the pursuit of environmental goals and to normative conflicts between actors,[7] and may undermine effective enforcement and exacerbate existing environmental injustices by allowing forum shopping or shifting. Equally, fragmentation between environmental regimes and rule complexes beyond international environmental law, such as the human rights, trade and investment regimes, threatens to undermine normative coherence and the effective application of environmental rules.

Counteracting the threat of fragmentation, however, one can observe the phenomenon of 'convergence' occurring in the ongoing elaboration of international environmental law, whereby different environmental sub-fields appear increasingly to borrow normative forms and approaches from each other, and from beyond international environmental law, in an ongoing process of 'interpenetration and cross-fertilization'.[8] Most commentators welcome this process, foreseeing positive benefits in terms of environmental outcomes. Francioni highlights the potential environmental role of enforcement mechanisms established beyond international environmental law, such as the World Trade Organisation (WTO) Appellate Body's increasing readiness to give due consideration to the legitimate environmental commitments of States, or the growing concern of human rights courts and monitoring bodies with the environmental dimension of the human rights to life, health, and private and family life.[9] Others describe such

[3] J. Gupta and S. Schmeier, 'Future proofing the principle of no significant harm', (2020) 20 *International Environmental Agreements* 731-747.
[4] F. Francioni, *Realism, Utopia and the Future of International Environmental Law*, EUI Working Papers: Law 2012/11, at 1.
[5] Francioni, *ibid*.
[6] Gupta et al, *supra*, n. 2, at 235.
[7] Gupta et al, *ibid*, at 236 cite the failure of coordination between the climate regime and the forest regime, as the climate regime focused on forests as carbon sinks and not on their role in biodiversity.
[8] A. Cassese, *International Law* (OUP, Oxford, 2001), at 45.
[9] *Supra*, n. 4, at 1.

interactions between different regimes as a process of "cognitive learning", by means of which '[r]egimes learn from each other as, for example, with the "CBD-ification" of older conservation agreements; notions developed within the CBD were then applied within other conservation agreements'.[10] The phenomenon of convergence represents a critical point in the developmental maturity of international environmental law, as a process of normative consolidation which largely addresses concerns over fragmentation and treaty congestion, and thereby sustains the unitary and systemic character of international environmental law and bolsters its coherent application, often across multiple environmental sectors and media, and helps to reflect the broad scale and interconnectedness of the natural world.

2. Convergence in International Law

In response to, or perhaps in step with, the phenomenon of "fragmentation",[11] widely observed in recent decades in connection with the 'diversification and expansion' of international law[12] and the associated development of increasingly autonomous sub-regimes,[13] it would appear that a counteracting integrative process of "convergence" is occurring due to 'the gradual interpenetration and cross-fertilization of previously somewhat compartmentalized areas of international law'.[14] As Andenas observes:

> 'Fear of fragmentation as a threat to the unity and coherence of international law or its future as a legal system may explain why convergence and unity are becoming more dominating features of international law discourse than the claims to autonomy and specificity of different regimes and disciplines which previously dominated.'[15]

It appears, therefore, that the nature of the interrelationship between these opposing (and ostensibly incompatible) tendencies towards difference and universality may be quite complex. In seeking to reconcile the 'inherent dialectic' between fragmentation and convergence, Craven views both phenomena as interdependent processes necessitated by

[10] Gupta et al, *supra*, n. 2, at 236.

[11] See B. Simma, 'Fragmentation in a Positive Light', (2004) 25 *Michigan Journal of International Law* 845: M. Koskenniemi and P. Leino, Fragmentation of International Law? Postmodern Anxieties, (2002) 15 *Leiden Journal of International Law* 553; M. Prost, All Shouting the Same Slogans: International Law's Unities and the Politics of Fragmentation, (2006) *Finnish Yearbook of International Law* 131; T. Treves, 'Fragmentation of International Law: The Judicial Perspective', (2007) 23 *Comunicazioni E Studi* 821; A. Lang, 'The Role of the International Court of Justice in a Context of Fragmentation', (2013) 62/4 International and Comparative Law Quarterly 777–812.

[12] International Law Commission, Chapter X: 'Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law', Report of the 55th Session, UN GAOR, Supp. No. 3, UN Doc. A/58/10 (2003) 267, available at: https://legal.un.org/ilc/documentation/english/reports/a_58_10.pdf See further, M. Koskenniemi, *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, Report of the Study Group of the International Law Commission, UN Doc. A/CN.4/L.682 (13 April 2006), at 10–30; J. Ellis, 'Sustainable Development and Fragmentation in International Society', in D. French (ed.), *Global Justice and Sustainable Development* (Brill / Martinus Nijhoff, Leiden, 2010) 57–73.

[13] See, for example, B. Simma, 'Self-Contained Regimes', (1985) XVI *Netherlands Yearbook of International Law* 111; B. Simma and D. Pulkowski, 'Of Planets and the Universe: Self-contained Regimes in International Law', (2006) 17 *European Journal of International Law* 483-528.

[14] Cassese, *supra,* n. 8, at 45.

[15] M. Andenas, 'Reassertation and Transformation: From Fragmentation to Convergence in International Law', (2015) 46 *Georgetown Journal of International Law* 685, at 692.

an increasingly extensive, sophisticated and specialised legal system. He suggests that, as a system, international law 'must draw upon and recognise differences between regimes, actors, institutions and processes … [as] … difference and diversity must be disciplined, regularised, and contained within particular boundaries'.[16] This is achieved through the development of 'some coherent teleology' to be imposed upon each of the diverse specialised sites of legal activity.[17] Thus, the process of fragmentation may be viewed as indicative of the success of the system of international law[18] in addressing the problems of increasingly sophisticated inter-State interactions in an increasingly complex world,[19] while convergence serves to restrain international law's disintegration in order to preserve the requisite degree of systemic unity. It is possible, therefore, to view the continuing development of international law as a Hegelian dialectic process,[20] within which convergence represents the opposite side of the coin to more commonly aired concerns regarding the fragmentation of international law. In other words, 'fragmentation is produced through precisely the same processes which are used to contain or control diversity'.[21]

Koskenniemi further develops this logic, arguing that the maintenance of homogeneity in international law is necessarily associated with the pursuit of hegemonic interests, to which 'pluralistic fragmentation is a beneficial antioxidant'.[22] Conversely, Craven points out that fragmentation might 'allow the prioritisation of particular projects (and value sets) at the expense of others', so that '[e]ven if not, at the outset a hegemonic strategy, it might well come to be so.[23] Either view brings to mind the sometimes contested priority claimed for environmental or human rights values invoked in relation to the application of norms related to shared natural resources, on account of the uniquely critical and indispensable role of such resources in maintaining natural ecosystems and/or meeting vital human needs.

