United Nations A/CN.4/700

General Assembly

Distr.: General
3 June 2016

Original: English

**International Law Commission**
**Sixty-eighth session**
Geneva, 2 May-10 June and 4 July-12 August 2016

# Third report on the protection of the environment in relation to armed conflicts

**Submitted by Marie G. Jacobsson, Special Rapporteur**

## Contents



16-08605 (E) 280616

# I. General overview and developments concerning the topic

## A. Introduction*

1. At its sixty-fifth session, in 2013, the International Law Commission decided to include the topic "Protection of the environment in relation to armed conflicts" in its programme of work and appointed Marie G. Jacobsson as Special Rapporteur for the topic (A/68/10, para. 131).

2. The topic was included in the long-term programme of work in 2011. Consideration of the topic proceeded to informal consultations that began during the sixty-fourth session of the Commission, in 2012, and continued at the sixty-fifth session, in 2013, when the Commission held more substantive informal consultations. Those initial consultations offered members of the Commission an opportunity to reflect and comment on the road ahead. The Special Rapporteur presented a preliminary report (A/CN.4/674 and Corr. 1) at the sixty-sixth session, in 2014, on the basis of which the Commission held a general debate.[1]

3. The Special Rapporteur presented the second report (A/CN.4/685) at the Commission's sixty-seventh session, in 2015. The aim of the second report was to identify existing rules of armed conflict directly relevant to the protection of the environment in relation to armed conflicts. The Commission held a general debate on the basis of the report and decided to refer the draft principles contained in the report to the Drafting Committee, with the understanding that the provision on "use of terms" was referred for the purpose of facilitating discussions and to be left pending by the Drafting Committee at that stage.[2] The Drafting Committee examined the draft principles and provisionally adopted a draft text containing provisions on the scope and purpose of the draft principles, as well as six draft principles. The Commission was not requested to act on the draft principles, as they had been presented for informational purposes only.[3] The Commission took note of

* The Special Rapporteur expresses her deep gratitude for the instrumental support of the Cyrus R. Vance Center for International Justice and the Director of the Environment Program, Susan M. Kath. Special thanks go to Cleary Gottlieb Steen & Hamilton LLP for its invaluable contribution to the research for the present report. Henrik Slotte and David Jensen at the United Nations Environment Programme (UNEP) in Geneva continued to support the work and hence enabled consultations with UNEP. The Special Rapporteur is indebted to Amanda Kron of UNEP for her fundamental support in the preparation of the present report, and to Jeanique Pretorius, University of Pretoria, for her important contribution. The Special Rapporteur is also indebted to three interns, namely, Matilda Lindén, Anna Karlén and Ms. Julia Taavela, for their contributions. Special thanks also go to Professor Cymie R. Paine at Rutgers, The State University of New Jersey, and Carl Bruch, Co-Director at the Environmental Law Institute, for their support and cooperation in arranging the second international seminar on the topic in New York on 29 October 2015. Additional thanks go to participants at that seminar and the subsequent informal think tank meeting for sharing their knowledge and ideas, and to the Ministry for Foreign Affairs of Sweden and the Permanent Mission of Sweden to the United Nations in New York for their respective contributions, as well as to Nordic colleagues. Last but not least, thanks go to the librarians without whom the work could not have been done, namely Irina Gerassimova and Rachel Forman at the Palais des Nations, Geneva, and personnel at the Library of the Government Offices in Stockholm.

[1] A/69/10, paras. 192-213.

[2] A/70/10, para. 133. For a more comprehensive presentation of the debate, see summary records A/CN.4/SR.3227-3231.

[3] A/CN.4/L.870.

the draft introductory provisions and draft principles as presented by the Drafting Committee. It was anticipated that commentaries to the draft principles would be considered at the next session.[4]

4. The present report contains a brief summary of the debates held by the Commission in 2015 and by the Sixth Committee of the General Assembly during its seventieth session (2015). It also summarizes the responses from States with respect to specific issues that were identified by the Commission as being of particular interest to it.

## B. Purpose of the report

5. The main focus of the present report is to identify rules applicable in post-conflict situations.[5] It addresses legal aspects related to remnants of war and other environmental challenges. It also includes proposals on post-conflict measures, access to and sharing of information, and post-conflict environmental assessments and reviews. However, the report is not strictly limited to the post-conflict phase. In order to get an overview of the topic it will also address preventive measures, as only one draft principle thus far has been suggested with respect to that phase.[6] The report also includes a draft principle on the rights of indigenous peoples.

