

Law-making at the intersection of international environmental, humanitarian and criminal law: the issue of damage to the environment in international armed conflict

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Abstract

The relationship between international environmental law and international humanitarian law, like relationships between many other subsystems of contemporary international law, has not yet been articulated. The problem of environmental damage in international armed conflict lies at the intersection of these two branches and thus provides an ideal opportunity to investigate this relationship. Rather than simply evaluating the applicable international law rules in their context, we break them into elements that we separately assess from both (international) environmental law and international humanitarian/international criminal law perspectives. By doing so, we identify how international law rules for cross-sectoral

problems may appropriately combine the existing expertise and institutional strengths of simultaneously applicable branches of international law, and also discover how an evaluation of the ultimate appropriateness of the cross-sectoral rules adopted may be substantially affected by the different frames of reference that are used by those working within the different fields.



International law's responses to the radical changes that international society has undergone since World War II have been well documented. With each new area of international life created by increased global interaction and groundbreaking technological developments,¹ a new branch of international law has been spawned. Refugee and international migration law for the ever growing number of individuals traversing national borders, international trade law for the increasingly complex web of international trade relations, space law and international aviation law for new atmospheric frontiers. These branches are but a few among many.

The creation of new, specialized subsystems of international law for new areas of international relations was not only politically more feasible than, for example, expanding the scope and resources of pre-existing general international law but also offered the clear advantage of dedicated institutions, legal instruments, and tribunals generally better suited to the regulation of new areas of international activity, particularly those that are sufficiently technical to require of their practitioners considerable scientific knowledge. Classical, general international law could not necessarily accommodate such specialized fields. As noted by the International Law Commission's Special Rapporteur on the Fragmentation of International Law, Martti Koskieniemmi, '[v]ery often new rules or regimes develop precisely in order to deviate from what was earlier provided by the general law'.²

Recently, however, this proliferation of subsystems, and particularly of courts and tribunals, has caused some concern among scholars of international law.³

1 See Barry Jones, *Globalization and Interdependence in the International Political Economy: Reality and Rhetoric*, Pinter, London and New York, 1995, pp. 11–15; Sheila Croucher, *Globalization and Belonging: The Politics of Identity in a Changing World*, Rowman & Littlefield, Lanham, 2004, p. 10; Simon Reich, *What is Globalization? Four Possible Answers*, Helen Kellogg Institute for International Studies at the University of Notre Dame, Working Paper No. 261, December 1998, available at: <http://kellogg.nd.edu/publications/workingpapers/WPS/261.pdf> (last visited 7 September 2010).

2 International Law Commission (ILC), *Report of the Study Group on Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, 18 July 2006, UN Doc. A/CN.4/L.702, para. 10.

3 Certain judges of the International Court of Justice (ICJ) were particularly prominent in raising this concern. Former ICJ Judge Oda, in particular, was unambiguous in his 1980s criticism of the ICJ chambers procedure (Shigeru Oda, 'Further thoughts on the chambers procedure of the International Court of Justice', in *American Journal of International Law (AJIL)*, Vol. 82, 1988, pp. 556–562) and was somewhat more aggressive in his 1990s critique of the International Tribunal for the Law of the Sea (Shigeru Oda, 'The International Court of Justice and the settlement of ocean disputes', in *Collected Courses of the Hague Academy of International Law*, Vol. 244, 1993, pp. 127–155). A wider range of

Many participants in the fragmentation debate that has dominated much of international law theory over the last ten to fifteen years have expressed concern about different international jurisdictions competing or arriving at inconsistent interpretations of the norms and principles they consider as the common core of the discipline and call ‘general international law’, the internal cohesiveness of which they wish to retain.⁴

The now abundant literature on the relationship between public international law and the World Trade Organization (WTO) system for multilateral trade, for example, underscores the tendency to focus on what can be seen as *diagonal* interactions between general international law and subsystems of international law.⁵ What appear to have largely escaped scholarly attention (at least in relative terms) are the *horizontal* interactions between subsystems of international law.⁶ As international activity intensifies and becomes increasingly specialized, branches of international law are becoming not only more numerous but also more significant. A result of this broadening and deepening of international law is that the relative importance of general international law is declining, such that these diagonal overlaps between a subsystem of international law on the one hand, and general international law on the other, are becoming relatively less likely to occur.

fragmentation issues was then discussed at several conferences in the late 1990s, including a 1995 American Society of International Law (ASIL) forum, the Fourth EC/International Law Forum of 1997, and a 1998 New York University/PICT symposium. For proceedings, see Laurence Boisson de Chazournes (ed.), *Implications of the Proliferation of International Adjudicatory Bodies for Dispute Resolution*, ASIL, 1995; Malcolm Evans (ed.), *Remedies in International Law: The Institutional Dilemma*, Hart Publishing, Oxford, 1998; and *New York University Journal of International Law and Politics*, Vol. 31, No. 4, 1999, respectively.

- 4 See e.g. Pierre-Marie Dupuy, ‘L’unité de l’ordre juridique international: cours général de droit international public’, in *Recueil des cours*, Vol. 297, Hague Academy of International Law, 2002. With regard to potentially diverging interpretations of different international courts and tribunals see, in particular, Gilbert Guillaume, *The Proliferation of International Judicial Bodies: The Outlook for the International Legal Order*, Speech to the Sixth Committee of the UN General Assembly, 26 October 2000, press release available at: <http://www.icj-cij.org/presscom/files/9/3069.pdf> (last visited 10 September 2010). See further Rosario Huesa Vinaixa and Karel Wellens (eds), *L’influence des sources sur l’unité et la fragmentation du droit international*, Bruylant, Brussels, 2006.
- 5 See e.g. the now abundant literature on the openness of the World Trade Organization (WTO) system to public international law, including, for example, Gabrielle Marceau, ‘A call for coherence in international law: praises for the prohibition against “clinical isolation” in WTO dispute settlement’, in *Journal of World Trade*, Vol. 33, 1999, pp. 87–152; Joost Pauwelyn, ‘The role of public international law in the WTO: how far can we go?’, in *AJIL*, Vol. 95, 2001, pp. 535–578; Lorand Bartels, ‘Applicable law in WTO dispute settlement proceedings’, in *Journal of World Trade*, Vol. 35, No. 3, 2001, pp. 499–519; Markus Böckenförde, ‘Zwischen Sein und Wollen: über den Einfluss umweltvölkerrechtlicher Verträge im Rahmen eines WTO Streitbelegungsverfahrens’, in *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht*, Vol. 63, 2003, pp. 971–1005.
- 6 Gunther Teubner’s theoretical writings focusing on private international law are the main exception. Indeed, in 1992 he had already predicted that should ‘the law of a global society become entangled within sectoral interdependences, a wholly new form of conflicts law will emerge; an “intersystemic conflicts law,” derived not from collisions between the distinct nations of private international law, but from collisions between distinct global social sectors’. Gunther Teubner, *Law as an Autopoietic System*, Blackwell, Cambridge MA, 1993, p. 100. See further Julian Wyatt, *Beyond Fragmentation: WTO Jurisprudence, Environmental Norms and Interactions Between Subsystems of International Law*, Graduate Institute of International and Development Studies, Geneva, 2008.

The incidence of horizontal, subsystem–subsystem overlaps is, by contrast, only increasing both in absolute and relative terms. Not only is international law producing ever more, ever stronger branches, but the international problems deserving of international law’s attention are also increasingly complex and thus ever more likely to traverse the artificial bounds of the different subsystems of contemporary international law.

The theme of environment and armed conflict provides an ideal opportunity to visit a particular species of this horizontal interaction between subsystems of international law. International humanitarian law, which prescribes rules and standards for the conduct of armed conflict, and international environmental law, which consists of rules and principles aimed at the protection of the natural environment, overlap in certain specific areas. Such interactions raise various issues. For example, which branch’s rules will apply? If no rules are in existence, in which subsystem of international law should the international legal problem be addressed? Then, in formulating those rules, should the international community be guided by the normative and institutional approaches of one system, or those of the other, or even of a mixture of the two? Where there is an actual or potential conflict in the internal logic or ideology behind each system, how should such conflicts be mediated?

The present article seeks to explore such issues through the consideration of the international legal response to the key problem that occurs at the intersection of international humanitarian and international environmental law: environmental damage in international armed conflict. After setting out, in the first part of the article, the nature of the problem of such damage and the branches of international law that might be suited to regulating it, we then discuss how the international community has in fact dealt with this problem. Having thus identified the current international legal regime applying to wartime environmental damage, we will endeavour to analyse its specific elements in terms of how they manage the interaction of the two main branches of international law applicable to the problem. Finally we make some conclusions as to how the present-day regime for wartime environmental damage might be viewed from the different perspectives of the two branches of international law concerned, and what this example of a cross-sectoral international legal problem says about the relationship between subsystems of contemporary international law.

The cross-sectoral problem of wartime environmental damage

Serious and intentional damage to the natural environment in the context of armed conflict – what I have for the sake of convenience decided to refer to as ‘wartime environmental damage’ – is, like war itself, regrettably no novelty in the history of humankind. Early examples of such environmental warfare can be found in the ancient strategy of ‘salting the earth’, said to have been carried out as early as 1290 BC by the Assyrians in Mitanni and, most famously, though perhaps

apocryphally, by Roman legions around Carthage in the Third Punic War of 149–146 BC.⁷

The deliberate use of environmental destruction in armed conflict is, however, much more prevalent in modern history, appearing largely as part of the ‘total warfare’ strategies periodically used since the French Revolution.⁸ Many such acts involve large-scale burning and have therefore been frequently termed ‘scorched earth’ tactics. As in ancient history, armies have resorted to such methods both to punish (or alternatively to hamper the war effort of) their enemies and to protect themselves against invasion. Examples of the aggressive method include both sides’ widespread destruction of vast agricultural areas in China’s enormously bloody Taiping Rebellion (1850–1864), as well as Unionist General Sherman’s ‘March to the Sea’ and General Sheridan’s ‘burning’ of the Shenandoah Valley in the American Civil War.⁹ Defensive scorched earth policies include those carried out by both Portugal and Russia to resist advancing French armies in the Napoleonic Wars; Boer forces’ burning of grasslands in the Second Anglo-Boer War; and those planned, but never put into effect, during World War II, by the Australian government in the event of a Japanese land invasion, as well as Hitler’s notorious ‘Nero order’ to Albert Speer to raze the whole of Germany before the arrival of Allied Forces.¹⁰

In the period following World War II, armies moved beyond simple ‘scorched earth’ tactics to a more sophisticated and arguably more sinister species of environmental destruction, exemplified by the US bombing of Korean dams in the Korean War of 1950–1953 and, most significantly, by the array of environmental modification techniques carried out by the US military between 1961 and 1971 as part of the Vietnam War.¹¹ Far from simply setting ablaze Vietnamese jungle in which the Vietcong were hiding (though this was also carried out with the incendiary weapon Napalm),¹² from 1961 the United States began spraying twelve million gallons of highly toxic chemical agents over more than six million acres of

7 Jay E. Austin and Carl E. Bruch (eds), *The Environmental Consequences of War*, Cambridge University Press, Cambridge, 2000, p. 1. For a text disputing the veracity of this account, see Ronald Ridley, ‘To be taken with a pinch of salt: the destruction of Carthage’, in *Classical Philology*, Vol. 81, No. 2, 1986, pp. 140–146.

8 See e.g. David A. Bell, *The First Total War: Napoleon’s Europe and the Birth of Warfare as We Know It*, Houghton Mifflin Company, Boston, 2007.

9 Jacques Reclus, *La révolte des Tai-Ping: prologue de la Révolution chinoise*, Le Pavillon, Paris, 1972, p. 234; James M. McPherson, ‘From limited war to total war in America’, in Stig Förster and Jörg Nagler (eds), *On the Road to Total War: The American Civil War and the German Wars of Unification, 1861–1871*, Cambridge University Press, Cambridge, 2002, pp. 295–310.

10 Bill Nasson, ‘Waging total war in South Africa: some centenary writings on the Anglo-Boer War, 1899–1902’, in *Journal of Military History*, Vol. 66, No. 3, July 2002, pp. 813–828; Ralf Blank, ‘Die Kriegsendphase an Rhein und Ruhr 1944/45’, in Bernd-A. Rusinek (ed.), *Kriegsende 1945. Verbrennen, Katastrophen, Befreiungen in nationaler und internationaler Perspektive*, Wallstein Verlag, Göttingen, 2004, pp. 88–124. See generally William Thomas, *Scorched Earth*, New Society Publishers, Philadelphia, 1995.

11 See e.g. Asit K. Biswas, ‘Scientific assessment of long-term environmental consequences’, in J. E. Austin and C. E. Bruch, above note 7, p. 307.

12 Karen Hulme, *War Torn Environment: Interpreting the Legal Threshold*, Martinus Nijhoff, Leiden, 2004, p. 5.

crops and trees in an effort to preclude the growth of groundcover,¹³ and even endeavoured to influence weather patterns for military advantage by engaging in cloud seeding.¹⁴ Then, during the 1980s Iraq–Iran war, Iraqi bombers targeted Iranian oil installations in the Nowruz offshore field, sending enough smoke into the atmosphere to partially block out the sun for days and enough oil into the Red Sea to create a slick of 12,000 square miles, with catastrophic consequences for wildlife, including endangered species in that region.¹⁵

The end of the cold war did not spell the end of environmental methods of warfare. In the Gulf War of 1990–1991, Iraqi soldiers are said to have detonated approximately 720 Kuwaiti oil wells, with the intention of setting them alight and creating a thick smoke hazard, and also pumped enormous quantities of Kuwaiti oil into the Red Sea.¹⁶ Then, in the context of the intervention in Kosovo, NATO forces are alleged to have intensively bombed a petrochemical plant, nitrogen-fertilizer-processing factory, and oil refinery at Pančevo on the eastern bank of the Danube river.¹⁷ One of the severe environmental consequences of the alleged bombing was the leaking of large quantities of various toxic chemicals into the Danube river, which was connected to the facilities via a 1,800-metre artificial canal.¹⁸ After significant oil spills in the Iraq war beginning in 2003 and the Israel–Lebanon conflict of 2006, fuel stations and tanks were routinely targeted during Israel’s military operations in Gaza in December 2008–January 2009, severely contaminating soils and potentially contaminating groundwater with rainfall.¹⁹ Other recent environmental consequences of warfare include the damage done by fire after the use of white phosphorus in particular, as well as countless instances of water and land contamination, including the spillage of 100,000 cubic metres of mostly untreated wastewater and sewage sludge over 55,000 square metres of agricultural land in Gaza after damage to the Az Zaitoun wastewater treatment plant in December 2008.²⁰

13 J. E. Austin and C. E. Bruch, above note 7, p. 1; K. Hulme, above note 12, p. 5.

14 J. E. Austin and C. E. Bruch, above note 7, p. 2; K. Hulme, above note 12, pp. 11 and 73.

15 See Elisabeth Mann-Borgese, ‘The protection of the marine environment in the case of war’, in René-Jean Dupuy (ed.), *L’avenir du droit international de l’environnement/The Future of the International Law of the Environment*, Colloque, La Haye, 12–14 November 1984, Martinus Nijhoff, Dordrecht, 1985, pp. 105–106.

16 Samira Omar, Ernest Briskey, Raafat Misak, and Adel Asem, ‘The Gulf War impact on the terrestrial environment of Kuwait: an overview’, in J. E. Austin and C. E. Bruch, above note 7, pp. 321–322. Such incidents prompted comment from the United Nations General Assembly: see UN General Assembly Resolution 47/37 (1992).

17 Details of the environmental effects of the NATO bombing campaign can be found in the Yugoslavian Application and Yugoslavian Memorial dated 5 January 2000 in ICJ, *Case Concerning Legality of Use of Force (Yugoslavia v. Belgium, Canada, France, Germany, Italy, Netherlands, Portugal and United Kingdom)*, ICJ Reports 1999. The allegations were never tested because the case never got to the merits, separate proceedings against all defendants being dismissed after preliminary objections for want of jurisdiction.

18 See K. Hulme, above note 12, p. 188.

19 United Nations Environment Programme (UNEP), *Environmental Assessment of the Gaza Strip Following the Escalation of Hostilities in December 2008–January 2009*, Nairobi, UNEP, 2009, pp. 30–31.

20 *Ibid.*, p. 34.

As has already been indicated, at least two separate branches of public international law are potentially applicable to cross-sectoral situations such as those described immediately above: international environmental law and international humanitarian law.

International environmental law

International society only came to speak of the disciplines of international environmental law and environmental law on the domestic level after the conceptualization of ‘environment’, principally in the 1960s. However, while international and domestic environmental law have witnessed considerable development since this time, this does not mean to say that their rules and principles do not have their origin in earlier sources. Indeed, there is evidence of laws to protect the environment in even some of the most ancient civilizations. The Mesopotamian state of Ur, for example, declared laws against deforestation around 2700 BC, and the Indian King Ashoka enacted, around 250 BC, a law for the protection of various animal species. Then, in the early industrial period, legal action started being taken against environmental damage. As early as 1739, Benjamin Franklin petitioned the Pennsylvania Assembly to act against the tanneries of Philadelphia for the local pollution they were causing. By the mid-nineteenth century, courts of the world’s first country to industrialize on a grand scale, Great Britain, were receiving numerous claims for damage suffered as a result of progressively larger-scale and more intensive industrial processes. In the absence of any notion of ‘environment’ at that stage, these problems were dealt with on the basis of existing common law torts and rules of nuisance, trespass to goods, the enjoyment of property and the action of scienter, which has its unlikely origin in the harm caused to another by a defendant’s dangerous animal.

In England, a general notion that each subject of the law is free to do as he or she wishes in his or her own territory, but will be responsible and required to pay compensation if his or her activity results in damage to someone else or someone else’s property, has been applied at least since the famous 1868 case of *Rylands v. Fletcher*, in which this general principle was crystallized and applied to the actions of a farmer who, in filling up his dam before closing off some disused mine shafts, managed to flood his neighbour’s interconnected mines.²¹ The domestic law systems of other countries that industrialized through the nineteenth century also had damage liability provisions capable of dealing with what were increasingly prevalent instances of environmental damage. For example, the Prussian General Land Law of 1794 had provisions to support the clearly stated principle that

21 ‘We think that the true rule of law is, that the person who, for his own purposes, brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it in at his peril; and if he does not do so, is *prima facie* answerable for all the damage which is the natural consequence of its escape’ (Justice Blackburn in *Fletcher v. Rylands*, LR 1 Ex 265 (Exchequer Chamber, 1866), cited approvingly in UK House of Lords, *Rylands v. Fletcher*, judgment of Lord Cairns, 3 HL 330, (1868) LR 3 HL 330, [1868] UKHL 1 (17 July 1868)).