Whereas fragmentation has been comparatively well studied, both in terms of its origins in the 'changing structure of international law'[24] and its implications for normative

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[16] M. Craven, 'Unity Diversity and the Fragmentation of International Law', (2002) XIII *Finnish Yearbook of International* Law 1-31, at 10.
[17] *Ibid.*
[18] See, for example, G. Abi-Saab, 'Fragmentation or Unification: Some Concluding Remarks', (1999) 31 *New York University Journal of International Law and Politics* 919, who suggests, at 925, that 'the multiplication of specialised tribunals is, by itself, a healthy phenomenon'. See further, Craven, *ibid,* at 2.
[19] See B. Kingsbury, 'Foreword: Is the Proliferation of International Courts and Tribunals a Systemic Problem?', (1999) 31 *New York University Journal of International Law and Politics* 679, who notes, at 686, that such proliferation has led to increased third-party, law-based dispute settlement by 'making more disputes effectively justiciable in practice, and in deepening the body of authoritative pronouncements of international law – the better to guide legal actors and to make future adjudicative decisions more predictable'. See further, Craven, *ibid.*
[20] G.W.F. Hegel, *Phenomenology of Spirit* (Clarendon Press, Oxford, 1977, Translated by A.V. Miller), at 29-30.
[21] Craven, *supra,* n. 16, at 4.
[22] See Craven, *ibid*, summarising the position set out in M. Koskenniemi. 'What is International Law For?, in M.D. Evans, *International Law* (OUP, Oxford, 2002) 89, at 110.
[23] *Ibid.,* at 3.
[24] A phenomenon noticed as far back as the 1960s. See Craven, *ibid.,* citing, at 1, W. Friedmann, *The Changing Structure of International Law* (Stevens & Sons, London, 1964). Amongst the causal factors leading to fragmentation, Craven notes 'the lack of hierarchy, the absence of centralised institutions, and the problems of professional specialisation'.

consistency and systemic coherence, the various processes of convergence are rather less well understood.[25] However, some of these processes of convergence are readily apparent. Thus, while the phenomenon of fragmentation has been largely associated with the proliferation in recent years of international courts and tribunals,[26] the International Court of Justice (ICJ) is widely regarded as a key agent for maintaining the unity of the international legal order,[27] particularly through a range of procedural means, such as an expansion of its advisory functions.[28] Similarly, the International Law Commission (ILC) was conceived, *ab initio*, as an institution to be entrusted with responsibility for 'the progressive development of international law and its *codification*',[29] and it is specifically tasked with fostering 'more precise formulation and *systematisation* of rules of international law in fields where there already has been extensive State practice, precedent and doctrine'.[30] Andenas stresses the interaction between the ICJ and the ILC in the formation of coherent customary rules,[31] a factor recognised by the ILC Special rapporteur on the topic.[32] According to Craven, such systematisation 'is expressive of the idea that international law itself – its structures and processes – are open to evolutionary and progressive perfection' and so, to this end, it 'seeks to make homogenous, the empirically heterogenous, and create a whole out of disparate parts'.[33] Other, quasi-constitutional processes of convergence embedded into the fabric of international law include the principle of systemic integration applying to the interpretation of treaties pursuant to Article 33(1)(c) of the Vienna Convention on the Law of Treaties,[34] which has facilitated the kind of 'interpenetration and cross-fertilization' anticipated by Cassese,[35]

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[25] For a wide-ranging collection of essays exploring aspects of the phenomenon of convergence, see M. Andenas and E. Bjorge (eds.), *A Farewell to Fragmentation: Reassertion and Convergence in International Law* (CUP, Cambridge, 2015).

[26] See, for example, J.I. Charney, 'Is International Law Threatened by Multiple International Tribunals?', (1998) 271 *Hague Recueil des Cours* 101; G. Guillaume, 'The Future of International Judicial Institutions', (1995) 44 *International and Comparative Law Quarterly* 862; R. Jennings, 'The Role of the International Court of Justice', (1997) 68 *British Yearbook of International Law* 111.

[27] See Andenas, *supra,* n. 15; P.M. Dupuy, 'The Danger of Fragmentation or Unification of the International Legal System and the International Court of Justice', (1999) 31 *New York University Journal of International Law and Politics* 791, at 798-799.

[28] See further. L.B. Sohn, 'Important Improvements on the Functioning of the Principal Organs of the United Nations That Can be Made Without Charter Revision', (1997) 91 *American Journal of International Law* 652; S.M. Schwebel, 'Fifty Years of the World Court: A Critical Appraisal', (1996) 90 *Proceedings of the American Society of International Law* 339, at 347.

[29] Article 13, United Nations Charter (1945), 1 *UNTS* xvi (emphasis added).

[30] Article 15, Statute of the International Law Commission, UNGA Res. 174 (II), 21 November 1947 (emphasis added).

[31] *Supra,* n. 15, at 689. Consider, for example, the ICJ's express reference to the recently adopted and not (then) yet in force UN Watercourses Convention, the text of which had been elaborated over a period of more than 20 years by the ILC, in *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (Judgment) [1997] ICJ Rep 7, at para. 85.

[32] ILC Special Rapporteur (Sir Michael Wood), *First Report on Formation and Evidence of Customary International Law*, International Law Commission, UN Doc. A/CN.4/663 (17 May 2003); ILC Special Rapporteur, (Sir Michael Wood), *Second Report on Identification of Customary International Law*, International Law Commission, UN Doc. A/CN.4/672 (22 May 2014).

[33] *Supra,* n. 16, at 8.

[34] (1969) 1155 *UNTS* 331. See further, C. McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' (2005) 54 *International and Comparative Law Quarterly* 279; P. Merkouris, *Article 31(3)(c) VCLT and the Principle of Systemic Integration* (Brill Nijhoff, 2015); J. Lee, *Preservation of Ecosystems of International Watercourses and the Integration of Relevant Rules* (Brill Nijhoff, 2014).

[35] *Supra,* n. 8.

notably between the specialist sub-fields of international water resources law and international environmental law.[36] This principle builds upon other legal maxims traditionally applied by international courts and tribunals to facilitate teleological and normatively coherent reasoning, such as *ut res magis valeat quam pereat,* a tenet of treaty interpretation providing that all provisions are to be construed 'in a way that gives meaning to all of them, harmoniously'[37]

There are perfectly valid reasons for undertaking a systemic examination of the phenomenon of convergence and for seeking to highlight the diverse processes which can facilitate unity and coherence amongst related sub-fields of international law. Expert commentators have long expressed concern regarding a lack of awareness of parallel legal developments as a leading cause of fragmentation, with the ILC Study Group on Fragmentation noting that:

> 'Specialized law-making and institution-building tends to take place with relative ignorance of legislative and institutional activities in the adjoining field and of the general principles and practices of international law. The result is conflicts between rules or rule-systems, deviating institutional practices and, possibly the loss of an overall perspective on the law.'[38]

Dupuy similarly decries excessive professional specialisation emerging 'within some circles of specialized technical experts and diplomats, such as in the international protection of the environment', where:

> 'Due to their lack of solid background in public international law, some of these rather narrowly specialized "experts" do not necessarily see the implications, connections and legal relationships between some newly-established machineries and the norms of general international law which are still applicable, with respect, for example, to the international responsibility of States for breach of treaty obligations.'[39]