6. The report therefore consists of three sections. The first section summarizes the consultations in the Commission and reflects views expressed by States in the Sixth Committee at the seventieth session of the General Assembly. It also contains a substantive summary of the responses from States as a result of the invitation by the Commission to submit additional information.

7. The second section addresses rules of particular relevance applicable in post-conflict situations. It starts with general observations that include discussions on areas of law that are of particular relevance for the topic, such as the application of particular treaties on environmental law, and the rights of indigenous peoples. It also includes a section on access to and sharing of information, including the general obligation to cooperate.

8. The third section is a brief analysis of the three phases of the work conducted thus far. It also includes suggestions for the future programme of work.

9. The annex contains nine additional draft principles proposed by the Special Rapporteur.

### Method and sources

10. The work on this topic continues to operate on the assumption that the law of armed conflict is *lex specialis*. It follows that the law of armed conflict takes precedence over or possibly co-exists with other rules of international law.[7] In order to limit the discussions to this conventional legal postulation, the Special Rapporteur has decided not to address the ongoing academic discussions on the

[4] A/70/10, para. 134.
[5] A/CN.4/685, paras. 230 and 231.
[6] The text as provisionally adopted by the Drafting Committee is found in A/CN.4/L.870.
[7] See, for example, A/CN.4./674, paras. 5 and 6.

concept of *jus post bellum*. The legal-political discussion on this concept is wider than positive law and has a clear connection to just war theories.[8]

11. The more political dimensions of post-conflict peacebuilding are not discussed in the present report. If such a line were not drawn, this topic would have no temporal ending. As a consequence, matters relating to reconstruction and institution-building and strategies for the foundation for sustainable development and financing are considered to be beyond the scope of this topic.[9]

12. Managing land and water are two of the most important areas in the peacebuilding phase. These two areas almost deserve to become an agenda item of their own. It would take this topic too far to address these matters within the post-armed conflict phase beyond the immediate end of hostilities.[10] The protection of water in relation to armed conflict is not specifically addressed in this report as the report aims to examine the protection of the environment in relation to armed conflict more generally. Although the protection of water in relation to armed conflicts thus falls outside the scope of the report, it is an increasingly important topic which perhaps deserves the attention of the Commission in its own right.[11]

---

[8] *Jus post bellum* is the focus of a major academic project at Leiden University and much research material is available on its webpage, http://juspostbellum.com/default.aspx. See also Carsten Stahn, Jennifer S. Easterday and Jens Iverson (eds.), *Jus Post Bellum: Mapping the Normative Foundations* (Oxford, Oxford University Press, 2014), and Carsten Stahn and Jann Kleffner, *Jus Post Bellum: Towards a Law of Transition from Conflict to Peace* (The Hague, T.M.C. Asser Press, 2008).

[9] See www.un.org/en/peacebuilding/index.asp.

[10] For an excellent description of issues faced during the management of land and water in the peacebuilding phase, see Erika Weinthal, Jessica J. Troell and Mikiyasu Nakayama (eds.), *Water and Post-Conflict Peacebuilding* (New York: Earthscan, 2014) and Jon Unruh and Rhodri Williams (eds.), *Land and Post-Conflict Peacebuilding* (New York: Earthscan, 2013).

[11] See Mara Tignino, "The Right to Water and Sanitation in Post-Conflict Peacebuilding," *Water International* vol. 36 (2011), p. 241; Mara Tignino, "Water, International Peace and Security", *International Review of the Red Cross*, vol. 92, No. 879 (2010), p. 647, Mara Tignino, "L'eau et la guerre: éléments pour un régime juridique (Brussels: Bruylant, 2011); Mara Tignino, "Water Security in Times of Armed Conflict" in Hans Günter Brauch and others (eds.), *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (Berlin: Springer, 2009), pp. 726-740; Mara Tignino, "Water in times of armed conflict" in The International Bureau of the Permanent Court of Arbitration (ed.), *Resolution of International Water Disputes in Papers Emanating from the Sixth PCA International Law Seminar (8 November, 2002)* (The Hague, London, New York: Kluwer Law International, 2003), p. 319; Mara Tignino, "The right to water and sanitation in post-conflict legal mechanisms: an emerging regime?" in Erika Weinthal, Jessica J. Troell and Mikiyasu Nakayama (eds), *Water and Post-Conflict Peacebuilding* (New York: Earthscan, 2014), pp. 383-402; Mara Tignino, "Reflections on the legal regime of water during armed conflicts" (Paper presented at the Fifth Pan-European International Relations Conference, The Hague, 9-11 September 2004), available from www.afes-press.de/pdf/Hague/Tignino_LegalRegime_Water.pdf; Gamal Abouali, "Natural resources under occupation: the status of Palestinian water under international law", *Pace International Law Review*, vol. 10, No. 2 (1998), p. 411; Eyal Benvenisti, "Water conflicts during the occupation in Iraq", *American Journal of International Law*, vol. 97 (2003), p. 860; Théo Boutruche, "Le statut de l'eau en droit international humanitaire", *Revue internationale de la Croix-Rouge*, No. 840 (2000) p. 887; ICRC, *Water and War: ICRC Response*, (Geneva: ICRC, July 2009); Nikolai Jorgensen, "The protection of freshwater in armed conflict", *Journal of International Law and International Relations*, vol. 3, No. 2 (2007), pp. 57-96; *Water and War: Symposium on Water in Armed Conflicts (Montreux, 21-23 November 1994)* (Geneva: ICRC, 1995); Ameur Zemmali, "The Protection of Water in Times of Armed Conflicts", *Revue*