‘whoever impedes another’s exercise of his rights, offends him and is responsible for all damage and detriment arising from this’,²² a position later written into the German civil law (*Bundesgesetzbuch*).²³ In the United States, the Latin maxim, *sic utere tuo ut alienum non laedas* (one must so use his own as not to do injury to another), any Roman origins of which are more than questionable,²⁴ was frequently invoked in what would be now called environmental damage cases as a derivation from, and legal equivalent of, Christianity’s golden rule.²⁵

When industry reached a sufficiently large scale to have transboundary environmental impacts, the law of environmental damage stepped onto the terrain of international law. Yet it was not in any public international law, nor specifically environmental context, that the first key cases of transboundary environmental damage were decided. The ground-breaking *Trail Smelter* arbitration of 1938–1941, generally regarded as the first international environmental law case and the key judicial contribution to international law on liability for loss or damage,²⁶ was in fact decided against the background of domestic law on the compensation for damage to another’s property described above. The dispute between Canada and the United States (US) centred on the emissions from an enormous zinc and lead smelter in southern British Columbia, the fumes of which damaged farms, orchards, and timberlands more than seven miles across the border in the US state of Washington. Crucially, the agreement between the United States and Canada establishing the arbitral tribunal permitted it to apply not only ‘international law and practice’ but also ‘the law and practice followed in dealing with cognate questions in the United States of America’.²⁷ Noting the absence of any sufficient international law on the matter, the arbitral tribunal in fact applied liability principles from US tort law in support of its finding that Canada was responsible for the transboundary environmental damage caused by the smelter and would be required to pay reparations to compensate for that damage.²⁸

The international law principle that a state should not use its territory in such a way as to cause damage to another state’s territory was subsequently confirmed in a more general context by the International Court of Justice (ICJ),²⁹ and

22 *Allgemeines Landrecht für die Preußischen Staaten* (1794), para. 93: ‘Wer den andern in der Ausübung seines Rechts hindert, beleidigt denselben, und wird ihm, für allen daraus erwachsenen Schaden und Nachtheil, verantwortlich’ (present author’s translation).

23 *Bundesgesetzbuch* (German Civil Code), esp. para. 823: ‘Schadensersatzpflicht’, and para. 826: ‘Sittenwidrige vorsätzliche Schädigung’.

24 See Johan Gerrit Lammers, *Pollution of International Watercourses*, Martinus Nijhoff Publishers, The Hague, 1984, p. 570.

25 See Mark B. Greenlee, ‘Echoes of the Love command in the halls of justice’, in *Journal of Law and Religion*, Vol. 12, No. 1, 1995, pp. 255–270.

26 See e.g. Alan Boyle, ‘Globalising environmental liability: the interplay of national and international law’, in *Journal of Environmental Law*, Vol. 17, 2005, pp. 3–26.

27 *Convention for Settlement of Difficulties Arising from Operation of Smelter at Trail, B.C.*, U.S. Treaty series No. 893, signed at Ottawa, 15 April 1935; ratifications exchanged 3 Aug. 1935, Art. IV.

28 ‘Trail smelter arbitration (United States v Canada)’, 1938, in *Reports of International Arbitral Awards* (RIAA), Vol. 3, 16 April 1938 and 11 March 1941, esp. p. 1920; and ‘Trail smelter arbitration (United States v Canada)’, 1941, in RIAA, Vol. 3, 16 April 1938 and 11 March 1941, pp. 1947ff.

29 ICJ, *Corfu Channel Case (UK v. Albania)*, Merits, Judgment of 9 April 1949, ICJ Reports 1949, p. 4.

has since become one of the key tenets of the new discipline of international environmental law.³⁰ It is regarded by respected international jurists as the sole environmental principle that has without doubt crystallized into customary international law³¹ and is ‘sufficiently well-established to provide the basis for an international cause of action’.³²

Cases of transboundary environmental damage aside, international environmental law did not exist until well after World War II. A relatively young discipline, it has its origins in the post-World War II efforts of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and, more significantly, in the environmentalist movement of the 1960s and 1970s. It is an oft-forgotten fact that even though, upon its formation, the founding fathers of the United Nations (UN) could not have intended the organization to take on an environmental protection role,³³ organs of the UN were already heading in this direction in the 1950s. One of the four specialized agencies under the aegis of the UN’s Economic and Social Council, UNESCO had been created in 1945 as a forum of intellectuals and scientists with the aim of increasing international co-operation through the promotion of education, science, and culture in UN member states.³⁴ As early as its second session, in 1947, UNESCO launched an International Conference on the Protection of Nature, and in 1948 a conference at Fontainebleau under its guidance saw the creation of the International Union for the Conservation of Nature, the world’s first international environmental organization and a key participant in many areas of contemporary environmental law.³⁵

However, it was the UN General Assembly, which had become increasingly active in the 1960s as a result of the addition of a number of post-colonial UN member states, that placed environmental protection firmly on the agenda of the international community. It did so in the context of the burgeoning environmental movement of this time, the geographical spread and political intensity of which was most probably the chief cause of the speed with which international society and international law established an environmental branch. In 1962, the *New York*

30 ‘Trail smelter’, above note 28, p. 1965. See further Franz X. Perrez, ‘The relationship between “permanent sovereignty” and the obligation not to cause transboundary environmental damage’, in *Environmental Law*, Vol. 26, 1996, pp. 1187–1212.

31 See ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion of 8 July 1996, ICJ Reports 1996, para. 29. See further André Nollkaemper, ‘Sovereignty and environmental justice in international law’, in Jonas Ebbeson and Phoebe Okowa (eds), *Environmental Law and Justice in Context*, Cambridge University Press, Cambridge, 2009, pp. 253–269.

32 See e.g. Philippe Sands, *Principles of International Environmental Law*, 2nd edition, Cambridge University Press, Cambridge, 2003, pp. 236–237.

33 Kofi A. Annan, United Nations Department of Public Information, and United Nations Secretary-General, ‘*We the Peoples: The Role of the United Nations in the 21st Century*’, United Nations Department of Public Information, New York, 2000, para. 254, available at: <http://www.un.org/millennium/sg/report/full.htm> (last visited 10 September 2010).

34 *Constitution of the United Nations Educational, Scientific and Cultural Organization*, 16 November 1945, entered into force on 4 November 1946, preamble, available at: http://www.unesco.org/education/information/nfsunesco/pdf/UNESCO_E.PDF (last visited 10 September 2010).

35 See e.g. *Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)*, opened for signature 3 March 1973, entered into force 1 July 1975, 993 UNTS 243.

Times had published extracts of Rachel Carson's famous book on the harmful impact of DDT on birds, *Silent Spring*, a book that garnered substantial attention for environmental causes, particularly in the US. Then, in 1967, the oil tanker *Torrey Canyon* ran aground, discharging 120,000 tons of crude oil into the sea near the British coast and awakening the European population in particular to the prospect of large-scale environmental disasters. Against the backdrop of the social upheavals of 1968, in which many protesters also attacked the so-called 'out of control' growth of population and consumption, the General Assembly adopted, on the recommendation of UNESCO, a resolution to organize a UN Conference on the Human Environment³⁶ which took place in June 1972 in Stockholm – the birthplace of international environmental law.

It should be noted that, despite its rapid evolution since the 1970s, international environmental law has taken a different route in respect of environmental damage to that taken by its domestic law counterpart. Whereas most domestic environmental law systems have gone on to mandate unambiguously that compensation be paid in the event of environmental damage, international environmental law has been far more equivocal as regards the payment of compensation for damage and has instead focused on somewhat vague principles of prevention and precaution. While an obligation to pay reparations would usually be attached to any violation of the well-established *sic utere tuo ut alienum non laedas* environmental damage rule as a matter of general international law,³⁷ it is interesting to note that the main international environmental law expressions of this principle, including Principles 21 and 2 of the Stockholm and Rio declarations respectively,³⁸ as well as the International Law Commission's 2001 draft articles on the 'Prevention of Transboundary Harm from Hazardous Activities',³⁹ do not speak of *ex post facto* liability, but instead place their emphasis on pre-damage prevention. There are, of course, countless instances of international practice where compensation has in fact been paid for environmental damage,⁴⁰ and others have pointed to

36 UN General Assembly Resolution 2398 (XXIII), 3 December 1968, 'Problems of the Human Environment'.

37 'Draft Articles on Responsibility of States for Internationally Wrongful Acts with Commentaries', text adopted by the ILC at its fifty-third session, 2001, in *Yearbook of the International Law Commission*, Vol. II, 2001, Part Two.

38 'States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction' (*Declaration of the United Nations Conference on the Human Environment*, 16 June 1972, 1972 UNYB 319, 11 ILM 1416 (1972) ('Stockholm Declaration'), Principle 21); and *Rio Declaration on Environment and Development*, Report of the UN Conference on Environment and Development, Annex I, 12 August 1992, UN Doc. A/ Conf. 151/26, Vol. I, Principle 2.

39 Text adopted by the ILC at its fifty-third session, 2001, and submitted to the General Assembly as a part of the Commission's report covering the work of that session. The report, which also contains commentaries on the draft articles, appears in Official Records of the General Assembly (GAOR), Fifty-sixth Session, Supplement No. 10 (A/56/10), in *Yearbook of the International Law Commission*, Vol. II, 2001, Part Two.

40 Goldblat even finds such practice that pre-dates the birth and codification of international environmental law, with examples including the United States' payment of compensation to Japan for the effects

the growing recognition for the application of the payment aspect of the 'polluter pays' principle at an international level.⁴¹ However, thorough analyses of state practice have revealed that a state's payment of compensation for its breach of the 'soft responsibility'⁴² obligation not to cause environmental damage is the exception rather than the norm.⁴³

It can therefore be concluded that contemporary international environmental law focuses more on prevention before the fact than the distribution of justice after the fact of environmental damage. Prevention is the main strategy adopted by countless prominent international environmental law instruments adopted since the Stockholm Conference, including the wildly successful Vienna Convention/Montreal Protocol regime for the protection of the ozone layer⁴⁴ and the universally known, even if somewhat less successful, Framework Convention and Kyoto Protocol in respect of anthropogenic emissions that contribute to global climate change.⁴⁵ Such a focus on prevention in the environmental context (as opposed to a financial context, for example) is understandable when, as pointed out by the ICJ in the *Gabčíkovo-Nagymaros Case*, one notes the 'limitations inherent in the very mechanism of reparation of this type of damage'.⁴⁶ Indeed, the practical difficulties of *ex post facto* compensation for environmental harm are compounded at the international level, where international dispute resolution is not as suited to dealing with problems of proof and the calculation of damages as its domestic equivalents.⁴⁷

of radioactive fallout from a nuclear explosion it set off in the Pacific in 1954 (though the payment to the crew of the *Lucky Dragon* was technically made *ex gratia*, i.e. without admitting responsibility) and to Spain for the radioactive contents of hydrogen bombs that accidentally fell from a US bomber over Palomares, Spain, in 1966, damaging crops and fields. Jozef Goldblat, 'The environmental warfare convention: how meaningful is it?', in *Ambio*, Vol. 6, No. 4, 1977, pp. 216–221.

- 41 See Rio Declaration, above note 38, Principle 16. See also Hans Christian Bugge, 'The polluter pays principle: dilemmas of justice in national and international contexts', in J. Ebbeson and P. Okawa, above note 31, pp. 411–428.
- 42 See Alexandre Kiss, 'Present limits to the enforcement of state responsibility for environmental damage', in Francesco Francioni and Tullio Scovazzi, *International Responsibility for Environmental Harm*, Graham & Trotman, London, 1991, pp. 3–14.
- 43 Benedetto Conforti, 'Do states really accept responsibility for environmental damage?', in F. Francioni and T. Scovazzi, above note 42, pp. 179–180.
- 44 *Vienna Convention on the Protection of the Ozone Layer*, opened for signature 22 March 1985, 1513 UNTS 293, entered into force 22 September 1988; *Montreal Protocol on Substances that Deplete the Ozone Layer*, opened for signature 16 September 1987, 1522 UNTS 3, entered into force 1 January 1989.
- 45 *United Nations Framework Convention on Climate Change*, opened for signature 9 May 1992, 31 ILM 854 (1992), entered into force 21 March 1994; *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, opened for signature 11 December 1997, 37 ILM 22, entered into force 16 February 2005.
- 46 ICJ, *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Judgment of 25 September 1997, ICJ Reports 1997, p. 78, para. 140. Cited approvingly in ICJ, *Case Concerning Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment of 20 April 2010, para. 185.
- 47 See Christian von Bar and Joachim Schmidt-Salzer (eds), *Internationales Umwelthaftungsrecht II: Tagung des Instituts für Internationales Privatrecht und Rechtsvergleichung des Fachbereichs Rechtswissenschaften der Universität Osnabrück am 8. und 9. April 1994 in Osnabrück*, C. Heymann, Köln, 1995, p. 229. The difficulties encountered by the ICJ when dealing with the proof of environmental damage in the recent *Pulp Mills on the River Uruguay* case support this view. See ICJ, *Pulp Mills case*, above note 46.

Nevertheless, the fact that the international environmental law system generally stops at prevention and does not go on to prescribe detailed consequences for violation, as its domestic counterparts do, is perhaps indicative of some weakness in this still young and underdeveloped field of law. Relative to other subsystems of international law, international environmental law places considerable reliance on soft law norms and principles rather than hard norms of customary or treaty law, lacks capable institutional backing (the funding problems at the United Nations Environment Programme are well documented), and suffers from problems with enforcement.

It would be all too easy to attribute the fact that, as we will see, the bulk of the rules on wartime environmental damage were not developed in the international environmental law field to such weaknesses in the structure and form of international environmental law. However, this would ignore the fact that the nature of the subject matter of international environmental law itself often prevents it from claiming ownership to certain areas of international law properly falling within its ambit. Indeed, those who appear to forget or even explicitly deny the existence of international environmental law as a separate branch of international law generally do so on the basis that other areas of international law are often capable, perhaps even more capable, of dealing with environmental problems than the norms and principles belonging to international environmental law itself. Malgosia Fitzmaurice, for example, once went so far as to say that international environmental law is merely a subspecies of state responsibility law,⁴⁸ thereby implying that the sophisticated preventative machinery international environmental law has developed in respect of a range of international environmental problems can be largely ignored. Others may point to the fact that the environmental chamber of the ICJ has not yet been used or that the majority judgment even in one of the more famous environmental cases that has come before the ICJ, the *Gabčíkovo-Nagymaros Case*, arguably just paid lip service to international environmental law rules and principles while arriving at its findings on the substantive legal questions through a methodical application not of international environmental law rules or principles but of the dictates of treaty law and state responsibility law.⁴⁹ However, all of this does not serve to show that international environmental law, most appropriately defined as the set of rules and principles aimed at the protection of the natural environment,⁵⁰ does not exist, but merely that it rarely, if ever, exists in isolation, hermetically sealed off from the application of other branches of international law. After all, as noted in the introductory part of

48 Malgosia Fitzmaurice, 'International environmental law as a special field of international law', in *Diversity in Secondary Rules and the Unity of International Law: Special Volume Marking the 25th Anniversary of the Netherlands Yearbook of International Law*, 1994, p. 209.

49 See ICJ, *Gabčíkovo-Nagymaros case*, above note 46.

50 For the main elements of definition for international environmental law, see Laurence Boisson de Chazournes, Richard Desgagné, Makane Mbengue, and Cesare Romano, *Protection internationale de l'environnement*, 2nd edition, Pedone, Paris, 2005, p. 1; Patricia Birnie and Alan Boyle, *International Law and the Environment*, 2nd edition, Oxford University Press, Oxford, 2002, pp. 1–2; and P. Sands, above note 32, p. 15.

this article, contemporary international problems are often of such complexity that it is almost inconceivable that one of the many other branches of modern-day international law would not apply simultaneously with international environmental law in relation to an international environmental issue, a fact borne out in recent practice before international courts and tribunals where prominent international environmental law cases overlap with everything from the law on the use of force⁵¹ to international trade law⁵² and human rights law.⁵³

It is for this reason that serious practitioners of international environmental law must bring to their work knowledge not just of general international law but also of a range of other areas of international law. For environmental damage in the marine environment, law of the sea is likely to be relevant,⁵⁴ and where environmental damage is caused by a foreign investor, investment law will almost certainly come into play.⁵⁵ If environmental damage occurs in the context of armed conflict, international humanitarian law and potentially also international criminal law will obviously need to be addressed. It is to the latter interaction that we will devote our attention for the remainder of this article.

International humanitarian law

In the present publication, a general introduction to international humanitarian law is unnecessary, but a few remarks as to how environmental damage may come within its scope should be helpful. The first instruments of international humanitarian law were motivated by the principle of humanity and thus, at least from an environmental law point of view, were highly anthropocentric. However, while the focus of early international humanitarian law was on minimizing direct causes of human suffering among participants in armed conflict, the discipline itself was never restricted in such a way. Indeed, international humanitarian law has its foundations in general exhortations of the Martens clause and, originally, in the call of the International Committee of the Red Cross (ICRC)'s founder, Henry Dunant, to 'press forward in a human and truly civilized spirit the attempt to prevent, or at least to alleviate, the horrors of war'.⁵⁶ Moreover, the first code for the conduct of warfare, the famous Lieber Code adopted by Abraham Lincoln for the

51 See ICJ, *Legality of the Threat or Use of Nuclear Weapons*, above note 31.

52 See e.g. WTO Appellate Body, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body, 12 October 1998, WT/DS58/AB/R.

53 See e.g. European Court of Human Rights, *Önerildiz v. Turkey*, Judgment of 18 June 2002, Application No. 48939/99 [2002] ECHR 491. See more generally Cesare Paolo R. Romano, *The Peaceful Settlement of International Environmental Disputes: A Pragmatic Approach*, Kluwer Law International, The Hague, 2000.

54 See e.g. Arbitral Tribunal constituted under annex VII of the United Nations Convention on the Law of the Sea, *Southern Bluefin Tuna Case (Australia and New Zealand v. Japan)*, Award on Jurisdiction and Admissibility, Decision of 4 August 2000.