In the particular context of international environmental law, one might reasonably suggest that, in seeking to address looming crises of environmental degradation, natural resource depletion and global inequality, there are urgent and valid grounds for promoting the articulation of some measure of normative hierarchy, ideally identified by an institution enjoying an appropriate measure of legitimacy and authority, such as the ICJ, and based upon sufficient sensitivity to the relevant context in which rules apply in order to reflect advances in scientific understanding and solutions, shifts in political preference, evolving human rights concepts and standards, and demands for distributive equity in the use of resources.[40]

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[36] *Indus Waters Kishenganga Arbitration (Pakistan v India)* (Partial Award) (18 February 2013) PCA Case No. *2011-01* para 454 (concerning interpretation of the 1960 Indus Waters Treaty).
[37] B. Mayer, 'Temperature Targets and State Obligations on the Mitigation of Climate Change', (2021) 33(3) *Journal of Environmental Law* 585-610.
[38] Report of the ILC Study Group, *supra*, n. 12, at 11, para. 8.
[39] Dupuy, *supra,* n. 27, at 797.
[40] Craven suggests, supra, n. 16 at 2, that 'insecurity as to the absence of normative hierarchy, seems only to be an argument that the time is right for its articulation'.

3. Forms of Convergence

As convergence occurs in step with fragmentation, its characterisation might usefully commence with an examination of the key forms of the latter phenomenon. Craven identifies two principal varieties: firstly that of 'normative incompatibility between various sectors of international law', including, for example, 'the competition between trade and the environment'; and secondly 'the fragmentation of the basic "systemic rules" – the "rules of the game" – that underpin the idea of international law as a unitary domain of action and thought'.[41] The first he describes as a matter of 'judicial communication' and regards as a less serious threat to the systemic integrity of international law, as it 'would be open to remedy – by, for example, developing rules of hierarchy (temporal, normative, or conceptual) or machinery for institutional dialogue'.[42] His second variety of fragmentation, however, threatens the eventual disintegration of international law 'into a series of specialised, project-specific, regimes operating with little or no consistency between them as regards the relevant actors, institutional priorities, modes of settlement or framing suppositions'.[43] As an example of such systemic fragmentation, Crawford highlights[44] the divergent approaches to the question of attribution to the State of the conduct of non-State actors taken by the ICJ[45] and the Appeals Chamber of the International Criminal Tribunal for the former Yugoslavia (ICTY).[46]

Adopting an alternative characterisation, Andenas identifies three distinct forms of fragmentation, along with specific drivers of convergence to counter each.[47] Firstly, he refers to 'substantive fragmentation', which arises where different sub-fields claim a measure of autonomy and risk forming self-contained fragmented regimes. This corresponds with Craven's 'normative incompatibility' and may be addressed through recourse to the fundamental idea expressed by the ICJ in *WHO Regional Headquarters* that international law 'does not operate in a vacuum' but rather in 'relation to facts and in the context of a wider framework of legal rules of which it forms only a part'.[48] Having regard to this idea, the Court has on several occasions found that 'an international instrument must be interpreted by reference to international law'[49] so that even binding conventional rules must be interpreted and applied having regard to a broader context of relevant international rules and principles, and thus 'fragmentation gives way to

[41] *Supra,* n. 16, at 3.
[42] *Ibid.*
[43] *Ibid.* See further, Abi-Saab, *supra,* n. 18, at 926.
[44] J. Crawford, *Chance, Order, Change: The Course of International Law* (Hague Academy of International Law, General Course on Public International Law, 2014), at 286-287.
[45] In *Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. US), Merits, Judgment*, (1986) ICJ Reports 65, at para. 115, the ICJ required it to be shown that the State in question possessed 'effective control' of the relevant non-State actor in relation to the alleged conduct.
[46] In *Prosecutor v. Tadić (Appeal against Conviction)*, (1999) 124 ILR 62, at 109, the Appeals Chamber argued for a lower standard of 'overall control', a position systematically adopted by the ICTY Trial Chambers in later cases.
[47] *Supra,* n. 15, at 694-702.
[48] *Interpretation of the Agreement of 25 March 19512 between the WHO and Egypt,* (Advisory Opinion), (1962) ICJ Rep. 73, at 76 (10 October 1962). See Andenas, *ibid.*, at 694.
[49] *Fisheries Jurisdiction (Spain v. Canada),* (1998) ICJ Rep. 432, at 460 (4 December 1998).

convergence'.[50] Indeed Peters goes so far as to suggest that the "spirit of systemic harmonization" marks 'the new posture of international courts and tribunals'.[51]

Secondly, Andenas addresses 'institutional proliferation', which has seen a marked increase, not alone in the number of specialist international courts and tribunals, but also in the new enforcement mechanisms established under sectoral treaties to promote compliance with the increasingly specialised regimes created thereunder. Clearly, accretion over time of the specialised practice and jurisprudence developed by such judicial and quasi-judicial actors raises the prospect of further legal fragmentation. Crawford regards the problem of institutional proliferation as one of a lack of any centralised structure and of integration between judicial institutions; both a lack of horizontal integration, providing for an orderly division of labour amongst different specialised tribunals; and a lack of vertical integration, providing a formal hierarchy into which all international courts and tribunals might fit.[52] However, despite the lack of any formal hierarchy between such international courts and tribunals, Andenas argues that 'the pronouncements of the I.C.J., the only permanent tribunal of general jurisdiction, carry particular weight', and thereby provide 'a centre of gravity' which helps to ensure unity and coherence across all sub-fields of international law.[53] He notes the tendency of the Court increasingly to refer to the findings of 'other types of international courts and tribunals, not least the human rights courts and bodies' and cites Judge Greenwood's statement in *Diallo* (Compensation) to the effect that:

> 'international law is not a series of fragmented specialist and self-contained bodies of law, but a single, unified system of law, with the consequence for the case at hand that the I.C.J. should draw on the jurisprudence of other international courts and tribunals, even though it is not bound necessarily to come to the same conclusions.'[54]

Andenas finds further support for this position, regarding the essential unity and systemic character of international law, in the work of the ILC on the formation of customary international law.[55]

Finally, Andenas identifies 'methodological fragmentation', where different sub-fields of international law develop different methods for the interpretation of treaties and/or the recognition of customary rules. He points out that some judicial or quasi-judicial bodies, and especially those established under specialised treaties, have a tendency to regard the treaty that they are charged with interpreting 'as being special in some way'.[56] However,

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[50] Andenas, *supra,* n. 15, at 695.
[51] A. Peters, 'The refinement of international law: From fragmentation to regime interaction and politicization', (2017) 15/3 *International Journal of Constitutional Law* 671-704, citing, at 671, the words of the European Court of Human rights Grand Chamber in *Al-Dulimi and Montana Management Inc. v. Switzerland*, (2016) *Eur.Ct.H.R.* at 140 (App. No. 5809/08).
[52] J. Crawford, *Chance, Order, Change: The Course of International Law* (Hague Academy of International Law, General Course on Public International Law, 2014), at 283, citing the Appeals Chamber of the International Criminal Tribunal for the former Yugoslavia in *Prosecutor v. Tadić (Jurisdiction),* (1995) 105 ILR 458.
[53] *Supra,* n. 15, at 696, citing J. Crawford, *ibid.,* at 291.
[54] Andenas, *ibid.*, citing *Case Concerning Ahmadou Sadio Diallo (Guinea v. DRC),* (Compensation Judgment), (2012) ICJ Rep. 324, at 394, Declaration of Greenwood J.
[55] *Ibid.*
[56] *Ibid.*, at 697.