13. The work of the United Nations Environment Programme (UNEP) in strengthening national environmental management capacity in States affected by conflicts and disasters is critical for the understanding of post-conflict measures. UNEP has been called upon by the United Nations system and Member States to conduct impartial assessments of the environmental consequences of armed conflict. It has assessed the environmental aspects of armed conflicts and crises in numerous situations and has become increasingly more involved in post-conflict situations.[12]

14. As has been the case in the previous reports, the present report contains information on State practice based on the information received from States directly. Such information has been obtained through States' responses to questions posed by the Commission and their statements on the topic in the Sixth Committee of the General Assembly. In addition, the information has been obtained through official websites of States and relevant organizations. Such information is of a primary source character. Although such information is not comprehensive, it provides important information of relevance to the topic.

15. Obtaining State practice and practice of non-State actors in non-international armed conflict remains challenging.[13] In the second report, the Special Rapporteur therefore took the view that such information is certainly of interest even if it does not constitute "State practice" in the legal sense of the word. At the same time it was noted that the Commission's discussions in 2014 on the topic "Identification of customary international law" revealed a clear tendency within the Commission not to include practice by non-State actors as part of the concept of customary international law.[14] The Special Rapporteur also informed about the difficulties in obtaining information on practice by non-State actors. Yet some colleagues advised not to refrain from examining such practice and to take it into account.[15] It was argued that the decision not to address the practice of non-State actors in the context of the topic "Identification of customary international law" should not prejudice the work on the present topic. In the Special Rapporteur's summary of the debate it was recalled that attempts had been made to find such practice, but that it had been very difficult to find. The reason is that those actors that carry the knowledge of the practice of non-State actors are prevented from revealing the source of their knowledge and even the content of the practice. Very few examples are publicly available.[16] This is the case also with the information underpinning the present report — albeit with one important exception, namely, peace agreements.

16. The report also contains a section on relevant case law from primarily international and regional courts.

17. Some States and members of the Commission have referred to protection of the environment in situations of occupation. It should be recalled that situations of

---

*internationale de la Croix-Rouge*, No. 308 (1995), p. 550; Ameur Zemmali, "The right to water in times of armed conflict", in Liesbeth Lijnzaad, Johanna Van Sambeek and Bahia Tahziblie (eds.), *Making the Voice of Humanity Heard* (Leiden/Boston: Martinus Nijhoff, 2004), p. 307.

[12] There is a link between the UNEP Environmental Cooperation for Peacebuilding programme and peacebuilding in that the programme has been helping the United Nations system and Member States understand and address the role of the environment and natural resources in conflict and peacebuilding, but this will not be addressed in the present report.

[13] A/CN.4/685, paras. 8 and 9.

[14] Ibid., para. 8.

[15] See, for example, A/CN.4/SR.3265, comments by Mr. Tladi.

[16] See A/CN.4/SR.3269, statement by the Special Rapporteur.

occupation can vary greatly in length, from very short-term occupation lasting only a few days to long-term occupations lasting several years. Long-term situations of occupation are of particular relevance when the protection of the environment is considered. The decisions of numerous courts and tribunals confirm that the protection of property during belligerent occupation has indeed been applied in an environmental context.[17] Although the relevance of situations of occupation to the topic is noted, it is not specifically addressed in the present report, as the report aims to examine the protection of the environment in relation to armed conflicts in the post-conflict phase only. Although it is important to note that situations of occupation do often extend beyond the cessation of active military hostilities and that they may have implications for private property rights, situations of occupation are not only confined to the post-conflict phase of armed conflict. Compensation for breaches of the law of occupation may be linked to both compensation for a breach of a *jus ad bellum* rule and a rule that is connected with the obligation of the occupying power. There is a close correlation to private property rights. While not explicitly dealt with in this report, the protection of the environment in situations of occupation remains relevant to the topic.