55 See e.g. *Methanex Corporation v. United States of America*, International Arbitration under Chapter 11 of the North American Free Trade Agreement and the UNCITRAL Arbitration Rules, Final Award of the Tribunal on Jurisdiction and Merits, 7 August 2005.

56 Henry Dunant, *Un souvenir de Solferino*, 2nd edition, Joel Cherbuliez Libraire, Geneva and Paris, 1862.

use of his Union forces in the American Civil War in 1863, is also quite general in its scope, with its section II on the public and private property of the enemy, containing, for example, several provisions that aim to protect the culturally and scientifically important items and all property belonging to churches, hospitals, or other establishments of an exclusively charitable character.⁵⁷

Two aspects of the twentieth-century development of international humanitarian law along more general lines are of particular importance for an understanding of the regulation of wartime environmental damage. First, the progressive expansion of the scope of persons protected by the law of war, from soldiers directly engaged in the conflict to civilians indirectly caught up in it, placed new emphasis on how war affects civilian life and thereby laid the groundwork for international humanitarian law's consideration of the impacts of wartime environmental damage. Second, when the ICRC arguably went beyond the bounds of its primary mandate to assist victims and, in an effort to make a greater practical impact, brought within the scope of international humanitarian law efforts to restrict the use of certain types of weapons deemed inhumane and unnecessary,⁵⁸ treaties that could easily be adapted to regulate wartime environmental damage were adopted. It should come as no surprise, therefore, that it was within the system of international humanitarian law, the *lex specialis* applicable to armed conflict, that efforts to curb wartime environmental damage were first taken.

International legal efforts specifically to address the problem of wartime environmental damage

Many authors who have searched through the annals of human history for examples of 'environmental' legislation have come across policies and specific measures to reduce the impact of warfare on the environment. Indeed, some of the oldest and most important ancient texts dealing with the subject of war state such principles. Both the Old Testament common to Jews and Christians⁵⁹ and the Qur'an⁶⁰ implore followers who participate in armed conflict not to damage the trees of one's enemy.

Even though, at the beginning of the modern era, the major religions were in general agreement that the environment should be spared where possible from

57 Francis Lieber, *Instructions for the Government of Armies of the United States in the Field (Lieber Code)*, originally issued as General Orders No. 100, Adjutant General's Office, 1863, Government Printing Office, Washington, 1898, Arts. 34–36.

58 See Toni Pfanner, 'Editorial', in *International Review of the Red Cross*, Vol. 87, No. 859, 2005, p. 416.

59 Bible, Deuteronomy 20:19–20: 'When thou shalt besiege a city a long time, in making war against it to take it, thou shalt not destroy the trees thereof by forcing an axe against them: for thou mayest eat of them, and thou shalt not cut them down (for the tree of the field is man's life) to employ them in the siege: Only the trees which thou knowest that they be not trees for meat, thou shalt destroy and cut them down; and thou shalt build bulwarks against the city that maketh war with thee, until it be subdued'.

60 Holy Qur'an, 59:5: 'Whether ye cut down (o ye Muslims!) the tender palm-trees or ye left them standing on their roots it was by leave of Allah and in order that He might cover with shame the rebellious transgressors'.

the effects of armed conflict, damage to the environment was tolerated as a necessary evil of war. This began to change with the rapid development of new warfare techniques throughout the first half of the twentieth century and a growing realization of the great dangers inherent in modern warfare. Indeed, the major powers began to act as early as 1925, when they came together to prohibit the use of asphyxiating, poisonous, or other gases and of bacteriological methods of warfare in response to the widespread harm inflicted by the use of mustard gas in World War I.⁶¹ Then, after total war had reached its apogee with the mass civilian deaths of World War II and the first use of the atomic bomb, the international community took steps to protect civilian populations through the adoption of the Fourth Geneva Convention of 1949. However, even while several rules of such instruments may have applied to instances of environmental damage, international humanitarian law of this period remained highly anthropocentric.⁶²

It was in the 1960s, against the backdrop of growing fears of a nuclear winter and the Vietnam War of 1955–1975 (in which, as described above, US forces undertook, among other things, a vast exfoliation campaign against the guerrilla fighters of the Vietcong), that enough concern was generated about the capacity of modern warfare to severely damage the environment for the first specific legal efforts against wartime environmental damage to be undertaken. One commentator on this period even went so far as to say that ‘the entire future of mankind is very much dependent on a firm, precise and categorical assertion of the environmental law to be observed in wartime’.⁶³

Initial efforts were launched from within both the international humanitarian law and the international environmental law systems. On 16 December 1969, with the ongoing Vietnam War, the burgeoning environmental movement, and significant changes in composition of the international community, the UN General Assembly endeavoured to extend the scope of the somewhat anthropocentric creature of international humanitarian law, the ‘Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare’,⁶⁴ to chemical or biological agents of warfare intended to cause disease in or have direct toxic effects on ‘man, animals or plants’.⁶⁵ While adapting international humanitarian law instruments to new policy areas on the one hand, the General Assembly was, with the other, launching a new branch of international law to deal with precisely the same area of policy concern.

61 See International Committee of the Red Cross, *ICRC in WWI: Efforts to Ban Chemical Warfare*, 11 January 2005, available at: <http://www.icrc.org/web/eng/siteeng0.nsf/html/57JQGS> (last visited 10 September 2010).

62 Heller and Lawrence cite as examples Articles 23 and 55 of the Hague Regulations of 1907 and Article 53 of the Fourth Geneva Convention of 1949. See Jessica C. Lawrence and Kevin Jon Heller, ‘The first ecocentric environmental war crime: the limits of Article 8(2)(b)(iv) of the Rome Statute’, in *Georgetown International Environmental Law Review*, Vol. 20, 2007, p. 62.

63 Nagendra Singh, ‘The environmental law of war and the future of mankind’, in R.-J. Dupuy, above note 15, p. 419.

64 *Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare*, Geneva, 17 June 1925, entered into force 8 February 1928.

65 General Assembly Resolution 2603 (XXIV) of 16 December 1969, 24th Session, 1836th plenary meeting.

Just one year earlier it had called for the United Nations Conference on the Human Environment as part of a ‘framework for comprehensive consideration within the United Nations of the problems of the human environment’.⁶⁶ At this conference in Stockholm in 1972, the international environmental law movement promulgated principles calling for action on matters related to wartime environmental damage. Such moves included requiring states to co-operate to develop further international law regarding liability for environmental damage (Principle 22), and asking states to ‘strive to reach prompt agreement, in the relevant international organs, on the elimination and complete destruction of [nuclear] weapons’ (Principle 26).⁶⁷

These Stockholm principles revealed the desire to deal with the issue of wartime environmental damage, but it was an understandably very small step toward regulation of the issue at the founding conference of the international environmental law movement. Viewing the issue of wartime environmental damage in the context of this international environmental awakening and the ongoing Vietnam War, some states wanted to go much further than these general, soft law pronouncements of questionable legal effect.

The applicability of international environmental law instruments during armed conflict

One of the reasons proffered for why regulation of wartime environmental damage was and continues to be developed broadly within the subsystem of international humanitarian law is that international environmental law rules, even if they are legally binding, are often considered not to apply in the event of armed conflict. There are, in the present author’s view, two approaches that can be taken to this complex question.⁶⁸

Strictly applying treaty law to the issue, all international environmental law instruments would potentially apply in times of armed conflict except the very few that specifically exclude their application in times of war⁶⁹ or those from which

66 Economic and Social Council (ECOSOC) Resolution 1346 (XLV) (1968) and General Assembly Resolution 2398 (XXIII) of 3 December 1968.

67 Stockholm Declaration, above note 38.

68 The identification of two distinct approaches, argued for here specifically in relation to environmental treaties and armed conflict, has certain parallels with the ILC’s distinction between a subjective and objective test discussed in paragraph 9 of the ILC Report, *The Effect of Armed Conflict on Treaties: An Examination of Practice and Doctrine*, 1 February 2005, available at: http://untreaty.un.org/ilc/documentation/english/a_cn4_550.pdf (last visited 6 September 2010), esp. paras. 9ff, with the strict treaty law approach ultimately involving an appreciation of the subjective intention of the treaty drafters and the ICJ’s approach clearly depending on an objective evaluation of whether the operation of the treaty provision is compatible with the conduct of warfare.

69 P. Birnie and A. Boyle, above note 50, p. 149. Notable, albeit rare, examples include Part XII of the *United Nations Convention on the Law of the Sea*, opened for signature 10 December 1982, 1833 UNTS 3, 21 ILM 1261, entered into force 16 November 1994, Part XII – Protection and Preservation of the Marine Environment (which is essentially a mini multilateral environmental agreement for the marine environment), esp. Article 236 excluding the application of the provisions of that part to ‘to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State’; and the *International Convention*

it can be clearly ascertained that applying their provisions in times of armed conflict was not foreseen by the negotiating parties.⁷⁰ In light of the strict interpretation of what constitutes a ‘fundamental change of circumstances’ in the Vienna Convention on the Law of Treaties formulation of the *rebus sic stantibus* rule, excluding the application of general international environmental law instruments and rules, particularly those dealing specifically with armed conflict, seems extremely difficult as a matter purely of treaty law.⁷¹ Indeed, it is difficult to maintain that the drafters of provisions like the Stockholm Declaration’s Principle 26 on nuclear weapons did not foresee its application in times of war.

The more common approach to this thorny issue is to avoid the issue of applicability and simply subordinate the application of often vague dictates of international environmental law instruments to the application of more specific and more established rules of international law. This seems to have been the method adopted by the ICJ in its *Legality of the Threat or Use of Nuclear Weapons* Advisory Opinion where it stated that:

the issue is not whether the treaties relating to the protection of the environment are or are not applicable during an armed conflict, but rather whether the obligations stemming from these treaties were intended to be obligations of total restraint during military conflict. The Court does not consider that the treaties in question could have intended to deprive a State of the exercise of its right of self-defence under international law because of its obligations to protect the environment.⁷²

The Court then goes on to list the provisions of international environmental and international humanitarian law that specifically subordinate environmental considerations to the considerations of the laws of armed conflict in line with what it calls ‘the general view according to which environmental considerations constitute one of the elements to be taken into account in the implementation of the principles of the law applicable in armed conflict’.⁷³

Given these difficulties likely to be encountered in applying international environmental law provisions in such crossover areas, it is understandable that, especially during the formative years of international environmental law, those concerned about wartime environmental damage turned their attention to the law

on Civil Liability for Oil Pollution Damage, adopted 29 November 1969, 973UNTS 3, entered into force 19 June 1975, Art. III(2)(a), which excludes, *inter alia*, damage resulting from an act of war, hostilities, civil war, or insurrection. See E. Mann-Borgese, above note 15, pp. 105–108. See further Richard Desgagné, ‘The prevention of environmental damage in time of armed conflict’, in Horst Fischer and Avril McDonald (eds), *Yearbook of International Humanitarian Law*, Vol. 3, 2000, esp. pp. 122–126.

70 The doctrine of *rebus sic stantibus* is reflected in Article 62(3) of the *Vienna Convention on the Law of Treaties*, opened for signature 23 May 1969, 1155 UNTS 331, entered into force 27 January 1980, which allows the suspension of the operation of a treaty after a fundamental change of circumstances.

71 See further Michael Bothe, Antonio Cassese, Frits Kalshoven, Alexandre Kiss, Jean Salmon, and Kenneth R. Simmonds, *Protection of the Environment in Times of Armed Conflict*, Report established by a study group constituted by European Communities, European Commission, Brussels, 1985.

72 ICJ, *Nuclear Weapons Advisory Opinion*, above note 31, para. 30.

73 *Ibid.*, paras. 31–32.

of armed conflict. However, international humanitarian law of that era fell well short of these states' desire to specifically prohibit wartime environmental damage, at least where it was severe and intended. Instruments such as the Lieber Code of 1863,⁷⁴ the Hague Conventions of 1899 and 1907⁷⁵ and even the Geneva Conventions of 1949,⁷⁶ while sometimes containing provisions on 'wanton destruction', did not specifically address the issue of wartime environmental damage, so specific treaty provisions were sought.⁷⁷

When states convened in Geneva in 1974 for the Diplomatic Conference for the Reaffirmation and Development of International Humanitarian Law, there was already a significant groundswell of support for the introduction of a provision protecting the natural environment in wartime. Interestingly, the draft text put forward at the commencement of the conference by the ICRC did not contain any specific provision dealing with this issue.⁷⁸ However, a wide-ranging group of states put forward proposals for a provision of international law protecting the environment.

One of the first such proposals was made, ironically, by Australia on 19 March 1974, a state that had earlier fought alongside the US in the Vietnam War but, by the time of the Geneva conference, was being run by a pioneering new government that had ended Australia's involvement in the Vietnam War and was in the process of passing a raft of highly progressive pieces of legislation.⁷⁹ The provision suggested by the Australian delegation not only prohibited the use of wartime methods harming the environment and reprisals against the environment, but also made any violation of these prohibitions a 'grave breach',⁸⁰ thereby entailing individual criminal liability enforceable through universal jurisdiction. However, opposition from, among others, the United Kingdom, eventually resulted in the Australian provision – and similar proposals put forward by the German Democratic Republic, Czechoslovakia, Uganda, and Vietnam – being substantially watered down.⁸¹ As a result, the relevant provisions of Additional

74 *Lieber Code*, above note 57.

75 See the relevant Hague Conventions of 1899 and 1907, all available at: <http://www.icrc.org/ihl.nsf/INTRO?OpenView> (last visited 7 September 2010).

76 See the Geneva Conventions of 1949, all available at: <http://www.icrc.org/IHL.nsf/CONVPRES?OpenView> (last visited 7 September 2010).

77 Note that, once specific rules had been developed, the *lex specialis derogate legi generali* rule had a non-neutral application as between the two subsystems of international law, requiring that the specific provisions developed within international humanitarian law apply in place of pre-existing general international environmental law rules on environmental damage (but not in wartime) or general international humanitarian law rules on wanton destruction (but not specifically destruction of the natural environment).

78 Alexandre Kiss, 'Les protocoles additionnels aux Conventions de Genève de 1977 et la protection de biens de l'environnement', in Christophe Swinarski (ed.), *Études et essais sur le droit international humanitaire et sur les principes de la Croix-Rouge en l'honneur de Jean Pictet*, Martinus Nijhoff, La Haye, 1984, p. 182.

79 Australia's Whitlam Government was elected in 1972, ending a twenty-three-year conservative stranglehold on federal power. Pioneering legislation passed by this short-lived government included the wide-ranging consumer protection provisions of the *Trade Practices Act* of 1974 and the socially-progressive *Family Law Act* of 1975.

80 See A. Kiss, above note 78, p. 182.

81 *Ibid.*, pp. 183–184.

Protocol I as it was signed,⁸² while prohibiting reprisals against the natural environment (Article 55(2)), introduced a qualifying mental element for the prohibition on the use of methods of armed conflict damaging the environment (Articles 35(3) and 55(1)) and did not make violation of either of these provisions a 'grave breach' under the Protocol such as to entail individual war crimes responsibility (see Article 85 of Additional Protocol I). Further, no environmental provisions were included in Additional Protocol II,⁸³ which regulates non-international armed conflict, reportedly on the basis that rebel forces fighting in civil wars were unlikely to apply international humanitarian law anyway and their actions would therefore be better addressed through the human rights framework.⁸⁴

Between the first and second sessions of the 1974–1977 Geneva Conference that produced Additional Protocol I, the Soviet Union submitted to the UN General Assembly a draft international convention on the prohibition of action to influence the environment and climate for military and other purposes and proposed that an international convention along these lines be adopted.⁸⁵ The General Assembly accepted this proposal and, after the United States cooperated with the USSR in its drafting,⁸⁶ the *Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques* (the ENMOD Convention) was already set to be adopted by the General Assembly on 10 December 1976, prior to the conclusion of the Geneva Conference and the adoption of Additional Protocol I.⁸⁷ While it has received criticism from environmentalists for its limited scope,⁸⁸ the ENMOD Convention remains the first and only instrument specifically focusing on the protection of the environment in armed conflict.⁸⁹ It is neither a Convention that prosecutes wartime environmental damage as such nor a Convention that bans the use of certain weapons, but rather an effort to restrict the use of certain techniques in armed conflict such as those that had been employed by the US military in Vietnam.

82 *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I)* (hereafter 'Additional Protocol I'), opened for signature 8 June 1977, 1125 UNTS 3 (entered into force 7 December 1978).

83 *Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts* (hereafter 'Additional Protocol II'), opened for signature 8 June 1977, 1125 UNTS 609 (entered into force 7 December 1978).

84 A. Kiss, above note 78, p. 184.

85 See General Assembly Resolution 3264 (XXIX) of 9 December 1974.

86 See General Assembly Resolution 3475 (XXX) of 11 December 1975, introductory paragraph 5.

87 General Assembly Resolution 31/72 of 10 December 1976.

88 See e.g. Susana Pimiento Chamorro and Edward Hammond, *Addressing Environmental Modification in Post-Cold War Conflict: The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) and Related Agreements*, Edmonds Institute Occasional Papers Series, 2001, available at: <http://www.edmonds-institute.org/pimiento.html> (last visited 20 September 2010).

89 *Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques*, (hereafter 'ENMOD Convention'), adopted 10 December 1976, opened for signature at Geneva on 18 May 1977 (entered into force 5 October 1978). See further Daniel Bodanksy, *Legal Regulation of the Effects of Military Activity on the Environment*, Research Report 201 18 103 for the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety, Erich Schmidt, Berlin, 2003, p. 26.

Neither of these two instruments – nor the weak provisions of subsequent instruments spawned either by the international humanitarian law branch (such as the heavily qualified 1982 CCW *Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons* provision)⁹⁰ or by the international environmental law branch (such as the vague, soft law articles in the General Assembly's 1982 *World Charter for Nature*⁹¹ and *Agenda 21*,⁹² which simply urge protection of the environment in armed conflict) – proved particularly effective in preventing subsequent wartime environmental damage. As described above, the 1980s and 1990s witnessed some of the most egregious acts against the environment during armed conflict. It is submitted that there are three main reasons for this apparent failure.