his analysis of oft-cited case law of the European Court of Human Rights suggests that the Court employed an interpretive method firmly based upon the 1969 Vienna Convention on the Law of Treaties, including Article 5, requiring that it should, where appropriate, take account of 'any relevant rules of the organization'. Therefore, the Court took account of the special nature of the European Convention on Human Rights in accordance with the universally applicable rules of international law.[57]

As regards 'methodological fragmentation' in the formation of customary rules, Andenas alludes to the problems that arise in seeking to base human rights law, which creates rights for individuals, on custom, which 'derives from the de facto adjustment of conflicting claims and interests of the subjects of international law', which have not traditionally included individuals.[58] However, he notes that it is becoming increasing clear that 'states can no longer be regarded as the only subjects of international law'[59] and that a broader range of interactions might now be understood to contribute to and provide evidence of the formation of customary rules across the spectrum of different specialist sub-fields.[60] It follows that different authority may be accorded to different evidential materials depending on the sub-field in question, but that the fundamental universal rules relating to custom continue to apply. Andenas concludes, therefore, that practice on the formation of custom appears to be 'trending towards convergence rather than to Thirlway's fragmentation' and, regarding methodological fragmentation more generally, that '[t]he tools needed to secure that coherence and integration of the diverse international law of today are all to hand.'[61]

In addition to the problems of substantive fragmentation and institutional proliferation, Crawford lists as a problem the phenomenon of so-called 'self-contained regimes', where 'a particular substantive or institutional field of international law develops to such an extent that it effectively displaces the general law' and no longer needs to interact with the wider international law system.[62] He argues that substantive fragmentation, even that of a systemic variety, may be addressed through certain institutional processes which facilitate the emergence of a normative preference, most notably the work of the ILC. Indeed, he points out[63] that the 2001 ILC Articles on the Responsibility of States for Internationally Wrongful Acts (ARSIWA) expressly approve the ICJ requirement for 'effective control' in establishing State responsibility for the acts of non-State Actors in the related commentary to Article 8.[64] The contributions of both the ILC and the ICJ in promoting normative convergence led Crawford to conclude 'that fragmentation poses no real threat to international law as a system'.[65]

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[57] *Ibid.*, at 697-698, based on analysis of *Mamatkulov & Askarov v. Turkey,* 2005-I Eur. Ct. H.R. 293 and *Golder v. United Kingdom,* 18 Eur. Ct. H.R. (ser. A) at 14 (1975).
[58] *Ibid.*, at 700, citing H.W.A. Thirlway, *The Sources of International Law* (OUP, Oxford, 2014), Chapter 2 and H.W.A. Thirlway, *International Customary Law and Codification* (Brill, Leiden, 1972), at 7.
[59] C. Greenwood, 'Sovereignty: A View from the International Bench', in R. Rawlings, P. Leyland and A. Young (eds.), *Sovereignty and the Law: Domestic, European and International Perspectives* (OUP, Oxford, 2013) 255.
[60] Supra, n. 15, at 700-701, citing the ILC Special Rapporteur on the Formation of Custom, supra, n. 32.
[61] *Ibid.,* at 701-702.
[62] *Supra,* n. 52, at 285.
[63] *Ibid.,* at 291-291.
[64] ILC, *Yearbook of the ILC,* 2001/II (2), at 47, para. 4.
[65] *Supra,* n. 52, at 291.

As regards institutional proliferation and the danger of fragmentation due to the overlapping jurisdictions of international courts and tribunals, he likewise identifies solutions among well-established principles of international law, including those of comity, *lis alibi pendens* and *res judicata*. The doctrine of comity, which derives from the inherent power of international courts and tribunals to protect the integrity of the judicial process by opting to decline jurisdiction or stay proceedings in respect of matters more appropriately heard elsewhere, allowed the UNCLOS Annex VII tribunal to decide to stay proceedings in the *MOX* case,[66] where proceedings in respect of a dispute between Ireland and the United Kingdom had been commenced before a range of judicial fora, also including the International Tribunal for the Law of the Sea (ITLOS), a Permanent Court of Arbitration (PCA) tribunal and the European Court of Justice.[67] Regarding the risk of fragmentation presented by self-contained regimes, such as the WTO system which contains a detailed suite of primary norms, a compulsory dispute-settlement system and a specialised regime of remedies, Crawford echoes the view of the ILC Study Group that such regimes amount to 'little more than a strong form of *lex specialis*, by which a "geographically or functionally limited treaty series" attempts to contract out of the secondary rules of international law that underpin the system as a whole'.[68] At any rate, he points out[69] that the *lex specialis* principle is accommodated in the ILC's work on State responsibility,[70] that the WTO system relies heavily on the Vienna Convention in matters of treaty interpretation,[71] and that the WTO Appellate Body has acknowledged that the GATT 'is not to be read in clinical isolation from public international law'.[72] To further illustrate this point, the Panel has recognised customary international law as a source of law for the WTO 'to the extent that the WTO treaty agreements do not "contract out" from it',[73] while the Appellate Body has taken a similar position regarding general principles of law.[74] All of which supports the position of commentators who seek to downplay the risks presented by 'the unrealistic hypothesis of a fully autonomous legal system'.[75]

4. Drivers of Convergence

The phenomenon of convergence is supported and facilitated by a number of systemically important and centrally located international institutions, by the continuing evolution of

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[66] *MOX Plant (Ireland v. United Kingdom), Annex VII,* (2003) 126 *ILR* 310, at 318-320, where the tribunal took this decision: 'bearing in mind considerations of mutual respect and comity which should prevail between judicial institutions both of which may be called upon to determine rights and obligations as between two States'.
[67] See Crawford, *supra,* n. 52, at 300-302.
[68] *Ibid*, at 305, citing ILC, Conclusions of the ILC Study Group, UN Doc. A/CN.4/L.702 (18 July 2006), para. 10.
[69] *Ibid*, at 304-308.
[70] ARSIWA, Article 55, *supra*, n. 64, at 140, para. 5.
[71] See generally, I Van Damme, *Treaty Interpretation by the WTO Appellate Body* (OUP, Oxford, 2009).
[72] Appellate Body Report, *United States of America – Standards for Reformulated and Conventional Gasoline,* WT.DS2/AB/R, 26 April 1996, at 19.
[73] Panel Report, *Korea – Measures Affecting Government Procurement,* WT/DS163/R, 1 May 2000, para. 7.96.
[74] Appellate Body Report, *United States of America – Import Prohibition of Certain Shrimp and Shrimp Products,* WT/DS58/AB/R, 12 October 1998, para. 158.
[75] B. Simma and D. Pulkowski, 'Of Planets and the Universe: Self-Contained Regimes in International Law', (2006) 17/3 *European Journal of International Law* 483-529. See Crawford, *supra,* n. 52, at 308.

certain specialist sub-fields of international law, and by established processes employed in the formation of international rules. Most notable amongst the institutional drivers are the universalist instincts of the International Court of Justice in its role as the pre-eminent adjudicatory body concerned with the determination and application of international rules, along with the International Law Commission's tendency towards the identification and promotion of generally accepted normative positions in its central role in the codification and progressive development of international law. Indeed, the general use of codification initiatives as a means of informing and assisting the rational development of critically important and emerging areas of international legal activity, even by learned societies and other bodies enjoying no law-making mandate formally conferred by States, further contributes to incremental progressive convergence around key legal values in a number of fields.[76] The universal, pervasive and indivisible character of human rights norms ensure that these can play a very influential unifying role in evolution of many sub-fields of international law, not least international environmental law.