18. The connection between the legal protection of natural resources and of the natural environment is partly addressed since States have made the connection in their statements in the Sixth Committee and reportedly in their national legislations and regulations.

19. The marine environment is specifically addressed since it poses somewhat different legal challenges than the land domain. This is partly due to the miscellaneous legal status of the sea, ranging from internal waters to the high seas. The legal protection of the marine environment is in reality weak, and belligerents cannot be held accountable for having been engaged in lawful military operations (*jus ad bellum*) unless they have violated the law of armed conflict (*jus in bello*). Hence, it is difficult to invoke liability and State responsibility. Yet remedial and restorative measures may need to be undertaken to ensure that remnants of war (e.g. explosive and chemical remnants, leaking wrecks) do not continue to destroy the marine environment and threaten the safety of human beings using the environment. International cooperation is essential.

---

[17] There are numerous cases dealing with this issue. For but a few examples see generall, *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda), Judgment, I.C.J. Reports 2005*; *Prosecutor v. Hermann Wilhelm Gőring et al* (1 October 1946) Trial of the Major War Criminals before the International Military Tribunal, vol. 1; *Prosecutor v. E. W. Bohle et al*. (19 April 1949) Trials of War Criminals Before the Nuremberg Military Tribunals Under Control Council Law No. 10, vol. XIV; *Prosecutor v. Mladen Naletilic aka: "Tuta", Vinko Martinovic aka "Stela"* (Trial Judgment), IT-98-34-T, 31 March 2003; *Corrie v. Caterpillar, Inc.,* 403 F. Supp. 2d 1019, 1023-27 (W.D. Wash. 2005) affirmed in 503 F.3d 974 (9th Cir. 2007). See also the reports of the Panel of Commissioners appointed by the Governing Council of the United Nations Claims Commission, contained in documents S/AC.26/2001/16, 2002/26, 2003/31, 2004/16, 2004/17 and 2005/10. As noted in the second report of the Special Rapporteur (A/CN.4/685, para. 74), the relevance of environmental considerations in relation to situations of occupation can also be seen in the military manual of the United Kingdom, which prohibits the extensive destruction of the natural environment unless it is justified by military necessity. See United Kingdom, *The Joint Service Manual of the Law of Armed Conflict* (Joint Service Publication 383, 2004 Edition), para. 11.91. Available from www.gov.uk/government/uploads/system/uploads/attachment_data/file/27874/JSP3832004Edition.pdf.

20. As is the case with previous reports, direct references to literature are strictly limited. A more extensive list of literature that has been consulted is found in annex II to the second report (A/CN.4/685). References to comments and analyses by authors that have contributed to the doctrine will be made in future commentaries.

## C. Consultations in the Commission at its sixty-seventh session (2015)

21. At its sixty-seventh session, in 2015, the Commission held a general debate on the basis of the second report submitted by the Special Rapporteur (A/CN.4/685). This debate is summarized in the 2015 report of the Commission.[18] The short recapitulation of the debate below focuses on views expressed which are of particular relevance to the scope of the present report.

22. Members of the Commission generally reiterated the importance of the topic. A number of members acknowledged the decision to focus the second report on the law of armed conflict. Nonetheless, the discussions also centred on the importance of addressing the continued applicability of international environmental law, international human rights law and other relevant treaties/bodies of law. It was stated that such a review should be based on the Commission's 2011 draft principles on the effects of armed conflicts on treaties. Some members considered such an analysis central to the topic and suggested that it could contribute to avoiding legal gaps in environmental protection in relation to armed conflicts.

23. The methodology of the work was also discussed, with several members referencing the practice of non-State actors as an important source of guidance, and suggesting that this practice should be further studied and analysed.

24. While some members believed that draft articles might be a more pertinent outcome of the Commission's work on the topic, there was broad support for the development of draft principles. In terms of the overall structure of the principles, members were generally of the view that the principles should be structured according to the three temporal phases, while acknowledging that strict dividing lines between the three phases would not be feasible. Specifically regarding the terminology of the draft principles, some members considered that the draft principles should have headings and be phrased in less absolute terms, replacing "shall" with "should". There was also substantial discussion regarding the terms "environment" and "natural environment". In essence, members acknowledged the importance of ensuring uniformity, regardless of which term was chosen.