As regards the more specific, further-reaching 1970s provisions, first, neither the ENMOD Convention nor Additional Protocol I prohibits environmental damage occurring in non-international armed conflicts such as insurrections by rebels and full-blown civil wars.⁹³ Many of the instances of wartime environmental damage in the 1980s and 1990s occurred in the context of non-international armed conflicts, such as the Guatemalan Civil War where Agent Orange-style defoliants were reportedly used in regions of guerrilla activity; in the Salvadoran Civil War, where napalm and white phosphorus are understood to have been used; and in the early part of the Kosovo conflict, where Serb forces are alleged to have poisoned wells and adopted scorched earth tactics against ethnic Albanians.⁹⁴

Secondly, the environmental damage provisions of the 1976–1977 instruments are only binding on the states who have signed them, unless they are deemed reflective of customary international law. In light of prior and subsequent state practice, it is difficult to see how these provisions could be considered customary international law applicable against some of the most militarily active states, which

90 Protocol III to the Convention on Certain Conventional Weapons, Geneva, 10 October 1980, available at: <http://www.icrc.org/ihl.nsf/FULL/515> (last visited 20 September 2010), Art. 2(4): 'It is prohibited to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives'. As can be seen, this provision is heavily compromised by an explicitly broad notion of military objectives, such that it would not even find the US activities in Vietnam in breach.

91 UN General Assembly Resolution 37/7 of 28 October 1982: '5. Nature shall be secured against degradation caused by warfare or other hostile activities; ... 20. Military activities damaging to nature shall be avoided'.

92 'Agenda 21', Annex II to the Report of the United Nations Conference on Environment and Development, Rio de Janeiro, 3 to 14 June 1992, UN Doc. A/CONF.151/26: '39.6.a) Measures in accordance with international law should be considered to address, in times of armed conflict, large-scale destruction of the environment that cannot be justified under international law. The General Assembly and the Sixth Committee are the appropriate *fora* to deal with this subject. The specific competence and role of the International Committee of the Red Cross should be taken into account'.

93 ENMOD Convention, above note 89, Art. I: 'Each State Party ... as the means of destruction, damage or injury to *any other State Party*'. As noted above, Additional Protocol I expressly applies only to international armed conflict and no environmental damage provision was included in Additional Protocol II, which regulates non-international armed conflict.

94 See sources cited in J. E. Austin and C. E. Bruch, above note 7, pp. 3–5.

had refused to ratify them.⁹⁵ There are presently 167 parties to Additional Protocol I, but these do not include the US, Israel, Iraq, and Iran; while the ENMOD Convention has only been ratified or acceded to by 72 states, not including France and most Middle Eastern states. Most major incidents of post-1980 wartime environmental damage were therefore committed by states not party to these international agreements, including the Iraqi use of oil installations in the Iran–Iraq and Persian Gulf wars, the US-led NATO bombings in Kosovo in 1999 (particularly at industrial complexes in Pančevo and around Novi Sad), and the Israeli actions in Lebanon and Gaza. More will be said about these incidents below, but it suffices to note for present purposes that neither Iraq nor Israel (which were and are still not party to either agreement), nor the US (whose environmental damage was not attributable to the use of environmental modification techniques and which was not a party to Additional Protocol I) was subject to an international law treaty regime that could have rendered them in breach of an international obligation not to damage the environment in armed conflict.

Thirdly, as noted in the above history as to how these provisions were adopted, the environmental protection norms as set out in both these instruments – like most norms in the Geneva Conventions and Additional Protocols – are not considered ‘grave breaches’ under international humanitarian law; violations of them therefore only entail a weak obligation on states to repress such breaches and potentially state responsibility with, at most, consequences such as reparations and possibly international co-operation against the offending state.⁹⁶ Indeed, the civil liability aspect of international humanitarian law is underscored by Article 91 of Additional Protocol I, which makes a ‘Party to the conflict which violates the provisions ... if the case demands ... liable to pay compensation’.⁹⁷ The practical limitations of enforcing a system of state responsibility on states already involved in armed conflict are obvious. Indeed, the basis for the enforcement of the decentralized and consensual international legal system rests on the often vain hope that states will apply international law and settle their disputes in good faith, but armed conflict generally indicates a reluctance to apply international law rules and to co-operate in such a manner as to settle disputes peacefully.⁹⁸ In addition, international law’s last-resort, United Nations system of sanctions is, as Sassòli

95 For their customary nature see Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law: Volume I: Rules*, Cambridge University Press, Cambridge, 2005, pp. 142–143, now available at: http://www.icrc.org/customary-ihl/eng/docs/v1_cha_chapter14_rule4 (last visited 7 September 2010). Even if norms of precisely this nature are considered to have been the subject of sufficiently constant and widespread state practice with accompanying *opinio juris* to have become customary, which in the present author’s view is doubtful, the persistent objector notion would seem to prevent these rules being applied in relation to certain key militarily active states.

96 See e.g. Additional Protocol I, Part V, Section II.

97 Additional Protocol I, Art. 91. See further Stanislaw Nahlik, ‘Le problème des sanctions en droit international humanitaire’, in C. Swinarski, above note 78, pp. 469–481.

98 See Frits Kalshoven, *Reflections on the Law of War*, Martinus Nijhoff, Leiden, 2007, pp. 596–597. See also Marco Sassòli and Antoine A. Bouvier, *How Does Law Protect in War? Cases, Documents, and Teaching Materials on Contemporary Practice in International Humanitarian Law*, 2nd edition, ICRC, Geneva, 2006.

notes, in such politically charged contexts often governed by ‘arbitrary and selective political decisions of States’ and undermined by the use of the veto at the UN Security Council empowered to decree sanctions.⁹⁹ Such problems caused Birnie and Boyle, writing from an international environmental law perspective, to comment that ‘the law of armed conflict is one of the least sophisticated parts of contemporary international law’, with no means to ‘afford adequate assurance of military restraint’.¹⁰⁰

The criminalization of international humanitarian law norms as an effort to ensure greater compliance

International humanitarian law’s response to these issues, particularly the third problem, was to criminalize certain particularly serious violations of the Geneva and Hague Conventions and their protocols in the hope that, by raising the spectre of personal criminal liability for politicians or military commanders, they would at least be discouraged from carrying out the most serious and inexcusable acts.

However, the ‘grave breaches’ regime of the Geneva Conventions and Additional Protocols is itself subject to important practical limitations. For all grave breaches, international humanitarian law creates universal jurisdiction and requires states to enact legislation either for prosecuting and trying persons alleged to have committed, or to have ordered to be committed, such crimes, or for extraditing those persons to another High Contracting Party for trial.¹⁰¹ Yet few states have introduced such legislation or taken such action in their national courts, and, where there is legislation and enforcement, how the rules are applied has often greatly diverged across systems.¹⁰² In branding the Geneva law’s provisions on national jurisdiction over grave breaches ‘a dead letter’, Cassese cites as possible reasons for this failure, first, the reluctance of states to prosecute, or expose to prosecution, their own nationals, and second, political and diplomatic considerations frequently causing states to refrain from prosecuting foreigners.¹⁰³ Indeed, many of the few cases conducted in national courts relate to the events of World War II,¹⁰⁴ the most famous of which only came to pass after the lawless Israeli abduction of Adolf Eichmann in violation of Argentina’s territorial sovereignty. The vast majority of other prosecutions for grave breaches have only been possible in tribunals specially constituted by the winners of the relevant war, including in the *ad hoc* international criminal tribunals established by the Security Council taking a broad view of its powers under Chapter VII of the UN Charter. As Sharp

99 Marco Sassòli, ‘Humanitarian law and international criminal law’, in Antonio Cassese (ed.), *The Oxford Companion to International Criminal Justice*, Oxford University Press, Oxford, 2009, pp. 111–122.

100 P. Birnie and A. Boyle, above note 50, p. 150.

101 See e.g. Geneva Convention IV, Arts. 49, 50, 129, and 146; Additional Protocol I, Art. 85(1).

102 See Michael Bothe, Peter Macalister-Smith, and Thomas Kurzidem (eds), *National Implementation of International Humanitarian Law*, Martinus Nijhoff, Dordrecht, 1990.

103 Antonio Cassese, ‘On the current trends towards criminal prosecution and punishment of breaches of international humanitarian law’, in *European Journal of International Law*, Vol. 9, No. 2, 1998, p. 5.

104 *Ibid.*, p. 6.

has provocatively argued, an international legal order that is dependent on such actions as one sovereign invading or interfering with the territorial sovereignty of another is a dubious foundation for a stable rule of law.¹⁰⁵

As the result of such reliance on external factors, the international humanitarian law regime revealed itself to be in need of bolstering if it were to achieve the outcome of comprehensive punishment and powerful deterrence for which the grave breaches regime had been established. Unfortunately, little could be done about this in the fragmented international community of the cold-war era, but the fall of the iron curtain ushered in a decade of internationalist optimism in which the concept of an international criminal court enjoying wide jurisdiction to try individuals for such violations was revived.¹⁰⁶

The International Criminal Court (ICC) came into being as a result of the entry into force of the Rome Statute of the International Criminal Court ('ICC Statute') on 1 July 2002. The Statute differs from statutes promulgated for the earlier *ad hoc* criminal tribunals by setting out more than simply the main categories of offences over which the Court has jurisdiction and instead providing considerable detail as to the precise crimes for which the Court may find an individual personally criminally liable.¹⁰⁷

In respect of war crimes, the ICC Statute spells out, in Article 8(2)(b), twenty-six separate violations over which, if they occur in international armed conflict, the Court has jurisdiction. The war crimes detailed move beyond the grave breaches of the Geneva Conventions (over which jurisdiction is separately established by Article 8(1) of the ICC Statute) and also mark a significant progression from the jurisdiction granted to the *ad hoc* international criminal tribunals for Rwanda (ICTR) and the Former Yugoslavia (ICTY) by statutes drafted only four of five years earlier. Article 3 of the Statute for the *International Criminal Tribunal for the Former Yugoslavia* (1993), for example, explicitly mentions only six war crimes over and above the grave breaches of the Geneva Convention – twenty fewer than the ICC Statute.¹⁰⁸ For present purposes, it is important to note that that ICTY list contains the 'employment of poisonous weapons or other weapons calculated to cause unnecessary suffering' (Article 3(a) of ICTY Statute) and the

105 Peter Sharp, 'Prospects for environmental liability in the International Criminal Court', in *Virginia Environmental Law Journal*, Vol. 18, No. 217, 1999, p. 220.

106 A. Cassese, above note 103, p. 7. The General Assembly had already drawn up plans for an international criminal court in the immediate aftermath of World War II, complete with a draft statute. See UN General Assembly Resolution 489 (V) of 12 December 1950 and a reproduction of the statute in *American Journal of International Law*, Supplement, Vol. 46, 1942, pp. 1–13; and for the problems seen to have plagued that project, see Julius Stone, 'The proposed international criminal court', in Julius Stone, *Legal Controls of International Conflict: A Treatise on the Dynamics of Disputes- and War-Law*, Rinehart, New York, 1954, pp. 377–379.

107 The Nuremberg Statute already contained the distinction between genocide, war crimes, and crimes against humanity, as did the Tokyo, ICTY, and ICTR statutes. See *Charter of the International Military Tribunal, Annex to the Agreement for the Prosecution and Punishment of the Major War Criminals of the European Axis (London Agreement)*, 8 August 1945, 82 UNTS 279.

108 *Statute of the International Tribunal for the Former Yugoslavia* ('ICTY Statute'), adopted 25 May 1993 by Security Council Resolution 827; as amended 13 May 1998 by Resolution 1166 and 30 November 2000 by Resolution 1329, Art. 3.

‘wanton destruction of cities, towns or villages, or devastation not justified by military necessity’ (Article 3(b)), but does not include any explicit criminalization of general wartime environmental damage. Even though this list is explicitly stated not to be exhaustive, under the test laid down by the ICTY Appeals Chamber presiding in the *Tadić Case*, it is extremely unlikely that the rule in Articles 35(3) and 55(1) of Additional Protocol I, not listed as a grave breach by the aforesaid instrument, could meet the requirement that a violation of its terms attracts individual criminal responsibility as a matter of customary international law.¹⁰⁹

Clearly then, by explicitly attaching individual criminal liability to certain instances of wartime environmental damage in its Article 8(2)(b)(iv), the ICC Statute has moved further than the non-grave-breach provisions of Additional Protocol I and also the statutes of the *ad hoc* international criminal tribunals for Rwanda and Yugoslavia. Significantly, the ICC Statute does not end its list of war crimes at the acts considered grave breaches, and therefore attracting individual criminal responsibility under the Geneva Conventions and Additional Protocol I. It is indeed a tribute to the somewhat unexpected success of the Rome Conference that it was able not merely to achieve a crystallization of existing customary international law, but also to contribute to the progressive development of that law in certain key respects, including the criminalization of what Richard Falk had famously termed ‘ecocide’.¹¹⁰

Without doubt, the addition of a provision attaching criminal liability to instances of wartime environmental damage significantly bolsters the international legal regime governing this type of act. Within the humanitarian law structure, the imposition of criminal liability is regarded as the furthest that legal regulation can reach and the sanction most likely to produce greater long-term compliance with the laws of war.¹¹¹ Indeed, as noted by the Nuremberg tribunal in 1947:

crimes against international law are committed by men, not abstract entities, and only by punishing individuals who commit such crimes can the provisions of international law be enforced.¹¹²

Interestingly, criminal liability is viewed in a very similar manner in environmental law. While international environmental law has not yet reached the stage of evolution where it can think in general terms about imposing criminal liability for breaches of its norms, many domestic environmental law systems use criminal responsibility as a key part of their regulatory armoury. In adopting a directive on the protection of the environment through criminal law in 2008, the

109 See ICTY Appeals Chamber, *Prosecutor v. Dusko Tadić*, Decision of 2 October 1995, para. 94. See further Anne-Marie La Rosa, *Dictionnaire de droit international pénal: Termes choisis*, Presses universitaires de France, Paris, 1998, pp. 31–32.

110 Richard Falk, ‘Environmental warfare and ecocide’, in Richard Falk (ed.), *The Vietnam War and International Law*, Vol. 4, Princeton University Press, Princeton, 1976, p. 300.

111 See e.g. M. Sassòli, above note 99, p. 122.

112 Nuremberg International Military Tribunal: Judgment and Sentences, in *American Journal of International Law*, Vol. 41, 1947, p. 221.

European Parliament noted the importance of criminal penalties, saying in its third preambular paragraph:

Experience has shown that the existing systems of penalties have not been sufficient to achieve complete compliance with the laws for the protection of the environment. Such compliance can and should be strengthened by the availability of criminal penalties, which demonstrate a social disapproval of a qualitatively different nature compared to administrative penalties or a compensation mechanism under civil law.¹¹³

Domestic environmental law systems are replete with examples of where criminal penalties have been introduced to increase compliance with laws protecting against environmental damage. The US *Clean Air Act*, for example, prescribes criminal penalties involving fines and/or imprisonment of up to five years in length for flagrant failures to comply with environmental law obligations,¹¹⁴ and fines and/or imprisonment of up to fifteen years for the most egregious acts of air pollution.¹¹⁵ In Spain, the possibility of penal sanctions for environmental breaches is even set out in the country's constitution,¹¹⁶ while in South Africa '[c]riminal enforcement power is the most widely prescribed for implementation of environmental law'.¹¹⁷

By imposing a state responsibility obligation that ultimately entails the payment of damages for less serious acts of wartime environmental damage (the equivalent to a civil law obligation in domestic law), then individual criminal liability for more serious acts, the existing international legal regime in respect of wartime environmental damage can be seen, on a very general level at least, to be in keeping with the general approaches and internal logics of domestic and international forms of both humanitarian and environmental law.

This does not mean, of course, that the precise legal consequences associated with each type of wartime environmental damage in each type of situation are sure to be appropriate, be they viewed from the international humanitarian/

113 Directive 2008/99/EC of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law.

114 See *Clean Air Act*, 42 USC Section 7413(c)(1): 'Any person who knowingly violates any requirement or prohibition of an applicable implementation plan (during any period of federally assumed enforcement or more than 30 days after having been notified ...)'.

115 See *ibid.*, Section 7413(c)(5)(A): 'Any person who knowingly releases into the ambient air any hazardous air pollutant listed ... and who knows at the time that he thereby places another person in imminent danger of death or serious bodily injury shall, upon conviction, be punished by a fine under title 18, or by imprisonment of not more than 15 years, or both'.

116 *Spanish Constitution*, Art. 45 [Environment]: '(1) Everyone has the right to enjoy an environment suitable for the development of the person as well as the duty to preserve it. (2) The public authorities shall concern themselves with the rational use of all natural resources for the purpose of protecting and improving the quality of life and protecting and restoring the environment, supporting themselves on an indispensable collective solidarity. (3) For those who violate the provisions of the foregoing paragraph, penal or administrative sanctions, as applicable, shall be established and they shall be obliged to repair the damage caused'.

117 Bowman Gilfillan, 'Chapter 55: South Africa', in *The International Comparative Legal Guide to Environmental Law 2009*, Global Legal Group, 2009, pp. 397–398.

international criminal law or the (international) environmental law perspective. Indeed, such an evaluation can only be made once the specifics of the norms regulating wartime environmental damage, including the ICC Statute provision, which attaches criminal liability to its commission (Article 8(2)(b)(iv)), have been analysed in greater detail.¹¹⁸

Environmental, humanitarian, and criminal law perspectives on each element of the applicable international legal regime

Today's international legal framework regulating damage to the natural environment in armed conflict is multi-layered and pushes in different directions. There are international treaty norms prohibiting signatory states from use of a specific and quite narrow category of techniques of manipulating the environment as a weapon and thus altering its natural state; provisions in general international humanitarian law instruments attaching state responsibility to those who use methods of armed conflict that severely damage the environment; and now an international criminal court that can, in certain cases, find individuals who intentionally damage the environment in armed conflict criminally liable. In addition, if one were to extend the scope of this article's consideration to environmental damage occurring in the context of non-international armed conflict, one would have to add domestic environmental law provisions relating to environmental damage and human rights considerations into the equation.¹¹⁹

This part of the present article considers the appropriateness of the legal regime created from two main angles. First, given that the problem of wartime environmental damage occurs at the intersection of two branches of international law with different approaches, different values, and different areas of expertise, does the single, albeit multi-layered, international legal regime conceived to deal

118 Some authors, such as Freeland, Weinstein, and Sharp, consider that other provisions in the ICC Statute – such as those pertaining to genocide or crimes against humanity – may be applicable to acts of wartime environmental damage. The present author does not share this view. Most environmental damage is unlikely to be sufficiently localized to have the effect of deliberately targeting a specific national, ethnical, racial, or religious group and to reach the high threshold rightly imposed by the ICC Statute's genocide provision (Article 4), while crimes against humanity, which generally require 'great suffering or serious injury to body or to mental or physical health' (see ICC Statute, Art. 7(1)(k)), at the most only capture attacks against the environment directly causing, with knowledge, substantial *human* suffering, not simply '*environmental*' crimes. See Steven Freeland, 'Crimes against the environment: a role for the International Criminal Court?', in *La Revue Juridique Polynésienne*, Hors Série, 2005, pp. 335ff.; Tara Weinstein, 'Prosecuting attacks that destroy the environment: environmental crimes or humanitarian atrocities?', in *Georgetown International Environmental Law Review*, Vol. 17, 2005; and P. Sharp, above note 105.