(i) International Court of Justice

In response to concerns regarding the risk of fragmentation due to the expansion of international law to cover a multitude of new fields, and the related creation of new and highly specialised courts, enforcement mechanisms and other institutional structures, leading authorities have long argued that the ICJ ought to revitalise its role as 'the principal judicial organ of the United Nations'[77] and of the international community in order to ensure the unity and coherence of international law,[78] as it and other central UN organs including the ILC, are 'not limited to a single treaty regime [and] can rely on their experience from other fields, a wider body of law, and also a general legal method'.[79] The ICJ, in particular, 'has a long-standing practice and experience ranging across all fields of law and in applying multiple fields of law simultaneously', a position 'strengthened not only by the extensive jurisprudence, clarifying treaty obligations and customary international law, but also by the quality of and respect for that jurisprudence across legal communities'.[80] In further support of the contention that 'the I.C.J. is uniquely positioned to lead the way in the shift from fragmentation to convergence in international law', Andenas points out that '[t]he I.C.J.'s authority is particularly strong on general international law, its principles and method' and further notes '[t]he interaction between the I.C.J. and the ILC on the formation of customary international law' and the ICJ's influence on the methodological approaches of other UN bodies involved in the elaboration of international rules.[81]

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[76] Consider, for example, the seminally important role in the development of modern international water resources law of the International Law Association's 1966 Helsinki Rules on the Uses of the Waters of International Rivers, 'Report of the Fifty-Second Conference of the International Law Association' (ILA 1966) (Helsinki Rules).
[77] UN Charter, Article 92.
[78] Dupuy, *supra,* n. 27, at 801-802. See also, Abi-Saab, *supra,* n. 18, at 926-927.
[79] Andenas, *supra,* n. 15, at 688.
[80] *Ibid.*, at 688-689.
[81] *Ibid.*, at 689-690. Andenas cites the work of the ILC's Special Rapporteur on Identification of Customary International Law, Sir Michael wood, who 'rationalizes and closely follows the methodological approaches developed by the I.C.J., which is what other U.N. bodies attempt to do when they address such issues': International Law Commission, Special Rapporteur, *First Report on*

A range of leading commentators provide diverse illustrations of the unifying role of the ICJ. For example, Crawford highlights the phenomenon of "regionalism" in international law, in respect of which 'the International Court has been reluctant to attribute any legal significance to regional considerations', tending instead 'to see cases raising regional considerations through the prism of general international law'.[82] Citing a number of key cases spanning a range of sectoral and doctrinal issues,[83] Crawford argues that so-called '"regional" claims can be accepted only if they can be accommodated within the ordinary framework of international law', so that 'to the extent that such [regional] hegemony is not embodied in treaties or otherwise clearly agreed to by the affected States, it will be extra-legal in character'.[84] Therefore, 'it does not detract from the tendency of the international system towards universal or general principles'.[85] He points out, for example, that the test adopted by the Court in *Asylum (Colombia / Peru)* for establishing a rule of '"alleged regional or local custom peculiar to Latin-American States" ... was applying a stricter standard of proof than it would have done to a "universal" rule of general international law'.[86]

On the basis of a study of recent ICJ case law concerned primarily with diplomatic or consular protection, Andenas concludes that the Court now sits at the top of a more integrated judicial hierarchy which can 'serve to clarify and strengthen "the systemic nature of international law"'.[87] In particular, he notes the Court's recent important contributions to customary international law on human rights and environmental law and its recent recognition and development of the doctrines of *erga omnes* and *jus cogens* as illustrative of a transformation in its approach, 'moving away from the strictly inter-state perspective and non-hierarchical view of international law where state consent has put extreme restrictions on jurisdiction, obligations of states and the development of the law'.[88] Such a transformation can only contribute to the process of convergence with the doctrine of jus cogens, for example, widely understood 'as a force binding international subsystems "within a minimal communal sphere"'.[89] In an observation pertinent to the continuing evolution of international environmental law, Andenas notes that:

> 'The development of customary international law by the I.C.J. is now more likely to include human rights law, international trade law, environmental law, and other fields of international law which until recently seemed to fragment into autonomous

Formation and Evidence of Customary International Law, UN Doc A/CN.4/663 (17 May 2003); International Law Commission, Special Rapporteur, *Second Report on Identification of Customary International Law*, UN Doc A/CN.4/672 (22 May 2014).

[82] Crawford, *supra,* n. 44, at 332.

[83] *Asylum (Colombia / Peru),* Judgment, (1950) ICJ Reports, at 276-278; *Fisheries (United Kingdom v. Norway),* Judgment, (1951) *ICJ Reports,* at 131-133; *Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide*, Advisory Opinion, (1951) *ICJ Reports*, at 25; *Right of Passage over Indian Territory (Portugal v. India),* Judgment, (1960) *ICJ Reports,* at 39-44; *Frontier Dispute (Burkino Faso / Mali),* Judgment, (1986) *ICJ Reports,* at 565-566.

[84] Crawford, *supra,* n. 44, at 337.

[85] *Ibid.*

[86] *Ibid., at 333-334.*

[87] Andenas, *supra,* n. 15, at 686, citing the ILC Special Rapporteur's, *Second Report on Identification of Customary International Law, supra,* n. 81.

[88] *Ibid.*, at 706.