25. Discussions were held on the limitation of the scope of the topic. There was broad support for addressing non-international armed conflicts as part of the topic. Some members nevertheless cautioned about the difficulty of locating sufficient practice and customary international law in this respect. Different aspects of the human environment, cultural heritage, natural heritage zones and cultural aspects pertaining to the topic were discussed. While some members were of the view that the exploitation of natural resources was not directly related to the scope of the topic, it was noted that the human rights implications of extraction and other actions relating to natural resources might be pertinent to address.

[18] See A/70/10, paras. 137-170. For a more comprehensive presentation of the debate, see A/CN.4/SR.3264-3269.

26. Suggestions were also made regarding the scope, use of terms and purpose of the draft principles, as outlined in the preamble. Several members were of the view that the scope and use of terms should be included in the operative text rather than the preamble, with a number of members suggesting that the purpose should also be added to the operative text. Moreover, a number of members were of the opinion that the term "preventive and restorative measures" was too restrictive.

27. Several members suggested that a provision on use of terms was needed to clarify the scope of the draft principles overall. It was acknowledged that the delineations of the terms "environment" and "armed conflict", as tentatively outlined by the Special Rapporteur, were to be considered "working definitions" for the purposes of this topic. A number of members found the formulation of the term "the environment" to be too broad in this context, and suggested that the formulation be limited to the environment as relevant to situations of armed conflict. Regarding the formulation of the term "armed conflict", several members supported it as being broad enough to cover non-international armed conflicts, noting that such conflicts, while increasingly common and damaging to the environment, often prove challenging to regulate. It was also noted that terms from an instrument dealing with peacetime situations could not simply be transposed to situations of armed conflict.

28. Concerning specific draft principles as proposed by the Special Rapporteur, the possibility of the environment representing civilian or military objectives was given particular attention. Several members suggested that the principle be modified to reflect that no part of the environment be made the objective of an attack, unless and until it becomes a military objective.

29. A number of members supported including references to ensuring the strongest possible protection of the environment through fundamental principles and rules of international humanitarian law, whereas other members cautioned against it. In that context, it was observed that environmental considerations were considered to be of different standing in *jus in bello* and *jus ad bellum*, respectively. It was also noted that the role of environmental considerations when assessing proportionality and necessity should be examined.

30. While the prohibition of reprisals against the natural environment was welcomed and supported by a large number of members, its status under customary international law was called into question by others.

31. On the suggestion to establish protected zones of major ecological importance, members sought to clarify the practical and normative effects of designating such sites. The possible effects of unilateral declarations of such zones were discussed, as were the question of whether the principle should cover both natural and cultural heritage sites, and the potential role of cultural considerations in designating such sites. It was also suggested that a separate draft principle could be added on nuclear-weapon-free zones. It was stated that provisions on zones of major ecological importance should apply to all three temporal phases.

32. To supplement the principles proposed by the Special Rapporteur, members suggested including draft principles on topics such as specific principles reflecting the prohibition against causing widespread, long-term and severe damage to the natural environment, specific weapons and training and dissemination requirements, as well as considering special regimes such as indigenous rights.

33. It was suggested that the third report should include grounds and proposals on how international organizations can contribute to the legal protection of the environment and on protection of the environment through a duty of cooperation or sharing of information. The intention of the Special Rapporteur to address the issue of occupation in her third report was welcomed. On a general level, it was observed that it should be considered to what extent the final outcome of the work on the topic could constitute progressive development and contribute to the development of *lex ferenda*.

34. A number of members specifically welcomed the intention of the Special Rapporteur to continue her collaboration with regional organizations and international entities, such as UNEP, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Committee of the Red Cross (ICRC). It was also suggested that the third report should contain an outline of the envisioned draft principles, so as to facilitate future work on the topic. In addition, there was widespread agreement that it would be helpful if States continued to provide examples of domestic and regional legislation and case law.