119 The scope of this article has been limited to international armed conflict not simply because the relevant international criminal law is restricted to international conflicts (see ICC Statute, Art. 8(2)(b) (chapeau); ICC Preparatory Commission, Elements of Crimes, ICC Doc: ICC-ASP/1/3 (hereafter 'Elements of Crimes')), but also to avoid the analysis of a significant further branch of international law – human rights law – and the detailed discussion that its interaction with both international environmental law and international humanitarian law in this context would merit.

with it manage to fuse these different perspectives into a cohesive whole or are we instead left with an inconsistent set of norms leading to anachronistic outcomes? Do the specific elements of the relevant norms borrow from the appropriate area of international law such that the branches can mutually support each other or do they simply follow the path of least resistance, adopting the lowest common denominator of legal regulation? Second, in general terms, does the international legal regime for wartime environmental damage, considered in the context of certain key contemporary examples, go too far or not far enough? Finally, would our conclusions as to the appropriateness of the level of regulation differ if we were to answer these questions and evaluate the regime in general from a specifically international humanitarian law perspective or a solely international environmental law perspective?

Like many legal norms that also have criminal liability as a consequence of their violation, the existing international legal regime for wartime environmental damage can be divided into six key parts.¹²⁰ In the first place, there must be (i) a certain type of act or omission that (ii) causes (iii) a particular type of consequence. Then there are the mental elements, which criminal lawyers often refer to as *mens rea*, including whether the person so acting (iv) intended to commit the act and (v) was aware that the particular consequences would ensue and finally the issue of (vi) whether there are any applicable defences to exclude liability in the specific case. In an effort to evaluate the regime prohibiting environmental damage in international armed conflict from the plural perspectives required for an activity that sits at the intersection of different branches of public international law, we will now break it down into these six constitutive parts.

The range of acts prohibited by each of the relevant rules

The first norm to be adopted in respect of wartime environmental damage, the ENMOD Convention, appears to be narrower than the later provisions in terms of the range of acts that fall within the prohibition. While its Article II definition of what constitutes an environmental modification technique is quite broad, the set of illustrative examples in the Understandings appended to the Convention (CCD Understandings) by the Geneva Conference of the Committee on Disarmament and adopted by the UN General Assembly appears to place undue restriction on the scope of this rule.¹²¹ Indeed, as pointed out by Jozef Goldblat shortly after

120 It should be noted that in defining the scope of her study of Transboundary Damage in general, Xue Hanqin uses four elements of definition which overlap substantially with those outlined here. See Xue Hanqin, *Transboundary Damage in International Law*, Cambridge University Press, Cambridge, 2003, p. 4.

121 *Understandings Appended to the Convention on the Prohibition of Military or any Hostile Use of Environmental Modification Techniques by the Conference of the Committee of Disarmament* (hereafter 'CCD Understandings'), available at: <http://www.icrc.org/ihl.nsf/FULL/460?OpenDocument> (last visited 20 September 2010).

the Convention was adopted, it appears that the Convention is a half-measure clearly prohibiting only fanciful events such as the triggering of earthquakes, while environmental modification techniques more likely to be adopted during armed conflict, such as certain instances of river diversion or strategic cloud seeding, do not seem to be prohibited.¹²²

Additional Protocol I and the ICC Statute are, however, much more general in terms of the range of acts that may, under certain circumstances, lead to responsibility for wartime environmental damage. Articles 35(3) and 55(1) of Additional Protocol I speak in general terms of ‘methods or means’ that cause damage to the environment, while Article 8(2)(b)(iv) of the ICC Statute speaks of an ‘attack’. The Elements of Crimes document adopted by the Preparatory Commission for the International Criminal Court (PrepCom) shortly after the signature of the Statute makes it clear that attack should be interpreted in the general sense of ‘acts of violence against the adversary, whether in offence or in defence’ (as defined in Article 49(1) of Additional Protocol I) and not confused with the special, *jus ad bellum*, sense of how this term and its cognates, including ‘armed attack’, are used in the UN Charter.¹²³

The use of notions such as ‘hostile use of technique’ (ENMOD), ‘methods or means’ (Additional Protocol I), or an ‘attack’ (ICC Statute) in defining the scope of acts prohibited, is the first clear sign that the provisions that constitute the current international legal regime against wartime environmental damage were clearly adopted in accordance with the logic of international humanitarian law and not according to the principles and approach of international environmental law. The scope of the ENMOD Convention in particular may be somewhat disturbing to someone viewing these norms from an environmental law perspective, not only because it unduly restricts the range of techniques but also because it targets only those situations where the environment itself was effectively used as a weapon, thereby excluding all other situations of incidental damage to the environment in international armed conflict. Even the more general norms of Additional Protocol I and the ICC Statute are liable to a certain degree of such criticism from this perspective, as there may be situations where the environment is greatly damaged in wartime as part of events that neither constitute environmental ‘methods or means of warfare’ (Additional Protocol I) nor offensive or defensive acts of violence against an adversary (ICC).

An applicable test for causation?

In terms of causation, none of the relevant provisions specifies what exactly this might require in the circumstances. ENMOD speaks of ‘having [certain] effects’, Additional Protocol I of methods that ‘are intended, or may be expected, to cause’

122 J. Goldblat, above note 40, p. 217.

123 *Charter of the United Nations*, opened for signature 26 June 1945, 1 UNTS 16, entered into force 24 October 1945, Art. 51.

certain damage, and the ICC Statute provision simply uses the expression 'will cause' the damage.¹²⁴

Without any authoritative explanations or jurisprudence showing what test for causation is likely to be used, it is impossible to evaluate whether the international legal regime for wartime environmental damage approaches questions of causation more in the style of international humanitarian law or of international environmental law. Suffice to say that, if the opportunity to develop such a test eventually arises in relation to environmental damage, the court, tribunal, or other institution may well begin by placing itself within the frame of how causation has been understood in relation to other breaches of international humanitarian law. Yet an international environmental lawyer would prefer to tailor the rules of causation to the specific situation of environmental damage and would prefer such a body not to rely on general humanitarian law notions, but instead on the theory of causation elaborated precisely in relation to environmental damage.

The United Nations Compensation Commission (UNCC) established to compensate victims of the Gulf War for harm they suffered, including environmental harm, is one such source of jurisprudence for the causation of environmental damage to which international environmental lawyers would refer the ICC. This commission had been established by a UN Security Council resolution that held Iraq 'liable under international law for *any direct loss, damage, including environmental damage* and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait'.¹²⁵ The UNCC Panel of Commissioners for 'F4' claims (environmental damage claims) drew on tests for causation elaborated in the context of peacetime environmental damage to determine what constituted a direct cause, taking a very liberal approach to 'direct causation' in one particular case where the Commissioners held that, even where there were intervening events, a direct causal link could be established so long as those events did not break the chain of causation.¹²⁶

It should be noted that this UNCC test for the 'direct causation' of environmental damage is much more lenient than equivalent tests used in relation to non-environmental international humanitarian law norms. For example, the ICRC's recently published *Interpretive Guidance on the Notion of Direct*

124 ENMOD Convention, above note 89, Art. I; Additional Protocol I, Arts. 35(3) and 55(1); ICC Statute, Art. 8(2)(b)(iv).

125 UN Security Council Resolution 687 (1991), UN Doc. S/RES/687 (1991), emphasis added; Report of the Secretary-General pursuant to paragraph 19 of Security Council resolution 687 (1991), UN Doc. S/22559, 2 May 1991. For context and discussion, see Laurence Boisson de Chazournes and Danio Campanelli, 'The United Nations Compensation Commission: time for an assessment?', in Andreas Fischer-Lescano, Hans-Peter Gasser, Thilo Marauhn, and Natalino Ronzitti (eds), *Peace in Liberty: Festschrift für Michael Bothe zum 70. Geburtstag*, Nomos/Dike, Baden-Baden/Zürich, 2008, pp. 3–17.

126 See e.g. the *Well Blowout Control Claim*, Report of 15 November 1996, UN Doc. S/AC.2/Dec.40, 36 ILM 1343 (1997), 1356, paras. 85–86 (approved by Governing Council Decision 40, 17 December 1996 (S/AC.26/Dec.40), reproduced in I.L.R., Vol. 109, p. 669). See further Roger P. Alford, 'Well Blowout Control Claim. UN Doc. S/AC.2/Dec.40, 36 ILM 1343 (1997)', in *AJIL*, Vol. 92, No. 2, 1998, pp. 287–291.

Participation in Hostilities Under International Humanitarian Law, says that: ‘direct causation should be understood as meaning that the harm in question must be brought about in one causal step [such that] ... conduct that ... only indirectly causes harm, is excluded from the concept of direct participation in hostilities’.¹²⁷

Widespread, long-term, and/or severe damage to the natural environment

The type and extent of environmental damage that must be caused to trigger the application of the rules prohibiting wartime environmental damage is probably their most important element. The formulation ‘widespread, long-term *and* severe damage to the natural environment’ (emphasis added) is used in all of Additional Protocol I’s Articles 35(3) and 55(1) and Article 8(2)(b)(iv) of the ICC Statute. Hence, in terms of the environmental damage caused, the ICC Statute’s criminalized form of the prohibition, unlike certain prior draft criminal environmental damage provisions,¹²⁸ does not differ from Additional Protocol I’s humanitarian obligation except as regards the ICC Statute’s additional requirement that the damage be ‘clearly excessive in relation to the ... military advantage anticipated’ – the element of the ICC Statute provision that will be discussed in the final subsection of the present analysis.

Before turning to the ‘widespread, long-term and severe damage’ formula, it should be noted that what constitutes the ‘*natural* environment’ is neither defined in these instruments nor the object of consensus. Indeed, as Jensen goes to substantial lengths to demonstrate, there is not yet a generally accepted definition of the ‘environment’ let alone the ‘*natural* environment’ and even the widely referenced scientific and comprehensive definition of Article II of the ENMOD Convention, in Jensen’s view, provides little clarity.¹²⁹ Alexandre Kiss argues that the adjective ‘natural’ seems to exclude urbanized or industrial zones,¹³⁰ while the ILC’s 1991 Commentary to its *Draft Code of Crimes Against the Peace and Security of Mankind* contains a broader interpretation of ‘natural environment’.¹³¹ In light of

127 ICRC, *Interpretive Guidance on the Notion of Direct Participation in Hostilities Under International Humanitarian Law*, ICRC, Geneva, 2009, p. 53.

128 See e.g. the 1996 Draft Code of the Crimes Against Humanity, Art. 20 (War Crimes): ‘(g) ... cause widespread, long-term and severe damage to the natural environment *and thereby gravely prejudice the health or survival of the population*’ (emphasis added).

129 See ENMOD Convention, above note 89, Article II: ‘the term “environmental modification techniques” refers to any technique for changing – through the deliberate manipulation of natural processes – the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space’; Eric Talbot Jensen, ‘The international law of environmental warfare: active and passive damage during armed conflict’, in *Vanderbilt Journal of Transnational Law*, Vol. 38, 2005, pp. 150–152.

130 A. Kiss, above note 78, p. 188.

131 *Report of the International Law Commission on the Work of its Forty-third Session, 29 April–19 July 1991, Official Records of the General Assembly, Forty-sixth Session, Supplement No. 10, Doc. A/46/10* (hereafter ‘ILC 1991 Commentary’), para. 4 of commentary to draft Article 26, available at: http://untreaty.un.org/ilc/documentation/english/A_46_10.pdf (last visited 7 September 2010). The ILC 1991 Commentary remains the most detailed on this point, as the draft provision was subsequently altered.

ever-increasing consciousness of the fragility of the environment, one might suggest abandoning the Kiss interpretation in favour of a more contemporary, broader view that more closely resembles the ENMOD definition.

In terms of the scope of application of Articles 33(5) and 55(1) of Additional Protocol I and Article 8(2)(b)(iv) of the ICC Statute, it is of vital importance to note that the provisions use the conjunctive element ‘*and*’ to link the three adjectives qualifying the damage to the natural environment. This means that ‘widespread damage’, ‘long-term damage’, and ‘severe damage’ are cumulative conditions, all of which must separately be met in order for there to be a breach of the relevant provision. Greater environmental damage is accordingly required than that which would potentially constitute a breach of Article I of the ENMOD Convention, an instrument that uses the less demanding, disjunctive formula of ‘widespread, long-lasting *or* severe’.¹³²

The precise meanings of the separate elements ‘widespread’, ‘long-term’, and ‘severe’ were the subject of long discussions at the Geneva Conference for Additional Protocol I,¹³³ but remain shrouded in ambiguity.¹³⁴ Commenting on a draft provision drawn from Article 55(1) of Additional Protocol I in 1991, the ILC simply described these elements as cumulative factors to determine the seriousness of a crime, with little guidance as to the thresholds to be applied.¹³⁵ The ICC Elements of Crimes document of 1998 does not specify the meaning of these terms so, in a search for clarity, one must return to the older official and unofficial commentaries regarding the meaning of these same terms as they were used in the ENMOD Convention and Additional Protocol I.

Widespread damage

The CCD Understandings appended to the ENMOD Convention define widespread damage in Article I of that Convention to mean ‘an area on the scale of several hundred square kilometres’,¹³⁶ but Hulme argues that the drafters of Additional Protocol I intended somewhere between this minimum standard and something closer to the damage to some 20,000 square kilometres actually caused in Vietnam.¹³⁷

The CCD Understandings were provided subject to the disclaimer that they apply only to the ENMOD Convention and do not prejudice the interpretation of the same or similar terms used in other international agreements.¹³⁸

132 ENMOD Convention, above note 89, Art. I, emphasis added.

133 A. Kiss, above note 78, p. 189.

134 René Provost, ‘International criminal environmental law’, in Guy S. Goodwin-Gill and Stefan Talmon (eds), *The Reality of International Law: Essays in Honour of Ian Brownlie*, Clarendon Press, Oxford, 1999, p. 447.

135 ILC 1991 Commentary, above note 131, p. 107, para. 5 of commentary to draft Article 26.

136 See CCD Understandings, above note 121. See also L. Boisson de Chazournes *et al.*, above note 50, p. 645.

137 K. Hulme, above note 12, p. 92.

138 See Dietrich Schindler and Jiří Toman, *The Laws of Armed Conflicts*, Martinus Nijhoff Publishers, Leiden, 1988, pp. 164–169.

Moreover, in the final debate on the Article 55 provision containing these words at the Geneva Conference negotiating Additional Protocol I, several delegations made the point that the words ‘widespread, long-term and severe’ do not have the same meaning as the corresponding words in the ENMOD Convention.¹³⁹ However, the fact that no higher threshold was provided in materials associated with either Additional Protocol I or the ICC Statute may mean that the low ENMOD standard of widespread damage has been adopted by default. Indeed, this is the interpretation given to the provision by many states’ military handbooks.¹⁴⁰

Even if the less demanding interpretation of widespread were not adopted for the non-ENMOD rules, from an international environmental law perspective at least the ENMOD Convention’s prohibition appears quite reasonable. Combined with the less burdensome disjunctive test of widespread, long-term, or severe damage, its clear statement of a low threshold for ‘widespread’ damage means that most instances of wartime environmental damage will meet the ENMOD Convention’s damage requirement. However, as was noted above, the scope of acts to which the ENMOD Convention applies is potentially very limited, so this provision is, overall, not as accessible as its damage requirement suggests. The Additional Protocol I and ICC Statute provisions, on the other hand, adopt a definition of ‘widespread damage’ that may ultimately exclude many incidents that environmental campaigners would probably consider at least sufficient grounds for non-criminal liability, such as the recent spillage of untreated wastewater and sewage sludge over only 0.055 square kilometres of agricultural land in densely populated Gaza.

Long-term damage

The requirement that damage be long term refers to the persistence of the damage in time.¹⁴¹ The ENMOD Convention’s CCD Understandings’ interpretation of this term again sets a low threshold of ‘a period of months, or approximately a season’.¹⁴² However, as pointed out by an ICRC report to the General Assembly in 1993, there are substantial grounds, including from the *travaux préparatoires* of Additional Protocol I, to suggest that ‘long-term’ should be interpreted to mean decades, rather than months.¹⁴³

It is unclear which interpretation would be preferred by the ICC provision on wartime environmental damage. The difference between these two standards is significant and could have substantial implications on whether a state can be found

139 See Yves Sandoz, Christophe Swinarski, and Bruno Zimmermann (eds), *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC/Martinus Nijhoff Publishers, Geneva, 1987, Article 55 of Additional Protocol I, para. 2136, and sources cited therein.

140 See e.g. International and Operational Law Department, US Army, *Operational Law Handbook* (2007), p. 232, available at: <http://www.fas.org/irp/doddir/army/law2007.pdf> (last visited 5 September 2010).

141 ILC 1991 Commentary, above note 131, p. 107, para. 5 of commentary to draft Article 26.

142 ENMOD Convention, above note 89. See also L. Boisson de Chazournes *et al.*, above note 50, p. 645.

143 ICRC, *Report to the UN General Assembly 1993*, UN Doc A/48/269, para. 34; see also the similar conclusion reached by K. Hulme, above note 12, pp. 92–95, after an extensive analysis of the provision.

responsible under Additional Protocol I or an individual prosecuted under Article 8(2)(b)(iv) of the ICC Statute. For example, the environmental damage caused by the discharging of oil into the Persian Gulf in 1991 was probably not sufficiently long-term to come within the scope of these provisions, as much of it in fact evaporated away relatively quickly, while the report of the UN Environmental Programme's Balkan Task Force on the war in Kosovo concluded that the long-term pollutants in the Danube were the result of pre-war industrial processes, and therefore not of the Allied bombing campaigns.¹⁴⁴ Any deforestation caused in Lebanon by the Israeli use of incendiary weapons potentially including white phosphorus would also not meet this temporal threshold, which therefore seems, particularly from a perspective that seeks to maximize protection of the environment, inappropriately high.