[89] *Ibid.*, at 707, citing A. Paulus, '*Jus Cogens* in a Time of Hegemony and Fragmentation: An Attempt at a Re-appraisal', (2005) 74 *Nordic Journal of International Law* 297-334, at 332.

regimes. The I.C.J. has provided itself with the tools to contribute to some level of unity and coherence of international law.'[90]

(ii) International Law Commission

In concert with the role of the Court in "nudging" international law in the direction of universality,[91] the International Law Commission (ILC) plays a critical role in the elaboration of multilateral treaties which similarly contribute to legal convergence. This is particularly true of the many instruments which purport to codify and/or progressively develop rules of custom in a particular field, where the ILC's pronouncements 'carry unusual normative force and may help to resolve difficult legal issues'.[92] In addition to the 'presumption of universality' evident in the recognition of customary rules, such a presumption also pervades many of the reports and draft articles produced by the ILC, aimed as they so often are at "all States" or the "international community".[93] Experience appears to suggest that the Commission's "pre-legislative" texts, which are normally presented to States as a general statement of the applicable law as it has evolved to date, 'are likely to be acceptable to States only if they can be presented in as general terms as possible'.[94] On the other hand, proposed conventional instruments containing significant divergences tend to be less widely ratified. Crawford further highlights the Commission's seminal work on State responsibility, where the proposed rules are elevated 'to a higher level of generality – from "primary" to "secondary" rules', which contributed to the wide-spread acceptance of the resulting 2001 ILC Draft Articles on State Responsibility.[95]

(iii) Human Rights Law

The universal character of many human rights values may also contribute to the tendency towards convergence in international law. Crawford notes that reservations to treaties that might in effect 'violate basic guarantees designed to support the attainment of protected rights' might, in the face of objections by other States, be severed from human rights treaties and rendered inoperable against the objecting State.[96] Such a restriction might also apply to purported reservations to other treaties, relating for example to the equitable apportionment or environmental protection of shared international water resources, where such a reservation might otherwise permit, in certain extreme cases, violation of an immediately effective and non-derogable obligation associated with the human right to water.[97] This may be the type of scenario contemplated by Wilde when

[90] *Ibid.*, at 732-733.
[91] Crawford, *supra,* n. 44, at 341.
[92] *Ibid.,* at 290.
[93] *Ibid.*, at 325,
[94] *Ibid.*, at 340. Crawford contrasts the fate of the 1983 Vienna Convention on Succession of States in Respect of State Property, Archives and Debt, UN Doc. A/CONF/.117/14, which distinguished between "newly independent States" and others and was ratified by only seven States, with that of the 1969 Vienna Convention on the Law of Treaties, which is widely held to represent custom, even by non-parties, and has been ratified by 113 States.
[95] 2001 ILC Draft Articles on the Responsibility of States for Internationally Wrongful Acts, (2001) *Yearbook of the International Law Commission*, Vol. II (Part Two), adopted under UNGA Res. 56/83 (12 December 2001), UN Doc. A/56/49(Vol. I)/Corr.4. See Crawford, *ibid.*, at 341.
[96] Ibid., at 339.
[97] See, for example, Article para. 37(a) of General Comment No. 15: The Right to Water (Articles 11 and 12 of the Covenant), adopted by the Committee on Economic, Social and Cultural Rights (CESCR), UN Doc. E/C.12/2002/11 (20 January 2003), which confirms the "core obligation" of States: 'To ensure

extolling the potential role of the ICJ in applying and developing certain human rights, suggesting that the Court 'might "add value" when compared to treatment by a specialist [human rights] tribunal'.[98]

5. Convergence and International Environmental Law

The primary object of this paper is to explore the myriad causal factors that appear to be driving convergence in international environmental and natural resources law and to identify the diverse legal processes by means of which the forces of unification can occur. In order to do so, it is helpful to focus upon recent experience in the area of international water law as a specific sub-field of international environmental law, which, despite its relative dynamism and growing specialisation, does not appear to be retreating from the generalised parameters of international law into an autonomous and compartmentalised regime. This is all the more remarkable when one considers humanity's unique and total dependence upon water over and above any other natural resource and the particular challenge this presents for inter-State water cooperation. Further, no two international watercourses are remotely similar – hydrologically, environmentally, demographically, historically, economically, socially, developmentally or politically – causing commentators to identify the use of international watercourses as an area of international legal activity particularly 'likely to be influenced by regional postures and implications'.[99]

The dynamism of modern international water law is demonstrated by its rapid evolution, since its first comprehensive codification in 1966,[100] to find expression in three globally relevant instruments[101] along with hundreds of bilateral and basin-level agreements, and its emergence as the most litigated element in international environmental and natural resources disputes.[102] In its frenetic development it interacts intensively with other sub-fields of international law. While the distributive equity enshrined at the core of

access to the minimum essential amount of water, that is sufficient and safe for personal and domestic uses to prevent disease.'

[98] R. Wilde, 'Human Rights Beyond Borders at the World Court: The Significance of the International Court of Justice's Jurisprudence on the Extraterritorial Application of International Human Rights Law Treaties', (2013) 12 *Chinese Journal of International Law* 639-677. See Andenas, supra, n. 15, at 688.

[99] Crawford, supra, n. 44, at 328.

[100] *Supra,* n. 76.

[101] Convention on the Protection and Use of Transboundary Rivers and Lakes (adopted 17 March 1992, entered into force 6 October 1996) 1936 UNTS 269 (UNECE Water Convention); Convention on the Law of the Non-navigational Uses of International Watercourses (adopted 21 May 1997, entered into force 17 August 2014) 36 ILM 700 (UN Watercourses Convention); ILC Draft Articles on Transboundary Aquifers, Report of the International Law Commission on the Work of Its Sixtieth Session, II(2) *Yearbook of the International Law Commission* (2008).

[102] *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (Judgment) [1997] ICJ Rep 7; *Pulp Mills on the River Uruguay (Argentina v Uruguay)* (Judgment) [2010] ICJ Rep 14; *Indus Waters Kishenganga Arbitration (Pakistan v India)* (Partial Award) (18 February 2013) PCA Case No *2011-01*; *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica)* (Judgment) [2015] ICJ Rep 665; *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua) Compensation Owed by the Republic of Nicaragua to the Republic of Costa Rica* (2 February 2018); *Dispute over the Status and Use of the Waters of the Silala (Chile v. Bolivia)* (proceedings instituted 6 June 2016).

international water law[103] appears increasingly relevant to other normative fields,[104] in pronouncing on water resources disputes international courts and tribunals have readily borrowed and assimilated values from related complexes of primary substantive rules including, in particular, international biodiversity law and international human rights law. Cassese might have almost had international water law in mind when noting that the 'special bodies of law' that have gradually emerged are at present 'gradually tending to influence one another, or States and international courts are coming to look upon them as part of a whole'.[105] He continues, in a manner reminiscent of the complex interactions of rules of international water law:

> 'Thus, for instance, two bodies of law, namely international rules and guidelines on the protection of the environment and international trade law are increasingly linked to – and, to some extent, made contingent upon the application of – the law of development as well as human rights law'.[106]

Of course, in its recent expansive elaboration international water law has also been subjected to the forces of divergence and fragmentation, most notably with the ILC's 2008 adoption of its Draft Articles on the Law of Transboundary Aquifers,[107] which purport to codify the rules applying to shared international groundwater resources, and which many commentators regard as heralding in certain key respects 'a markedly different approach to the utilization and environmental protection of transboundary water resources'[108] than that set out in the UN Watercourses Convention, which was itself based on earlier meticulous ILC codification of the law, albeit the law applicable to international surface waters.[109] Over time, however, the practice of international water law appears to promote unity in the management of groundwater and surface water resources. This trend is illustrated by the 2017 decision of the Ministerial Forum of the Parties of the Orange-Senqu River Commission (ORASECOM) – a river basin organisation (RBO) established

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[103] See, for example, L.F.E. Goldie, 'Equity and the International Management of Transboundary Resources', (1985) 25 *Natural Resources Journal* 665-699; X. Fuentes, 'The Criteria for the Equitable Utilization of International Rivers', (1996) 67 *British Yearbook of International Law* 337; O. McIntyre, 'Utilisation of Shared International Freshwater Resources – The Meaning and Role of Equity in International Water Law', 38/2 (2013) *Water International* 112-129.