## D. Debate in the Sixth Committee of the General Assembly at its seventieth session (2015)

35. Some 35 States addressed the topic during the seventieth session of the General Assembly, based on the report of the International Law Commission on the work of its sixty-seventh session in 2015 (A/70/10).[19]

36. Several States addressed the six draft principles as provisionally adopted by the Drafting Committee. Four States confined their comments largely to the five draft principles originally proposed by the Special Rapporteur.[20] It was noted that

[19] Austria (A/C.6/70/SR.24, paras. 66-70), Belarus (A/C.6/70/SR.24, paras. 15-16), China (A/C.6/70/SR.22, para. 74), Croatia (A/C.6/70/SR.24, paras. 86-89), Cuba (A/C.6/70/SR.24, para. 10), Czech Republic (A/C.6/70/SR.24, para. 45), El Salvador (A/C.6/70/SR.24, para. 96), France (A/C.6/70/SR.20, para. 22), Greece (A/C.6/70/SR.24, paras. 2-4), Indonesia (A/C.6/70/SR.23, para. 30), Iran (Islamic Republic of) (A/C.6/70/SR.25, paras. 2-9), Israel (A/C.6/70/SR.25, paras. 77-78), Italy (A/C.6/70/SR.22, paras. 116-120), Japan (A/C.6/70/SR.25, paras. 30-31), Lebanon (A/C.6/70/SR.24, paras. 58-60), Malaysia (A/C.6/70/SR.25, paras. 47-49), Mexico (A/C.6/70/SR.25, para. 103), Netherlands (A/C.6/70/SR.24, paras. 28-31), New Zealand (A/C.6/70/SR.25, paras. 101-102), Norway (on behalf of the five Nordic countries: Denmark, Finland, Iceland, Norway and Sweden) (A/C.6/70/SR.23, paras. 106-107), Palau (A/C.6/70/SR.25, paras. 26-28), Poland (A/C.6/70/SR.25, paras. 18-19), Portugal (A/C.6/70/SR.24, paras. 78-80), Republic of Korea (A/C.6/70/SR.25, para. 82), Singapore (A/C.6/70/SR.23, paras. 121-124), Slovenia (A/C.6/70/SR.24, paras. 39-41), Spain (A/C.6/70/SR.25, para. 109), Switzerland (A/C.6/70/SR.25, paras. 96-98), United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, paras. 21-22), United States of America (A/C.6/70/SR.25, paras. 63-68) and Viet Nam (A/C.6/70/SR.25, paras. 40-42). The statements are available *in extenso* at https://papersmart.unmeetings.org/ga/sixth/. The present report will nonetheless as often as possible refer to the summary records of the debate, as is the common practice of the Commission.

[20] Belarus (A/C.6/70/SR.24, para. 16), Slovenia (A/C.6/70/SR.24, paras. 40-41), Italy (statement to the Sixth Committee, seventieth session, 6 November 2015) and Malaysia (statement to the Sixth Committee, seventieth session, 11 November 2015).

the upcoming commentaries to the draft principles were an integral part of the project that would assist in the continued analysis.[21]

37. The majority of the statements provided by States underlined the importance of the topic.[22] It was stated that protection of the environment was considered a common concern for humanity.[23] Some States also raised the protection of the marine environment in particular.[24] It was also suggested that since the environment serves the population, safeguarding it is important as a means of protecting human health and promoting sustainability.[25]

38. A number of States expressed support for the temporal approach undertaken by the Special Rapporteur.[26] One State expressed doubts about the feasibility of the selected approach[27] and some concern was raised over the uncertainty of the direction of the topic.[28] It was suggested that the Commission should avoid addressing concurrent application of bodies of law during armed conflict,[29] and that the Commission should focus on analysing how international humanitarian law relates to the environment.[30] A number of delegations reiterated the significance of not seeking to revise the law of armed conflict.[31]

39. It was suggested that the effects of armed conflict on environmental agreements could be examined, as well as the *lex specialis* character of the law of armed conflict.[32] A number of States spoke to addressing the intersections between the law of armed conflict and environmental law, and encouraged the Special Rapporteur to further analyse the applicability of relevant rules and principles of international environmental law in this context.[33] Rule 44 of the 2005 ICRC study

---

[21] Indonesia (A/C.6/70/SR.23, para. 30, Italy (statement to the Sixth Committee, seventieth session, 6 November 2015), Malaysia (A/C.6/70/SR.25, para. 49) and Republic of Korea (A/C.6/70/SR.25, para. 82).