Severe damage

The 'severe damage to the natural environment' requirement is probably the most controversial part of the Additional Protocol I rule from an international environmental law perspective. While this clearly refers to the intensity of the damage and requires that it is, at the very least, more than 'significant',¹⁴⁵ many delegates and commentators since the ENMOD Convention and Additional Protocol I have connected this requirement to human suffering. For example, the CCD Understandings define 'severe' damage as 'involving serious or significant disruption or harm to human life, natural and economic resources or other assets',¹⁴⁶ while the second sentence of Article 55(1) of Additional Protocol I specifies that protection of the natural environment against widespread, long-term, and severe damage includes the 'use of methods ... to cause such damage to the natural environment and *thereby to prejudice the health or survival of the population*'.¹⁴⁷

Writing in 1984, soon after the signing of Additional Protocol I, Kiss reacted to its clearly anthropocentric manner of treating protection of the environment saying: 'A défaut de reconnaître que l'environnement en lui-même représente désormais une valeur intrinsèque ... le *Protocole de Genève* ne pouvait l'envisager qu'en fonction de la protection des humains'.¹⁴⁸ Given recent advances in the appreciation of the importance of protecting the natural environment for its own sake or, at any rate, by virtue of its *indirect* relationship to human utility, it is

144 UNEP and United Nations Centre for Human Settlements (Habitat), *The Kosovo Conflict: Consequences for the Environment and Human Settlements*, UNEP and UNCHS, Switzerland, 1999, p. 61; see further K. Hulme, above note 12, p. 195.

145 K. Hulme, above note 12, p. 96.

146 CCD Understandings, above note 121.

147 Additional Protocol I, Art. 55(1), emphasis added.

148 'Failing to admit that the environment had itself come to represent something of intrinsic value ... the Geneva Protocol could only envisage it in terms of the protection that it affords to humans'. A. Kiss, above note 78, pp. 191–192 (present author's translation).

regrettable that delegates at the Rome Conference and the PrepCom did not take the opportunity to set down that it is no longer a requirement of ‘severe damage’ that it cause (direct) human suffering.

Irrespective of how leniently these three separate conditions may one day be interpreted, it cannot be doubted that, outside the otherwise peripherally applicable ENMOD Convention, the ‘widespread, long-term and severe’ formula sets an extremely high threshold for actionable environmental damage, which goes well beyond the thresholds for damage set by other instruments of international environmental law. For example, the 1979 *Convention on Long-range Transboundary Air Pollution* sets the damage threshold at ‘deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment’,¹⁴⁹ while Article 40 of the Statute for the River Uruguay – recently at the root of Argentina and Uruguay’s *Pulp Mills* litigation – also speaks in wider terms of ‘deleterious effects or harm to living resources, risks to human health, or a threat to water activities including fishing or reduction of recreational activities’.¹⁵⁰ Compared to such international environmental law instruments, the conception of environmental damage for wartime seems very restricted.

The mental elements of the crime

The well-established criminal principle of *actus non facit reum, nisi mens sit rea* means that while the ENMOD Convention and Additional Protocol I may attach state responsibility to acts causing widespread, long-term, and severe damage to the environment, individual criminal responsibility will only ensue where such acts are intentional and undertaken in the knowledge that they would cause such damage. Given the above-noted weaknesses of enforcing state responsibility regimes such as ENMOD and Additional Protocol I and the great potential of the ICC Statute provision for ensuring greater compliance with rules prohibiting wartime environmental damage, it is important to evaluate in detail the limitations that these mental elements may place on enforcing legal consequences for damage to the environment in international armed conflict.

Article 8(2)(b)(iv) of the ICC Statute speaks of ‘[i]ntentionally launching an attack in the knowledge that such attack will cause ... widespread, long-term and severe damage to the natural environment ...’. Unlike some war crimes that do

149 *Convention on Long-range Transboundary Air Pollution*, opened for signature 13 November 1979, 1302 UNTS 217, entered into force 16 March 1983, Art. 1(a). Note, however, the impasse between states on setting an appropriate threshold for damage in negotiations for the annex on comprehensive liability for harm to the Antarctic environment required under Article 16 of the 1991 Environment Protocol to the Antarctic Treaty. See further Louise de La Fayette, ‘The concept of environmental damage in international liability regimes’, in Michael Bowman and Alan Boyle, *Environmental Damage in International and Comparative Law*, Oxford University Press, Oxford, 2002, pp. 180–182.

150 ICJ, *Pulp Mills case*, above note 46, p. 58, para. 198, quoting from the Statute of the River Uruguay (UNTS, Vol. 1295, No. I–21425, p. 340, Art. 40) as authoritatively interpreted in the CARU Digest (E3), Title I, Chapter I, Section. 2, Art. 1(c).

not specify the nature of the mental element,¹⁵¹ this provision avoids the difficulties posed by the much-contested ‘intent and knowledge’ drafting of ICC Statute’s general, default provision on the mental elements of crimes (Article 30). As pointed out by Werle and Jessberger, intent and knowledge have different meanings depending on the elements to which they are connected.¹⁵² By specifying intent as an adverbial qualifier exclusively of the launching of the attack and knowledge as solely relating to the consequences of the act, Article 8(2)(b)(iv) of the ICC Statute associates intent only with the relevant conduct and associates knowledge solely with the relevant consequences. This in turn reveals two distinct mental elements: (1) an intent to launch an attack; and (2) the knowledge that such an attack will cause environmental damage. We will now deal with each of these required mental elements in turn.

Intent to launch an attack

Some analysts have tried to make something out of the use of the word ‘launching’ in sub-section (iv), because the formulation ‘directing attacks’ is used in sub-sections (i) through (iii). According to the commentary of Knut Dörmann, one delegation at the Rome Conference at which the ICC Statute was negotiated and drafted brought up the fact that the use of the word ‘launch’ might require the person to have also planned the attack, whereas the word ‘direct’ would not, the use of the word ‘launching’ thereby narrowing the scope of this crime relative to attacks on civilians *et cetera* in parts (i), (ii), and (iii) of Article 8(2)(b) of the ICC Statute.¹⁵³ While this view remained both uncontested and undeveloped at the conference, the relevance of the change in terminology can be ascertained by other official language versions of the ICC Statute, which is equally authoritative in all six UN languages. The distinction, while made in the Spanish version, is not made in the French version, where the formula ‘*diriger intentionnellement*’ is used for all four sub-sections.¹⁵⁴ Given that the Statute was predominantly negotiated in English and French, it would appear to be going too far to suggest that a different and narrower meaning should be read into the provision, leading to a more onerous requirement that the attack be ‘launched’. Indeed, the confusion in the language used appears to indicate that the expressions ‘direct an attack’ and ‘launch an attack’ were understood by drafters of the Statute to be identical.

151 See e.g. ICC Statute, Art. 8(2)(b)(vi): ‘Killing or wounding a combatant who, having laid down his arms or having no longer means of defence, has surrendered at discretion’.

152 Gerhard Werle and Florian Jessberger, ‘“Unless otherwise provided”: Article 30 of the ICC Statute and the mental element of crimes under international criminal law’, in *Journal of International Criminal Justice*, Vol. 3, No. 1, 2005, pp. 35–55, esp. p. 39.

153 Knut Dörmann, *Elements of War Crimes under the Rome Statute of the International Criminal Court: Sources and Commentary*, ICRC/Cambridge University Press, Cambridge, 2003, p. 162.

154 It should be noted that the ‘launching’ of an attack is the expression used in the grave breaches provision of Article 85 of Additional Protocol I (in reference to the grave breach for the non-environmental limb of Article 8(2)(b)(iv) of the ICC Statute). This is probably the origin of the use of this word in the ICC Statute. Interestingly, Article 85 of the French version of Additional Protocol I uses ‘lancer une attaque’.

In the view of the present author, this debate merely serves to show that the element of intent is already somewhat bound up in the notion of ‘launching’ or ‘directing’ an attack. One need not ascribe too much importance to the adverb ‘intentionally’, which may well be redundant, as it is difficult to imagine how an unintended attack could nonetheless be deemed to have been launched or directed.

Knowledge that the attack will cause environmental damage

The critical mental element of the environmental damage offence is not the intention to perform the act being potentially in violation of the provision, which will be present in all but the most unlikely incidences of widespread, long-term, and severe environmental damage in armed conflict, but the question of whether or not the perpetrator acted in the knowledge that his or her actions would cause such environmental damage. Indeed, it is when we view the act from the perspective of the knowledge of the perpetrator that we best see the differences between the three international rules regarding wartime environmental damage emerge.

According to an ICRC study of the elements of the ICC Statute crimes, some delegations at the Rome Conference insisted on a literal reading of the expression ‘in the knowledge that such attack will cause’ (*‘qu’elle causera’* in the French version) in the Statute’s text to argue that an individual could only be prosecuted under the provision if the act in question did in fact cause the damage.¹⁵⁵ The PrepCom, however, sided with the majority of delegations and sought to avoid this narrower interpretation by using the words ‘would cause’ (*‘allait causer’* in the French version) in the Elements of Crimes document.¹⁵⁶ The result is that it is generally agreed that an individual can be convicted under this provision even if the attack in fact ended up failing, for example, owing to a device’s failure to explode.

The practical importance of this minor clarification of the wording used in the provision is clear from an incident of intentional wartime environmental damage reportedly figuring rather strongly in the minds of those negotiating the provision at the Rome Conference. In the Gulf War of 1990–1991, Iraqi soldiers are said to have detonated approximately 720 Kuwaiti oil wells with the intention of setting them alight and creating a thick smoke hazard.¹⁵⁷ In fact, only about 600 wells were ignited.¹⁵⁸ Assuming for the sake of argument that all other elements of Article 8(2)(b)(iv) of the ICC Statute can be established in relation to this act – as we will see, a far from insignificant assumption – the latter interpretation adopted by the PrepCom would enable the ICC to prosecute even those individuals for whom it could only be proven that they ordered the detonation of oil wells and not that the oil wells they had ordered to be detonated actually caught on fire.

155 K. Dörmann, above note 153, p. 162.

156 Elements of Crimes, above note 119, p. 21.

157 S. Omar *et al.*, above note 16, pp. 321–322.

158 J. E. Austin and C. E. Bruch, above note 7, p. 2.

On the other hand, one could argue that following the narrower interpretation makes little substantive difference because all perpetrators coming within the broader interpretation would be caught by the ICC Statute's attempt provision (Article 25(3)(f)) anyway – a provision permitting the Court to find an individual criminally responsible and liable for attempts to commit a crime within the jurisdiction of the Court by taking action that commences its execution by means of a substantial step, but which 'does not occur because of circumstances independent of the person's intentions'.¹⁵⁹

This 'knowledge of causation' part of the Article 8(2)(b)(iv) of the ICC Statute provision also points to the first of many important ways in which the ICC Statute provision criminalizing attacks causing wartime environmental damage sets a higher threshold than similar international humanitarian law provisions involving lesser, state-responsibility-related consequences. The second limb of the Additional Protocol I, Article 55 formula, 'methods or means of warfare which are intended or *may be expected to cause*' (emphasis added), is significantly wider than the 'will cause (*causera*)' of the ICC Statute or even the 'would cause (*allait causer*)' preferred by the PrepCom in the Elements of Crimes document. The difference extends beyond the substitution of actual cause for probable cause. Whereas the ICC Statute demands proof of *subjective* reliance on whether the perpetrator knew that the act would cause damage, Additional Protocol I allows an *objective* determination of whether the act would cause the damage, as is clear from the use of the impersonal subject '*on*' in the French version of the Additional Protocol I provision, '*méthodes ou moyens conçus pour causer ou dont on peut attendre qu'ils causent*' the requisite damage.¹⁶⁰ It will therefore be much more difficult to establish a violation of the ICC provision than of the Additional Protocol I provision.

The strictness of the knowledge requirement imposed by the ICC Statute provision on wartime environmental damage is clear from the genealogy of its precise terms. The phrase used in Article 8(2)(b)(iv) of the ICC Statute, 'in the knowledge that' ('*en sachant que*' in the French version), comes directly from Article 85(3)(b) of Additional Protocol I, which designates the non-environmental, civilian damage limb of Article 8(2)(b)(iv) of the ICC Statute as a grave breach of international humanitarian law. Such clear use of terminology from a grave breach provision is understandable and allows us to clarify the precise meaning of the knowledge requirement through reference to the commentary on that particular article of Additional Protocol I, which states that the individual committing the act must have known 'with certainty that the described results would ensue, and this would not cover recklessness'.¹⁶¹

159 ICC Statute, Art. 25(3)(f).

160 Note that, in contradistinction to Article 55, Article 35 of the French version of Additional Protocol I uses the future of the verb *causer* ('*dont on peut attendre qu'ils causeront*'), which in the context has the same meaning as the slightly less grammatically correct Article 55 formulation ('*dont on peut attendre qu'ils causent*').

161 Y. Sandoz *et al.*, above note 139, para. 3479.

That the content of the knowledge required by Article 8(2)(b)(iv) of the ICC Statute is much narrower than the Additional Protocol I language is evident when one applies the provision to a controversial instance of wartime environmental damage occurring shortly after the ICC Statute was signed. On 17–18 April 1999, NATO intensively bombed a petrochemical plant, nitrogen-fertilizer-processing plant, and oil refinery at Pančevo on the eastern bank of the Danube river.¹⁶² As mentioned earlier, one of the severe environmental consequences was the leaking of large quantities of various toxic chemicals into the Danube. There can be little doubt that the bombing of the facilities *may have been expected to cause* (Additional Protocol I) serious environmental damage, or that the relevant military personnel were reckless as to whether it would cause such damage, but it is substantially more difficult to prove that they *in fact knew that the bombings would cause* (ICC Statute) serious environmental damage. Of course, in such situations one might be able to prove that the perpetrators knew that *some* environmental damage would occur, but the different elements of Article 8(2)(b)(iv) of the ICC Statute should not be read too independently: it is necessary that they *actually knew* it *would* cause the *widespread, long-term and severe* damage to the natural environment required before a breach of this provision can be established.

This interpretation of Article 8(2)(b)(iv)'s knowledge requirement, proffered on the basis of text itself and also of the commentaries to the identical terminology of Article 85(3)(b) of Additional Protocol I, seems most faithful to the intent of the ICC Statute's drafters, but also sets the bar very high. Some commentators have therefore argued that it should not be interpreted to refer to the (subjective) knowledge actually existing in the mind of the perpetrator at the relevant time, but instead, in the manner of the Additional Protocol I provision, merely the knowledge objectively, or at least constructively, available to him or her at that time. On the basis of the ICTY report regarding the NATO bombing campaign,¹⁶³ Dörmann suggests that the knowledge requirement be determined through an objective appreciation of the knowledge of the 'reasonable military commander' in the circumstances.¹⁶⁴ Support for this approach can be found in the constructive knowledge standard for command responsibility adopted by various decisions of the ICTY and codified, for command responsibility, in Article 28 of the ICC Statute.¹⁶⁵ However, importing this popular juridical device of reasonableness, principally used to identify objective standards of conduct for negligence claims in common law systems, through the international criminal provisions on command responsibility for the separate issue of wartime environmental damage cannot, in

162 See above note 17 and text thereto.

163 ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia*, 13 June 2000, para. 22, available at: <http://www.icty.org/x/file/Press/nato061300.pdf> (last visited 20 September 2010).

164 K. Dörmann, above note 153, p. 176.

165 See ICTY, *Prosecutor v. Delalic et al.*, Case No. IT-96-21-T, Judgment of 16 November 1998, para. 393; affirmed in *Prosecutor v. Delalic et al.*, Case No. IT-96-21-A, Judgment of 20 February 2001, para. 238; ICC Statute, Art. 28. See further Eugenia Levine, 'The *mens rea* requirement', in *Global Policy Forum*, February 2005, paras. 45–58.

the present author's view, be supported either by the text of the Statute read in its historical context or the relevant note in the Elements of Crimes document. Footnote 37 of the latter document somewhat confusingly states that '[a]n evaluation of that value judgement must be based on the requisite information available to the perpetrator at the time', which appears to fuse the two poles by suggesting that the Court consider the perpetrator's actual knowledge to see if the value judgement was made, but test the veracity of his evidence about that subjective judgement through consideration of the objective knowledge available to him or her at the time.¹⁶⁶ How such requirements would apply in practice will remain unclear at least until we obtain a more authoritative interpretation of it, preferably from the ICC itself.¹⁶⁷

How it is in fact interpreted will clearly have important consequences, but it is more likely than not that the ICC will adopt a restrictive interpretation of the knowledge requirement along the lines of the textual interpretations of Drumbl and Schmitt, who both claim that in the absence of proof beyond reasonable doubt that the defendant had actual knowledge that the act would cause widespread, long-term, and severe damage, he or she would, under the present wording, not be able to be convicted.¹⁶⁸

This has significant implications for the enforcement of the rule against wartime environmental damage in the International Criminal Court. Indeed, it has been well reported that the ICTY Prosecutor opted not to pursue members of the NATO force under applicable ICTY provisions partly because of likely difficulties in obtaining the evidence from the Pentagon that would ultimately be sufficient to prove beyond reasonable doubt that NATO forces actually knew the bombing of the installations at Pančevo and other places could have such environmental consequences.¹⁶⁹ On the other hand, responsibility of the state that caused the environmental damage in such situations is likely to follow from Additional Protocol I or even the ENMOD convention so long as the act itself can, from an objective point of view, be seen as potentially causing widespread, long-term, and severe environmental damage. The key question from a policy point of view is whether the individual criminal responsibility should also attach to intentional acts that a reasonable person could have expected to cause such severe environmental damage.

International environmental law, like its domestic counterpart, very occasionally imposes strict liability in respect of certain environmental offences

166 Elements of Crimes, above note 119, p. 132, footnote 37.

167 None of the cases currently before the ICC involve a charge under either limb of Article 8(2)(b)(iv) of the ICC Statute, the only provision containing this particular 'knowledge of facts'-style requirement.

168 Mark A. Drumbl, 'Waging war against the world: the need to move from war crimes to environmental crimes', in *Fordham International Law Journal*, Vol. 22, 1998, p. 130. Michael N. Schmitt, 'Humanitarian law and the environment', in *Denver Journal of International Law and Policy*, Vol. 28, No. 3, 2003, pp. 265 and 281.