[104] Notably, the inter- and intra-generational equity lying at the heart of the overarching concept of sustainable development. See further, E. Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* (UNU / Transnational Publishers, New York, 1989); L. Rajamani, *Differential Treatment in International Environmental Law* (OUP, Oxford, 2006); P. Cullet, *Differential Treatment in International Environmental Law* (Routledge, London, 2003).

[105] *Supra,* n. 8.

[106] *Ibid.*

[107] UN Doc. A/RES/63/124 (2009). See 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).

[108] S.C. McCaffrey, 'The International Law Commission Adopts Draft Articles on Transboundary Aquifers', (2009) 103/2 *American Journal of International Law* 272-393; S.C. McCaffrey, 'The International Law Commission's Flawed Draft Articles on the Law of Transboundary Aquifers: the way forward' (2011) 36/5 *Water International* 566-572; O. McIntyre, 'International Water Resources Law and the International Law Commission Draft Articles on Transboundary Aquifers: A Missed Opportunity for Cross-Fertilisation?', (2011) 13 *International Community Law Review* 1-18, at 2-3.

[109] International Law Commission, *Report of the International Law Commission on the Work of its Forty-Sixth Session*, UN GAOR 49th Sess., Suppl. No. 10, UN Doc. A/49/10 (1994).

between Botswana, Lesotho, Namibia and South Africa - to establish a Multi-Country Cooperation Mechanism for the Stampriet Transboundary Aquifer System (STAS MCCM), which lies within the basin.

The STAS MCCM will facilitate joint management of the resources of the aquifer and coordination of the requirements applying to surface waters and groundwater resources. For example, ORASECOM will now have responsibility for activities related to the STAS, which are now incorporated into ORASECOM's 10-year IWRM Plan, running from 2015-2024. This is not an isolated example of the incorporation of groundwater within the activities of RBOs. In Southern Africa alone, similar initiatives have recently been adopted in the context of the Limpopo and Zambezi basins. In the context of the second cycle of national reporting on SDG indicator 6.5.2 on 'progress on transboundary water cooperation', the Danube States reported that groundwater bodies of basin-wide importance are incorporated into the river basin management plan of the International Commission for the Protection of the Danube River (ICPDR). Highlighting the potential unifying role of such paradigms as the SDGs, the Second Report on SDG Indicator 6.5.2 suggests that '[i]n other instances, it may be necessary to update older [transboundary cooperation] arrangements in order to integrate principles … which account for both surface water and groundwater'.[110]

Through international water law's dynamic and intensive interactions with other sub-fields, it typifies the processes of 'interpenetration' and 'cross-fertilisation' identified by Cassese.[111] Indeed, evolving practice in the field would appear to exhibit each of the means of addressing normative incompatibility suggested by Craven.[112] For example, 'rules of hierarchy', which are normative in character rather than temporal or conceptual, would appear to be emerging, under which human rights values take priority, followed increasingly closely by ecological values. The human rights values correspond with international water law's traditional emphasis on providing for vital human needs[113] and are increasingly informed normatively by the active global discourse on the human rights of access to adequate water and sanitation,[114] and by the elaborate implementation framework developed for realisation of Sustainable Development Goal (SDG) 6.[115]

[110] UNECE and UNESCO, Second Report on SDG Indicator 6.5.2 (2021), at 20.
[111] *Supra,* n. 8.
[112] *Supra,* n. 16, at 3.
[113] See, for example, the unique priority above all other uses of water accorded water required for 'vital human needs' under Article 10 of the UN Watercourses Convention, which provides:

1. 'In the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses.
2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to Articles 5 to 7, with special regard being given to the requirements of vital human needs.'

[114] Which has evolved significantly over the course of the past two decades, since adoption of UN Committee on Economic, Social and Cultural Rights, *General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)*, UN Doc. E/C.12/2002/11 (20 January 2003).
[115] Comprising 8 separate targets and a comprehensive set of related indicators: https://www.un.org/sustainabledevelopment/water-and-sanitation/ See further, O. McIntyre, 'International Water Law and Sustainable Development Goal 6: Mutually Reinforcing Paradigms', in D. French and L.J. Kotze (eds.), *Sustainable Development Goals: Law, Theory and Implementation* (Edward Elgar, Cheltenham, 2018) 173-201.

The ecological values, in turn, correspond with increasing recognition of the imperative of protecting water-related ecosystems and maintaining the ecosystem services and human benefits provided thereby. Similarly, 'machinery for institutional dialogue' plays an increasingly important role in ensuring such 'permeation' and 'cross-fertilisation'. For example, the Conferences of the Parties and Secretariats of the Convention on Biological Diversity and the Ramsar Convention on Wetlands continue to elaborate detailed guidance on the integration into international water law instruments and practice of ecosystems obligations arising under each of these flagship global environmental conventions.[116]

Though convergence plays a role in addressing both principal varieties of fragmentation, it appears that 'it is in the potential inconsistencies developing as regards secondary, or "structural" rules, that one finds much of the debate over fragmentation located', including rules relating to 'the source of obligation, the identity of relevant actors, the method by which competing interests are to be weighed, or the basis for responsibility – that seems to call into question the integrity of the whole'.[117] Taking Craven's characterisation of secondary systemic rules as a starting point, the evolution of international water law as a sub-field appears to demonstrate the operation of convergence in respect of just such rules, thereby contributing to the systemic integrity of international law more generally. As regards 'the source of obligation', for example, foundational cases in the area have turned upon determination of the respective limits of States' rights and duties emanating from territorial sovereignty[118] or upon radical approaches to the general rules of treaty interpretation, including the contextually informed principle of 'contemporaneity'[119] and pioneering application of the principle of 'systemic integration'.[120] Others have focused upon the role and character of intergovernmental institutions in the discharge of procedural obligations and elements of due diligence conduct.[121]

As regards 'the identity of relevant actors', international water law struggles within the traditional confines of international law to adapt to emerging customary requirements[122]