[22] Belarus (A/C.6/70/SR.24, para. 15), Cuba (A/C.6/70/SR.24, para. 10), statement by El Salvador to the Sixth Committee, seventieth session, 10 November 2015, statement by Indonesia to the Sixth Committee, seventieth session, 9 November 2015, Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 2), Lebanon (A/C.6/70/SR.24, paras. 58-59), Mexico (A/C.6/70/SR.25, para. 103), New Zealand (A/C.6/70/SR.25, para. 101), Norway (on behalf of the Nordic countries) (A/C.6/70/SR.23, para. 106), Palau (A/C.6/70/SR.25, para. 26), Poland (A/C.6/70/SR.25, para. 18), Portugal (A/C.6/70/SR.24, para. 78) and Slovenia (A/C.6/70/SR.24, para. 39).

[23] Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 2), Cuba (A/C.6/70/SR.24, para. 101) and New Zealand (A/C.6/70/SR.25, para. 101).

[24] Iran (Islamic Republic of) (A/C.6/70/SR.25, paras. 6-7), Lebanon (A/C.6/70/SR.24, para. 58) and Palau (A/C.6/70/SR.25, para. 28).

[25] Statement by Israel to the Sixth Committee, seventieth session, 11 November 2015.

[26] El Salvador (A/C.6/70/SR.24, para. 96), Italy (A/C.6/70/SR.22, para. 116) and Lebanon (A/C.6/70/SR.24, para. 60).

[27] Spain (A/C.6/70/SR.25, para. 109).

[28] Czech Republic (A/C.6/70/SR.24, para. 45), United States (A/C.6/70/SR.25, para. 63) and Spain (A/C.6/70/SR.25, para. 109).

[29] United States (A/C.6/70/SR.25, para. 64).

[30] Israel (A/C.6/70/SR.25, para. 77), Japan (A/C.6/70/SR.25, para. 30), Singapore (A/C.6/70/SR.23, para. 121) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21).

[31] Croatia (A/C.6/70/SR.24, para. 86), Singapore (A/C.6/70/SR.23, para. 121) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21).

[32] Italy (A/C.6/70/SR.22, para. 117).

[33] Austria (A/C.6/70/SR.24, para. 66), Belarus (A/C.6/70/SR.24, para. 15), Croatia (A/C.6/70/SR.24, para. 86), Greece (A/C.6/70/SR.24, paras. 2-3), Italy (A/C.6/70/SR.22,

on customary international humanitarian law, the duty of care provided for in article 55 of Additional Protocol I to the Geneva Conventions and the no-harm rule and the precautionary principle under environmental law were mentioned specifically in this context.[34] While one State suggested that the intersection between human rights and humanitarian law should be analysed,[35] others cautioned about the implications of addressing human rights as part of the topic.[36]

40. Regarding the scope, some States raised concerns regarding the inclusion of non-international armed conflicts.[37] Nonetheless, several States were of the view that both categories should be addressed.[38] It was suggested that the differences between non-international and international armed conflicts should be reflected in developing a methodology for the topic.[39] The view was also expressed that situations falling short of non-international armed conflict, such as internal disturbances and tensions, should not be addressed within the scope of the present topic.[40]

41. States expressed various views regarding whether and how to address cultural heritage and areas of cultural importance[41] and natural resources.[42] Some States suggested that specific weapons and the effects of such weapons on the environment should be addressed within the scope of the topic,[43] whereas others suggested that this subject matter should be excluded.[44] Some States explicitly underlined the importance of addressing the consequences of the use of nuclear weapons.[45] Rehabilitation efforts, toxic remnants of war and depleted uranium[46] were highlighted as important aspects of the topic.[47] It was considered that rules and principles on distinction, proportionality, military necessity and precautions in

---

para. 117), Lebanon (A/C.6/70/SR.24, para. 59), Poland (A/C.6/70/SR.25, para. 18) and Slovenia (A/C.6/70/SR.24, para. 39).

[34] Greece (A/C.6/70/SR.24, paras. 2-3).

[35] Italy (A/C.6/70/SR.22, para. 117).

[36] Austria (A/C.6/70/SR.24, para. 66), Belarus (A/C.6/70/SR.24, para. 15), Singapore (A/C.6/70/SR.23, para. 121) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21).

[37] China (A/C.6/70/SR.22, para. 74), Republic of Korea (A/C.6/70/SR.25, para. 82) and Viet Nam (A/C.6/70/SR.25, para. 41).

[38] Austria (A/C.6/70/SR.24, para. 70), Croatia (A/C.6/70/SR.24, para. 86), El Salvador (A/C.6/70/SR.24, para. 96), Italy (A/C.6/70/SR.22, para. 118), Lebanon (A/C.6/70/SR.24, para. 60), New Zealand (A/C.6/70/SR.25, para. 101), Portugal (A/C.6/70/SR.24, paras. 78-79), Slovenia (A/C.6/70/SR.24, para. 40) and Switzerland (A/C.6/70/SR.25, para. 98).