169 See ICTY, above note 163, in particular paras. 21–25. See also D. Bodansky, above note 89.

causing environmental damage.¹⁷⁰ In simple terms, strict liability means that a defendant may be legally liable even where mental elements such as intention to commit the offence or knowledge that the offence was being committed cannot be proven. However, in all of the few instances in which international environmental law operates on a strict liability basis, the prescribed penalties are rarely severe and do not include the incarceration that flows from a conviction under the ICC's war crimes provision. Indeed, as explained above, international environmental law does not yet have the notion of criminal sanctions for breaches of its rules, so has never formulated rules and principles to establish whether and on what bases an international environmental law offence may attract individual criminal responsibility. The domestic environmental policy and law of many jurisdictions has, on the other hand, been known to prescribe civil, administrative, and criminal penalties. However, it should be noted that criminal penalties, despite their growing popularity in certain parts of the world, still constitute the exception for breaches of domestic environmental law and, if part of a regime, tend only to apply to the most egregious breaches and subject to a host of conditions. While there are many examples of strict (or absolute) liability offences in domestic environmental law systems, very few prescribe criminal penalties on a strict liability basis. A quick review of the US *Clean Air Act* shows that criminal offences must be committed 'knowingly' or 'negligently', while Australian states have many strict liability civil environmental laws and many strict and absolute liability criminal offences, but few, if any, strict liability criminal environmental offences. European jurisdictions also insist on intent or negligence: Sweden's Environmental Code, for example, prescribes criminal penalties including imprisonment for broadly defined acts of environmental nuisance where they were committed 'deliberately or through negligence'.¹⁷¹

It can be concluded that neither international environmental law, nor its somewhat more developed domestic counterparts, have a general policy imposing criminal liability for any acts of environmental damage without the protection of the *mens rea* defences. Clearly, in venturing into the terrain of criminal law, with its potentially harsher penalties, environmental law yields to the long-established policy considerations of criminal law and respects its fundamental principles. Even from a domestic environmental law perspective, therefore, it is far from surprising to see the international rules on wartime environmental damage with criminal implications qualified by the mental elements of intention and knowledge. What is somewhat more difficult for international environmental lawyers to comprehend is the next element of the ICC war crimes provision on environmental damage, the proportionality requirement.

170 See e.g. *Convention on International Liability for Damage Caused by Space Objects*, opened for signature 29 March 1972, 961 UNTS 187, entered into force 1 September 1972, available at: <http://www.oosa.unvienna.org/oosa/SpaceLaw/liability.html> (last visited 7 September 2010). See further A. Boyle, above note 26.

171 Swedish Environmental Code, adopted 1998, entered into force 1 January 1999, Part Six 'Penalties', Chapter 29, 'Penalty provisions and forfeiture', Sections 1–4.

The proportionality 'defence'

The environmental damage provision of the ICC Statute does not simply require an act causing widespread, long-term, and severe damage to the natural environment, an intention to commit that act, and knowledge that it would cause that damage, but also demands that such damage is 'clearly excessive in relation to the concrete and direct overall military advantage anticipated'.¹⁷²

On the one hand, it seems justifiable that a further requirement be introduced to distinguish the more serious criminal offence from the violation of humanitarian law. However, compared to the parallel Additional Protocol I provisions, the ICC Statute already contains a stricter causality and a more demanding knowledge requirement (see sub-sections above). Providing, in addition, a very open proportionality requirement that, through its link to an 'overall military advantage anticipated', effectively amounts to a wide defence of necessity seems to give perpetrators yet another way to avoid the application of a provision that, in light of the analysis undertaken in the previous five sub-sections, it already appears extremely difficult to apply to many instances of intentional wartime environmental damage.

This proportionality requirement-cum-defence, like other elements of Article 8(2)(b)(iv) of the ICC Statute seems to have its origins in provisions relating to its other limb, civilian damage, including Additional Protocol I's Article 51. Indeed, the proportionality requirement in relation to civilians dates from a UK claim in relation to the 1938 Spanish Civil War.¹⁷³ A consequence of the ICC Statute's combination of civilian damage and environmental damage into the one provision therefore appears to be that proportionality with a military advantage has, for what appears to be the first time in any international instrument relating to wartime environmental damage, become a defence for any perpetrator of such damage. This defence is one of the most enduring elements of classical international humanitarian law, having featured prominently in the aforementioned Lieber Code, which was so expansive in its definition of the defence that it was sometimes construed as a licence to contravene the laws of war.¹⁷⁴ Yet, as Carnahan notes, the Lieber Code's necessity defence is increasingly seen as out of sync with contemporary international humanitarian law norms that protect the civilian population and the environment, and is 'widely regarded today as an insidious doctrine invoked to justify almost any outrage'.¹⁷⁵

In this context, one can understand the 'astonishment' expressed by Allain and Jones in response to the inclusion of what is in effect a defence of military

172 ICC Statute, Article 8(2)(b)(iv).

173 ICTY, Trial Chamber, *Prosecutor v. Kupreskic et al.*, Judgment of 14 January 2000, para. 524.

174 It should be noted that Article 14 of the *Lieber Code*, above note 57, also combines into one provision the linked elements of necessity and proportionality: '... indispensable for securing the ends of war [necessity] and lawful according to the modern laws of war [proportionality]'. See further Burrus M. Carnahan, 'Lincoln, Lieber and the laws of war: the origins and limits of the principle of military necessity', in *AJIL*, Vol. 92, No. 2, 1998, pp. 213–231.

175 B. M. Carnahan, above note 174, p. 230.

necessity, which they argue ‘runs counter to ... the whole spirit of the times, which recognises that the infliction of such damage on the natural world cannot be tolerated in any circumstances’.¹⁷⁶ The ICRC authors of a study on the elements of ICC crimes, on the other hand, claim that this result was not only intended but indeed reflects the *opinio juris* of the international community as regards wartime environmental damage.¹⁷⁷ This view is supported by authoritative pieces of evidence including the ICJ’s *Nuclear Weapons* Advisory Opinion, which, as Freedland points out, declined to promote the protection of the environment above questions of military necessity,¹⁷⁸ by urging that environmental considerations be taken into account ‘when assessing what is necessary and proportionate in the pursuit of legitimate military objectives’.¹⁷⁹ A General Assembly Resolution on the ‘Protection of the environment in times of armed conflict’ provides further support to this claim as it also makes this link, speaking of environmental destruction that is ‘not justified by military necessity and carried out wantonly’.¹⁸⁰

In terms of the precise meaning of the Article 8(2)(b)(iv) of the ICC Statute proportionality requirement, it should be noted that it goes further than Article 51(5)(b) of Additional Protocol I (and other instruments using identical wording)¹⁸¹ by adding the word ‘overall’ to the ‘concrete and direct military advantage anticipated’ and the word ‘clearly’ to the requirement that the damage be ‘excessive’. There are no other international legal sources using the precise phraseology of the ICC Statute, so these slightly different terms were not simply borrowed but rather reflect a specific effort at the Rome Conference to expand the defence of proportionality with a military objective. Indeed, whereas some delegations at the Geneva Conference (such as Australia, New Zealand, Germany, and Canada) considered the addition of the word ‘overall’ a mere improvement on the drafting of the Additional Protocol I provision, several delegations worried that it would allow the long-term advantages of winning the war *per se* to be taken into account. Solf’s use of the word ‘overall’ in his analysis of Article 52 of Additional Protocol I implies consideration of the entire military operation as a whole rather than the specific military objective.¹⁸² Following his logic, the word overall would enable the application of the defence of proportionality to a situation such as the

176 Jean Allain and John Jones, ‘A patchwork of norms: a commentary on the 1996 Draft Code of Crimes against the Peace and Security of Mankind’, in *European Journal of International Law*, Vol. 8, No. 1, 1997, p. 115.

177 K. Dörmann, above note 153, pp. 171–176.

178 Stephen Freedland, *Human Security and the Environment: Prosecuting Environmental Crimes in the International Criminal Court*, paper presented at the 12th Annual Conference of the Australian and New Zealand Society of International Law, Canberra, Australia, 18–20 June 2004, p. 7.

179 ICJ, *Legality of the Threat or Use of Nuclear Weapons*, above note 31, para. 30.

180 General Assembly Resolution 47/37 of 25 November 1992.

181 Terminology copied in the *Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices (Protocol II)*, 1342 UNTS 168, 19 ILM 1529, entered into force 2 December 1983; as amended 3 May 1996, 35 ILM 1206.

182 Waldemar A. Solf, ‘Article 52: general protection of civilian objects’, in Michael Bothe, Karl Josef Partsch, and Waldemar A. Solf (eds), *New rules for Victims of Armed Conflicts*, Martinus Nijhoff Publishers, The Hague, 1982, p. 324.

Allied bombing campaign in the Pas de Calais, which was unnecessary in the specific sense, but necessary as part of the overall purpose of distracting German forces from the Allies' subsequent landings on the beaches of Normandy.¹⁸³

The more significant way in which Article 8(2)(b)(iv) of the ICC Statute expands the proportionality defence is through the addition of the word 'clearly' before 'excessive'.¹⁸⁴ After all, almost any defendant coming before the Court, having intrinsically launched an attack in an international armed conflict, is likely to plead the defence of proportionality with his or her army's military objectives. One might suggest that it would be a brave court indeed who would go so far as to say that actions were 'clearly excessive' (*manifestement excessifs*' in the French version) to the military advantage described.

In this regard, Weinstein directs our attention to what she calls 'the only case in history where military necessity was balanced against environmental damage':¹⁸⁵ the Nuremberg Tribunal's prosecution of the Austrian general Lothar Rendulic in *US v. Wilhelm List & Ors* (1948).¹⁸⁶ Rendulic was not found guilty in relation to scorched earth offences in Norway on the basis of military necessity, even though the necessity did not exist in fact but only in Rendulic's mind – he had proceeded from the false assumption that the Russians were advancing. Far from providing a narrower interpretation of a defence that, it must be recalled, did not use the wider phrase 'clearly excessive', this decision merely serves to show just how broad even the unexpanded defence is, so much so that it probably even extends to subjectively determined necessity rather than objective necessity.

A brief consideration of the two main instances of wartime environmental analysis that sparked the international community's desire to prohibit attacks against the environment – US actions in Vietnam and Iraq's actions in Kuwait – further demonstrates the considerable breadth of this defence. If a US general who had directed the spraying of defoliants over vast tracts of Vietnamese territory were tried under such a provision, he would be likely to point to the US military's need to remove the jungle cover exploited against it by Vietcong fighters. Would a court be able to determine that the damage caused to the foliage, most of which subsequently grew back, was *clearly excessive* to the military advantage obtained by pursuing this objective? It would seem equally difficult in relation to the Iraqi forces who supposedly ignited oil wells to create a smoke cover against US aircraft and jettisoned millions of barrels of oil into the Persian Gulf to obstruct US naval movements. Given that the environmental consequences of these actions were not, for a variety of reasons, as catastrophic as they perhaps could have been, could a court determine them to have been *clearly excessive* in relation to Iraq's

183 *Ibid.*, p. 325.

184 Whether the damage was excessive in the context is to be judged, according to footnote 37 included by the PrepCom in its Elements of Crimes document (above note 119), on the basis of the information available to the perpetrator at the time of his or her decision to launch the attack (i.e. whether the disproportionality was foreseeable).

185 T. Weinstein, above note 118, p. 697.

186 'The Hostages Trial (Wilhelm List and Others)', in *Law Reports of Trials of War Criminals*, Vol. 8, 1948, pp. 66–69.

aforementioned military objectives? Indeed, it would seem enormously difficult to imagine a situation in which a court would definitely deem the environmental damage caused clearly excessive to the overall military advantage anticipated.

The likely willingness of any future defendants to invoke this defence and insist upon the importance of the military objective being balanced against the environmental damage caused is reflected in the public relations statements made even by those potentially not even subject to the Court's jurisdiction in relation to well-known instances of wartime environmental damage. On 14 July 1999, the *New York Times* quoted a NATO spokesperson as saying in relation to the incident at Pančevo:

NATO had two types of targets. There were tactical and strategic targets. The oil refinery in Pančevo was considered a strategic target. It was a key installation that provided petrol and other elements to support the Yugoslav army. By cutting off these supplies we denied crucial material to the Serbian forces fighting in Kosovo. *When targeting is done, we take into account all possible collateral damage, be it environmental, human or to the civilian infrastructure. Pančevo was considered to be a very, very important refinery and strategic target, as important as tactical targets inside Kosovo.*¹⁸⁷

Importantly for the purposes of the present article, the proportionality-cum-necessity defence in Article 8(2)(b)(iv) of the ICC Statute brings into focus the different perspectives taken on the problem of wartime environmental damage by the different branches of public international law. By demanding that the environmental damage caused be balanced against the overall military advantage obtained, this provision provides a classic example of how horizontal conflict between separate subsystems of international law and international relations can occur. Two different value structures are, in effect, being played off against each other: the objective of preventing environmental damage on the one hand, and, on the other, the humanitarian law philosophy of accepting all aspects of armed conflict necessary for the conduct of hostilities.

Balancing international environmental law and international humanitarian law values

Problems also arise when one considers who undertakes this balancing act, where, and in what context. In an ideal world, the environmental damage would be assessed within the bounds of and according to the principles of international environmental law, while the overall military advantage would be apprehended in the international military law or humanitarian law fields used to dealing with such questions. Yet the balancing act must be undertaken by one court or tribunal and

187 Chris Hedges 'Serbian town bombed by NATO fears effects of toxic chemicals', in *New York Times*, 14 July 1999, emphasis added. See also UNEP and United Nations Centre for Human Settlements (Habitat), above note 144, p. 32.

one group of decision-makers likely to have the same areas of expertise. With little doubt, a peace-loving environmentalist would place greater weight on the environmental damage and lesser importance on the overall military advantage than a military lawyer or even an international humanitarian lawyer, who might see destruction of the natural environment to fulfil a military objective as more necessary than reasonably available military alternatives that might involve, for example, grave restriction of the rights of enemy non-combatants. Of course, in the case of wartime environmental damage, it would be the ICC that would have to mediate between the values of different fields of international relations and the distinct approaches of different areas of public international law. Could this pose problems from the perspective of international environmental law?

International environmental law is, for the various reasons stated above, quite accustomed to decision-makers from 'foreign' subsystems of international law measuring the importance of an environmental objective against the philosophy of another branch of international law. Indeed, much of the trade and environment debate that briefly became so characteristic of inter-subsystem interaction grew out of the extraordinary interest shown within environmental circles for the WTO's *Shrimp-Turtle* case.¹⁸⁸ In that case, the first panel had in general terms found that an extra-territorial environmental measure undermined the structure of the multilateral trading system and could therefore not come within the general exceptions of Article XX of the General Agreement on Tariffs and Trade (GATT). This jurisprudence was overturned on appeal to the Appellate Body, who set out a more balanced approach, less heavily biased in favour of trade values. However, the fact remains that non-trade values, including environmental values, continued to be weighed against trade values in WTO adjudicatory bodies, panels, and an Appellate Body composed most commonly of experts in trade law supported by secretariat staff again more comfortable with the highly specialized area of international trade law than with general international law or the details of other, particularly non-economic, subsystems of international law.

Parts of the tests in the general exceptions in GATT, Article XX are analogous to the necessity defence for wartime environmental damage. Indeed, according to the WTO jurisprudence under GATT, Article XX(b), the importance of the public policy goal sought by a government measure will be weighed and balanced against various factors, including, most significantly, the trade restrictiveness of the measure.¹⁸⁹ Recently, the WTO Appellate Body has focussed on the *necessity* of the measure and in doing so has asked the parties taking the measure to protect the environment to prove that there was not a less trade-restrictive

188 See WTO Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WTO Appellate Body Report of 12 October 1998, WT/DS58/AB/R.

189 See Gabrielle Marceau and Julian Wyatt, 'Trade and the environment: the WTO's efforts to balance economic and sustainable development', in Rita Trigo Trindade, Peter Henry, and Christian Bovet (eds), *Economie environnement éthique: De la responsabilité sociale et sociétale. Liber Amicorum Anne Petitpierre-Sauvain*, Schulthess, Zurich/Basel/Geneva, 2009, pp. 225–235.

alternative available.¹⁹⁰ As general international law on proportionality and necessity reveals,¹⁹¹ such a less restrictive alternative approach is a logically appealing way of dealing with an evaluation of necessity or ‘excessiveness’ and could easily be used by the ICC considering a plea that wartime environmental damage was not clearly excessive to the overall military advantage obtained. If the WTO law or general law approach to necessity were followed at the ICC, the prosecutor’s pleadings would then have to suggest ways in which the overall military advantage could have been obtained with a lesser impact on the environment. While this seems to open up a new route toward eventual conviction, the evidentiary complications are patent, further restricting the likelihood of criminal sanctions for a military officer who engaged in wartime environmental damage.

Of course, there is always the chance that the judges on the International Criminal Court will respond well to the delicate balancing-of-interests tasks vested in them by this ICC rule on environmental damage. Indeed, some environmental law commentators have praised the environmental contribution of the WTO Appellate Body, at least in a notable period in which it had some prominent general international lawyers with wide-ranging experience in different fields of public international law sitting on its bench.¹⁹² Yet, the danger remains that as part-environmental-law cases move into courts and tribunals with their own ideologies and special areas of expertise, the distinct international environmental law philosophy will eventually be drowned out, never to resurface.¹⁹³

Ultimately, from an international environmental law perspective one must ask the question of whether it is better to have environmental rules enforced by another subsystem’s court or tribunal on the basis largely of that other subsystem’s philosophy or, alternatively, for them not to be enforced at all. In the absence of any proprietary international environmental law court, tribunal, or enforcement structure, should this field of international law really react negatively to the fact that other subsystems are taking a keen interest in environmental protection and bringing their greater institutional force to bear in order to achieve greater compliance with international law principles? After all, we have already seen how international humanitarian law has effectively reached out to the more closely related, but at the same time distinct, field of international criminal law in the hope that a different set of remedies may improve compliance with its rules. Along the

190 WTO Appellate Body Report, *Brazil – Measures Affecting Imports of Retreaded Tyres (DS 332)*, 3 December 2007, para. 171. See also WTO Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services (DS 285)*, 7 April 2005, para. 291. See further G. Marceau and J. Wyatt, above note 189, pp. 232–233.