[116] See, for example, Ramsar COP Resolution IX.3, 'Engagement of the Ramsar Convention on Wetlands in Ongoing Multilateral Processes Dealing with Water' (2005); S. Brels, D. Coates and F. Loures, *Transboundary Water Resources Management: The Role of International Watercourse Agreements in Implementation of the CBD* (CBD Secretariat 2008); J. Adams, *Determination and Implementation of Environmental Water Requirements for Estuaries* (Ramsar Convention Secretariat 2012); D. Russi *et al*, *The Economics of Ecosystems and Biodiversity (TEEB) for Water and Wetlands* (Institute for European Environmental Policy and Ramsar Convention Secretariat 2013).
[117] Craven, *supra,* n. 16, at 9.
[118] *Lac Lanoux Arbitration* (*Spain v France*) Arbitral Tribunal (1957) 12 RIAA 281; *Certain Activities, supra,* n. 102.
[119] *Gabčíkovo-Nagymaros, supra,* n.31.
[120] *Kishenganga Arbitration, supra,* n. 36.
[121] *Pulp Mills, supra,* n. 102.
[122] On the customary status of such an obligation, see C. Bruch, 'Evolution of Public Involvement in International Watercourse Management' in C. Bruch, L. Jansky, M. Nakayama and K.A. Salewicz (eds.), *Public Participation in Governance of International Freshwater Resources* (UNU Press, 2005) 21–72, at 28; . Razzaque, 'Information, public participation and access to justice in environmental matters', in S. Alam, E. Techera, J.H. Bhuiyan and T.M.R. Chowdhury (eds), Routledge Handbook of International Environmental Law (Routledge, London, 2012) 137-154, at 140; J. Ebbesson, 'Principle 10: Public Participation' in J.E. Viñuales (ed.), *The Rio Declaration on Environment and Development: A Commentary* (OUP, Oxford, 2015) 287.

on facilitating the participation of relevant stakeholders or the wider public,[123] with the UNECE Water Convention, regarded as 'arguably leading the charge on producing instruments which strengthen joint institutions and stakeholder participation',[124] even though formally it only requires State parties to make information relating to the management of transboundary freshwater resources available to the public and says little about public participation.[125] More generally, Andenas emphasises the role of the ICJ in expanding the cast of relevant actors, noting that the Court has contributed to 'resolving pressing problems of human rights and environmental law' by 'moving away from the strictly inter-state, non-hierarchical perspective of international law where state consent has put extreme restrictions on jurisdiction, obligations of states and the development of the law'.[126]

Possibly no other sub-field of international law has been so concerned with elaborating 'the method by which competing interests are to be weighed', since such a process comprises the core of equitable and reasonable utilisation, the overarching cardinal principle of international water law.[127] As regards the 'basis for responsibility', an important recent case saw the ICJ extend the application of generally applicable secondary rules on State responsibility to a new class of transboundary harm, the loss by one State of the beneficial enjoyment of ecosystem services due to ecological damage caused by another.[128] Thus, despite its specialised, context-specific character, international water law appears to counteract threatened fragmentation of the 'systemic rules' of international law through resort to the universally applicable general rules and institutions of international law. Indeed, it might be understood to address the unavoidable complexity of its subject-matter by employing context sensitivity in the application of general rules,[129] typified by the overarching principle of equitable and reasonable utilisation.

Similarly, if one adopts Andenas's characterisation of fragmentation, we can likewise see the forces of convergence at work in the sub-field of international water law in addressing each of his three species. Looking particularly at 'substantive fragmentation' it is notable that many of the key emerging imperatives of international environmental law have become central features of international water law. For example, in the celebrated *Pulp Mills* case the ICJ recognised the customary status and universal applicability of the requirement to conduct environmental impact assessment (EIA) of a major project potentially impacting a shared watercourse,[130] and hence its critically important role in discharging the core duty, contained in almost all watercourse agreements (and in environmental conventions more generally), to notify other watercourse States of such

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[123] Principle 10 of the Rio Declaration on Environment and Development (14 June 1992) UN Doc. A/CONF.151/26/Rev.1. See also, Article 13 of the International Law Commission (ILC) 2001 Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, ILC, Report of the International Law Commission on the Work of its 53rd Session, UN Doc A/56/10, at 165.
[124] 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, Cheltenham, 2017) 189-202, at 200.
[125] *Supra,* n. 101, Article 16.
[126] *Supra,* n. 15, at 687.
[127] Epitomised in Articles 5 and 6 of the UN Watercourses Convention, supra, n. 101.
[128] *Certain Activities, supra,* n. 102.
[129] See Craven, *supra*, n. 16, at 2.
[130] *Supra,* n. 36, at para. 114.

planned measures.[131] Equally, obligations relating to the protection of ecosystems and, more specifically, the maintenance of minimum environmental flows[132] and of essential ecosystem services,[133] have become ubiquitous in global and basin-level instruments.[134] Of course, the EIA and ecosystems obligations which have become such centrally important features of international water law are normatively informed by the rich and comprehensive corpus of environmental conventions, declarative instruments and related practice.[135] Canelas de Castro notes this continuing 'environmentalization of International Water Law' which, he explains

> 'passes firstly through the normative apprehension of the reality of water bodies as it really happens: in its multiple interconnections and unitary complexity – of (non-confined) groundwater with surface water, of the watercourses with other biota and ecosystems, with the land mass as well as with marine waters.'[136]

Of course, other sub-fields also permeate the normative requirements of international water law including, most notably, the full range of values associated with international human rights law. Regarding the tendency towards the 'humanization' of international water law, Canelas de Castro notes, in addition to 'the adoption of a human right to water and sanitation, which corresponds to the satisfaction of the most basic human needs', the wide-ranging recognition, exemplified by the 1998 Aarhus Convention[137] and other UNECE practice,[138] of

> 'procedural rights of access to information, participation in decision-making and in administrative decisions relating to the environment as well as judicial appeal against such decisions, and rights of participation in impact assessments as well as in the aforementioned institutional water platforms.'[139]

6. Conclusion

While one more often reads of concerns regarding the fragmentation of international environmental law into increasing diverse and uncoordinated sub-fields, or regarding its alienation from other, related fields of international law, in reality various processes of convergence tend to act to unify and enrich the fabric of this increasingly elaborate and sophisticated complex of rules, principles and institutional structures. These processes suggest the growing developmental maturity of modern international environmental law after 50 years of frenetic evolutionary development since Stockholm, while supporting its

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[131] See, most notably, Part III of the UN Watercourses Convention, comprising Articles 11-19.
[132] See *Kishengagna Arbitration, supra*, n. 36.
[133] See *Certain Activities, supra,* n. 102.
[134] Article 20, UN Watercourses Convention.
[135] Consider, for example, the 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context, 1989 *UNTS* 309; the 1971 Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (as amended in 1982 and 1987), (Ramsar, 2 February 1971), (1972) 11 *ILM* 969; and the 1992 Convention on Biological Diversity (CBD).
[136] P. Canelas de Castro, 'Trends of Development of International Water Law', (2015) 6 *Beijing Law Review* 285-295, at 286-287.
[137] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, (Aarhus, 25 June 1998) 38 *ILM* 517 (1999). See also Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú, 4 March 2018), not yet in force.
[138] UNECE Water Convention, *supra,* n. 101, Article 16.
[139] *Supra,* n. 136, at 289.

continuing coherent elaboration. Through an examination of the specific sub-field of international water resources law, this paper seeks to demonstrate how the processes of convergence operate to enrich international environmental law more generally. Where lacunae appear to exist in the substantive and procedural elaboration of international environmental law, practitioners might look beyond the immediately applicable sub-field of international rules for lessons regarding their progressive interpretation and coherent application.