191 See e.g. ICJ, *Gabčíkovo-Nagymaros case*, above note 46, para. 55, where the Court suggested alternative means by which Hungary could have protected its environmental concerns without abandoning the joint works.

192 See Steve Charnovitz, ‘The WTO’s environmental progress’, in *Journal of International Economic Law*, Vol. 10, No. 3, 2007, pp. 685–706.

193 See J. Wyatt, above note 6. See also Tomer Broude, *Fragmentation(s) of International Law: On Normative Integration as Authority Allocation*, paper delivered at the International Law Review 2008 Symposium, 15 February 2008, esp. p. 5, available at: http://www.luc.edu/law/activities/publications/ilrsymposium/2008sym/broude_normative_integ_paper.pdf (last visited 20 September 2010).

way, sacrifices have been made. In order to fit in with the criminal law philosophy, which comes with penalties including incarceration, the combined system requires mental elements such as intention and knowledge before conviction. Of course, the fit between international humanitarian law and international criminal law is much better than those involving international environmental law and these branches, international humanitarian and international criminal law ultimately dealing with the same subject matter according to a predominantly shared set of values. However, it cannot be denied that, even in relation to problems overlapping with areas of international law with which it does not have any particular affinity, international environmental law may, in certain cases, be very well served by employing another subsystem's framework, particularly for the purposes of enforcement of its norms.

Perhaps on the basis of a recognition of this point, the majority of the criticism of what are essentially international humanitarian law and international criminal law instruments regulating wartime environmental damage is focused not on the fact that the rules do not sit within a properly environmental structure and may potentially corrupt it, but on the fact that, from an environmental perspective, these rules do not go far enough.

Too strong or too weak a regime? From what perspective?

All policy-makers and legislators are aware of the common irony of a new policy or rule going too far for one group of people and not far enough for another. In international law, this is often the response elicited by law-making efforts aimed at cross-sectoral problems, issues that traverse the bounds of different branches of international law and the divergent value structures that they represent. A review of the literature in relation to the international legal regime for wartime environmental damage, and the relevant ICC Statute provision in particular, is illustrative of this phenomenon. The following remarks constitute an attempt to evaluate the regime from not just one but the two different international law perspectives likely to be applied to this phenomenon.

Too weak a regime from the perspective of international environmental law?

In the contemporary world of international humanitarian law, individual criminal penalties, be they applied through state courts, *ad hoc* tribunals, or the ICC, are often seen as the best available method for safeguarding compliance with international humanitarian law norms. At first blush, therefore, environmental campaigners should be delighted to see rules on wartime environmental damage that were previously not even part of the grave breaches regime elevated to the status of war crimes at the International Criminal Court. However, as the above analysis of the elements of Article 8(2)(b)(iv) of the ICC Statute and how they would apply to classic examples of intentional wartime environmental damage has shown, the

scope of this rule's application is extremely limited. Indeed, with the high threshold requirements for the damage caused, the complex knowledge requirement, and the specially enhanced and thus overly available proportionality/necessity defence, one may wonder, with Heller and Lawrence, whether it is even possible to convict someone under this ICC provision for wartime environmental damage¹⁹⁴ – all the more when one considers that we must strictly construe any definition of a crime without extending it by analogy and, in the case of ambiguity, by leaning towards the interpretation favourable to the person being prosecuted.¹⁹⁵ Arguably, any military act capable of falling within the ambit of Article 8(2)(b)(iv) of the ICC Statute would be so severe and inexcusable that it would probably fall within the ambit of other international crimes anyway.

ICC Statute, Article 8(2)(b)(iv) may have appeared to commentators at first sight to be a ground-breaking gain for protection of the environment in armed conflict, but seems on closer inspection to be but a mirage, unlikely ever to play a role in addressing the problem of intentional wartime environmental damage through international criminal prosecution. Indeed, a contributor to this *Review* arrived at a very similar conclusion ten years ago,¹⁹⁶ even before the United States had effectively taken such a large chunk out of the ICC's jurisdiction by signing so-called 'Article 98 agreements' with more than 100 different states.

Yet steps in any new and worthy direction, even if they are only very small, should nonetheless be lauded. After all, supporters of environmental causes and international environmental lawyers should themselves be all too aware of the difficulties involved in progressing rapidly toward hard, far-reaching international law on a new topic. Arguably, if the international environmental law movement had already reached a higher stage of development and formed a stronger institutional structure, a farther-reaching norm might have been adopted at the Rome Conference. It is all too easy for diplomats to hold the mirror up to the weaknesses of another field and areas of that field that have not been regulated as an excuse for inaction or only the smallest of steps. Such temptation was resisted in relation to wartime environmental damage, the criminalization of which must therefore, in the present author's view, be seen as the passing of a new frontier for international environmental law. No other area of this discipline even comes close to such severe consequences as incarceration for the breach of the terms of an environmental treaty or for international acts that damage the natural environment. Treaties such as the Basel Convention declare certain acts illegal but provide no enforcement measures, merely making a vague call to state parties to use domestic measures to

194 Jessica C. Lawrence and Kevin Jon Heller, 'The limits of Article 8(2)(b)(iv) of the Rome Statute: the first ecocentric environmental war crime', in *Georgetown International Environmental Law Review*, Vol. 20, No. 1, 2007, p. 62.

195 ICC Statute, Art. 22(2).

196 Thilo Marauhn, 'Environmental damage in times of armed conflict: not "really" a matter of criminal responsibility?', in *International Review of the Red Cross*, No. 840, 2000, p. 1036.

enforce Convention rules.¹⁹⁷ Even the Additional Protocol I provisions on wartime environmental damage should be lauded because they sit in a relatively small group of international environmental law rules by which a state can be held responsible for damage it caused even if such damage was not specifically intended, subjectively foreseeable, or reckless.

Viewed in the context of the present state of international environmental law, therefore, the criminalization of wartime environmental damage, far from not going far enough, may actually seem to have gone too far. Is it really right, from a legal policy point of view that the crew of a ship that disgorges toxic waste into the high seas, or the director of a company that takes the decision to pollute an international watercourse, should not necessarily be sent to prison, while a military commander, whose *raison d'être* is to inflict harm on his enemies, may end up spending time in prison on the basis of the incidental environmental harm that his military activities caused?

In a field such as international environmental law, where the guiding objective is greater protection of the environment by painting new international legal rules on a still relatively empty canvas, any new environmental norms will be welcomed irrespective of any apparent imbalances they may seem to create or contradictions of notions of basic fairness they may seem to engender. Indeed, it is the nature of international law that some branches of the domain are better regulated and better enforced than others, so international environmental law – many aspects of which depend on different branches – will inevitably be somewhat uneven in terms of how it seeks to protect the environment at the international level. The inevitably haphazard pattern of international law-making ensures that international law cannot follow the legal policy paradigm typical of domestic legal systems, pursuant to which the weight of legal sanction rises in tandem with the seriousness or public policy importance of the breach or offence. Such inconsistency is unavoidably more prevalent in branches of international law devoid of a strong internal structure and also in those domains whose norms are more likely to overlap with those of other areas of international law.

Ultimately, whether an international environmental lawyer considers that the criminalization of wartime environmental damage goes too far or not far enough will depend on his or her preparedness to accept, in the interests of the advancement of law-making in this still young subsystem of international law, both a new, yet limited and imperfect international environmental rule and also a patent lack of evenness regarding what activities within the discipline's scope are in fact regulated.

However, it is submitted that such inequities in what activities are regulated and not regulated will be less acceptable to those accustomed to branches of international law that do not typically rely on somewhat sporadic and often

197 *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, opened for signature 22 March 1989, 1673 UNTS 57, 28 ILM 657 (entered into force 5 May 1992), Art. 4, paras. 3 and 4.

fragmented treaty-making efforts, nor on the institutional support of a wide range of other branches of international law. International humanitarian law is one such system and it is therefore important to consider whether, from this field's perspective, the criminalization of wartime environmental damage creates a similar degree of unevenness as it appears to in the context of international environmental regulation.

Too strong a regime from the perspective of international humanitarian/international criminal law?

Employing the same method as we used for our evaluation of the legal regime for environmental damage in armed conflict from an international environmental law perspective, we should now consider it in relation to other violations of international humanitarian law on a separate international humanitarian law/international criminal law scale. In somewhat less scientific terms, the key question is whether it is even appropriate that an individual military commander can potentially be held personally liable for damage to the environment or whether individual criminal liability should instead be restricted to egregious acts carried out directly against human beings, such as genocide and torture. In this light, one might argue that by criminalizing wartime environmental damage, the ICC Statute, far from not going far enough on account of its restricted scope and effectiveness, actually goes too far.

The preamble of the ICC Statute speaks of 'unimaginable atrocities that deeply shock the conscience of humanity' and affirms that the 'most serious crimes of concern to the international community as a whole must not go unpunished'.¹⁹⁸ Some authors have even set out specific, numbered conditions that must be met before the violation of a norm is capable of becoming an international crime.¹⁹⁹

Above, we saw how the ICC Statute provides a very broad definition of, among other things, crimes against humanity and war crimes over which the Court has jurisdiction. In discussing terrorism, one of the crimes not included in the ICC Statute, Professor Antonio Cassese, the first President of the ICTY, notes that the ICC Statute was intended only to include crimes that are, among other things, considered by the international community to be serious enough, in terms of their scale of effects and intensity, to warrant prosecution by an international tribunal.²⁰⁰

However, a substantial portion of doctrine does not stop at a factual consideration of the seriousness of the violation. Many argue that more formalistic requirements must be met for a norm of international law, including of international humanitarian law, to be criminalized. In a separate publication, Cassese argues that, even for a 'serious' violation of international humanitarian law to

¹⁹⁸ ICC Statute, Preamble.

¹⁹⁹ Prabhu, for example, sets out five such features: Mohan Prabhu, 'General report on crimes against the environment', in *International Review of Penal Law*, Vol. 64, 1994, p. 703.

²⁰⁰ Antonio Cassese, 'Terrorism is also disrupting some crucial legal categories of international law', in *European Journal of International Law*, Vol. 12, No. 5, 2001, pp. 993–994.

become a war crime, it is necessary that there is proof that the violation has been criminalized by the jurisprudence of either relevant national courts or international courts and tribunals.²⁰¹ René Provost argues that there must be consensus on the fact that the given breach will incur the individual penal responsibility of its author,²⁰² while Georges and Rosemary Abi-Saab seem to go the farthest of all, by setting out an arduous double formation test akin to that generally considered to be necessary for the establishment of customary *jus cogens* norms:

En fait, pour que la violation d'une règle du *jus in bello* ait l'effet spécial d'engager la responsabilité pénale individuelle, il faut établir non seulement l'existence de la règle violée en droit international, mais également l'existence d'une règle secondaire, normalement coutumière, qui attribue à la règle cet effet spécial.²⁰³

These two authors, who appear to be desirous of maintaining the integrity of the international criminal law system, then go on to express concern that the drafters of the ICC Statute, who were appointed merely to set up an institution and not to codify substantial law, in fact promulgated the existence of war crimes beyond the scope of those established as criminal in customary international law.²⁰⁴ The prohibition of wartime environmental damage is of course one prominent example of this phenomenon.

However, there are equal numbers on the other side, who consider it far from inappropriate that a group of national representatives may agree on provisions of international criminal law and have praised the ICC drafters' willingness to move faster than a customary international law to criminalize such acts as sexual offences and, of course, wartime environmental damage. For example, Provost argues that both the nature of environmental norms and the ineffectiveness of the state-responsibility-based regime to address the problem of wartime environmental damage justifies the criminalization of this prohibition,²⁰⁵ while Steven Freeland is considerably more robust in his support for the criminalization of the norm, noting that the ICC was set up for the 'deterrence and punishment of the most serious international crimes' and then claiming that '[t]he deliberate destruction of the environment for strategic and military purposes, with its disastrous consequences for human populations, clearly falls within this description'.²⁰⁶

201 Antonio Cassese, *International Criminal Law*, 2nd edition, Oxford University Press, Oxford, 2007, pp. 84–86.

202 R. Provost, above note 134, p. 440.

203 'In fact, for a violation of a *jus in bello* rule to have the particular consequence of engaging individual criminal responsibility, one must establish not only the existence of a violation of a rule of international law but also the existence of a secondary rule, normally customary, which attributes this particular consequence to a violation of that rule'. Georges and Rosemary Abi-Saab, 'Chapitre 21: les crimes de guerre', in Hervé Ascensio, Emmanuel Decaux, et Alain Pellet (eds), *Droit international pénal*, Pedone, Paris, 2000, p. 278 (present author's translation).

204 *Ibid.*, pp. 284–285.

205 R. Provost, above note 134, p. 442.

206 S. Freeland, above note 178, p. 12.

The critical question is thus a matter of one's philosophy or, more precisely, one's frame of reference. In keeping with one of the key points made by this article, it is generally the authors looking at the provision from an environmental or international environmental law perspective who see no problem with the criminalization of wartime environmental damage, while those who approach it from a classical international law or international humanitarian/international criminal law perspective will question whether the ICC Statute's drafters really should have gone this far.

Indeed, given that criminal prosecution may be one of the best ways of ensuring compliance with many important norms of international humanitarian law, one should be careful not to detract too much from its integrity. A fledgling system depends on strong international consensus that its goals, approaches, and specific rules are appropriate. In the case of international criminal law, this would mean that all war crimes, which have imprisonment as their chief consequence,²⁰⁷ should be sufficiently serious to warrant the major and politically controversial step of criminal prosecution of individuals in international courts. As Peter Sharp points out, 'There is a compelling argument to be made for not pushing too far too fast in trying to turn the International Criminal Court into more than its language clearly states. One must conserve political capital for the most urgent battles.'²⁰⁸

Given that the attacks in armed conflict causing widespread damage have only been prohibited in international humanitarian law since 1977 and do not appear to have yet crystallized into customary international law prohibitions, it would, in the present author's view, be inappropriate to suggest that all acts causing such damage should be subject to criminal prosecution. Indeed, most of the other violations criminalized by the ICC Statute, such as genocide, torture, and the taking of hostages, are well-established norms of customary law, which have even, in some cases, obtained the status of *jus cogens*. Returning to our scale of the seriousness of different international law violations, it is worth noting that many acts of terrorism²⁰⁹ and the hostile use of nuclear weapons do not as such attract international criminal liability under the ICC Statute.²¹⁰ While it may be debatable whether such acts should be considered as serious as wartime environmental damage in a contemporary world increasingly concerned about the degradation of the environment, such a comparison serves to show that, at least from an international humanitarian law perspective, the relevant criminal law provision analysed in detail above is perhaps justifiably narrow in its scope.

However, the contention that not all acts causing wartime environmental damage should be subject to prosecution in international criminal courts does not

207 ICC Statute, Art. 77.

208 P. Sharp, above note 105, p. 219.

209 For the reasons why terrorism as such was not included in the Rome Statute, see A. Cassese, above note 200, p. 994.

210 India's proposal in this respect at the negotiations of the Rome Statute was defeated. See Marlies Glasius, 'Expertise in the Cause of Justice: Global Civil Society Influence on the Statute for an International Criminal Court', in Marlies Glasius, Mary Kaldor and Helmut Anheier (eds), *Global Civil Society*, Oxford University Press, Oxford, 2002, p. 137.

require as a corollary the view that no such acts should entail this consequence. Evidently, some intentional acts causing environmental damage in the context of armed conflict are significantly more serious, inexcusable, and therefore deserving of international criminal consequences for their perpetrators than others. When one considers both the growing international appreciation of the need to protect the natural environment and the fact that the prohibition of wartime environmental damage is still a relatively new phenomenon not yet established in the codex of customary international law, the international legal order is best served by settling for a compromise position that criminalizes only the most egregious intentional military acts causing significant damage to the natural environment.

Whether or not the ICC Statute correctly draws the line between those acts against the environment that are sufficiently serious to warrant criminalization and those that are not is something that can only be determined if and when we have jurisprudence from the ICC that authoritatively interprets the precise scope of Article 8(2)(b)(iv) of the ICC Statute. In the meantime, it is submitted on the basis of the analysis conducted in this article, that Article 8(2)(b)(iv) of the ICC Statute should not be criticized either for going too far by criminalizing wartime environmental damage or for not going far enough by imposing several demanding conditions that must be satisfied if a charge is to be sustained. Instead, one should appreciate that, when viewed from each of the two separate perspectives applicable to this matter – environmental law and the law of armed conflict – this limited, but nonetheless significant, step towards the criminalization of wartime environmental damage (as a corollary to existing, less demanding Additional Protocol I and ENMOD rules entailing the international responsibility of the offending state) may indeed strike the right balance between the need to protect the environment and the importance of maintaining the integrity of international humanitarian and international criminal law.

Conclusion

This analysis of wartime environmental damage, a phenomenon that sits squarely at the intersection of two separate branches of international law, serves to show a number of things about the international legal regulation of properly cross-sectoral problems. By missing the opportunity to define in any great detail both (a) the particular type of causal link required for all of the relevant rules between the act and the environmental damage; and (b) the precise contours of widespread, long-term, and severe damage, the negotiators of the relevant texts missed an opportunity to rely on the expertise of and consensus obtained in another (here environmental) field of international law to give their provisions greater clarity. This points to the potential pitfalls of remaining too closely associated with one particular branch of international law while formulating a cross-sectoral norm. By attaching a severe consequence to certain violations of the norm – the criminal penalty of imprisonment for war crimes – the wartime environmental damage example also shows how cross-sectoral problems may tap into the stronger

enforcement structure of one system, yet simultaneously create concern in the other system about the ‘functional neutrality’ of how that stronger system will enforce (and therefore more authoritatively interpret) the shared norm.

Most of all, however, this example shows that the increasing ‘complexification’ and specialization of contemporary international law,²¹¹ with the concomitant isolationist tendencies of practitioners of its different branches, creates real problems for the proper evaluation of cross-sectoral norms. The example of wartime environmental damage, especially since its criminalization by the ICC Statute, shows that international law scholars should always endeavour to analyse the growing number of cross-sectoral international law norms from a plurality of perspectives and evaluate them in the context of the objectives, principles, approaches, and norms of each relevant branch. It is a difficult and laborious task, but the complexity of modern international life and of contemporary international law demands it.

211 The notion of ‘complexification’ of the international legal order is drawn from Georges Abi-Saab, ‘Fragmentation or unification: some concluding remarks’, in *New York University Journal of International Law and Politics*, Vol. 31, No. 4, 1999, pp. 919–933.