[39] France (A/C.6/70/SR.20, para. 22).

[40] Croatia (A/C.6/70/SR.24, para. 86) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 22).

[41] Croatia (A/C.6/70/SR.24, para. 87), Israel (A/C.6/70/SR.25, para. 77), Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 8), United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 22) and United States of America (A/C.6/70/SR.25, para. 66).

[42] Israel (A/C.6/70/SR.25, para. 77), Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 9) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 22).

[43] Austria (A/C.6/70/SR.24, para. 67), Iran (Islamic Republic of) (A/C.6/70/SR.25, paras. 2 and 3) and Mexico (A/C.6/70/SR.25, para. 103).

[44] Israel (A/C.6/70/SR.25, para. 77) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 22).

[45] Austria (A/C.6/70/SR.24, para. 67), Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 3) and Mexico (A/C.6/70/SR.25, para. 103).

[46] Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 3).

[47] Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 5) and Viet Nam (A/C.6/70/SR.25, para. 42).

attack, as referred to in the draft principles, were particularly relevant for the topic.[48] It was suggested that the relationship between the protection of the environment and military necessity, as well as the practical application of such a principle, should be examined.[49]

42. In addition, it was suggested that issues relating to different thresholds of environmental harm could be considered.[50] The connection to sustainable development and related treaties was referenced specifically.[51] It was also suggested that the draft principles should explore environmental impact assessments for deploying weaponry[52] and the need to protect the marine environment.[53] The view was further expressed that while the draft principles should focus on general rules and standards, the commentary should also explore regulated methods of warfare such as incendiary weapons and attacks against works or installations containing dangerous forces.[54]

43. Different preferences were voiced regarding the use of the terms "natural environment"[55] and "environment"[56] in the draft principles. Some States expressed no preference, but simply noted that one alternative should be chosen and applied consistently for the sake of coherence.[57] The view was expressed that it was not possible to merely transpose definitions or provisions from an instrument dealing with peacetime situations to situations of armed conflict, or vice versa.[58] It was also noted that it was important to ensure that the definition chosen was compatible with the norms of international humanitarian law and international environmental law.[59]

44. Regarding the term "armed conflict", some States proposed that the existing definition in international humanitarian law be used,[60] while it was also suggested that the working definitions be maintained for the time being.[61] It was also stated that defining the term would complicate the work of the Commission and could risk unintentionally lowering the protection of the natural environment in armed conflict by fixating the definition and related threshold of applicability of international humanitarian law.[62] It was also recommended that the Commission add a separate provision with definitions of various terms, as was the case in article 2 of the 2001 draft articles on prevention of transboundary harm from hazardous activities.[63]

---

[48] Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 2), Mexico (A/C.6/70/SR.25, para. 103) and Norway (on behalf of the Nordic countries) (A/C.6/70/SR.23, para. 106).
[49] Netherlands (A/C.6/70/SR.24, para. 29).
[50] Greece (A/C.6/70/SR.24, para. 3).
[51] Lebanon (A/C.6/70/SR.24, para. 59) and Palau (A/C.6/70/SR.25, para. 26).
[52] Viet Nam (A/C.6/70/SR.25, para. 40).
[53] Palau (A/C.6/70/SR.25, para. 28).
[54] Greece (A/C.6/70/SR.24, para. 4).
[55] Republic of Korea (A/C.6/70/SR.25, para. 82) and United States of America (A/C.6/70/SR.25, para. 68).
[56] Italy (A/C.6/70/SR.22, para. 118).
[57] France (A/C.6/70/SR.20, para. 22) and Lebanon (A/C.6/70/SR.24, para. 60).
[58] El Salvador (A/C.6/70/SR.24, para. 96) and Malaysia (A/C.6/70/SR.25, para. 48).
[59] Mexico (A/C.6/70/SR.25, para. 103).
[60] Austria (A/C.6/70/SR.24, para. 66) and Croatia (A/C.6/70/SR.24, para. 87).
[61] New Zealand (A/C.6/70/SR.25, para. 101).
[62] Netherlands (A/C.6/70/SR.24, para. 28).
[63] Statement by Greece to the Sixth Committee, seventieth session, 10 November 2015.

45. Regarding the draft principles as provisionally adopted by the drafting committee[64] in general, some States were of the view that they were phrased in too absolute terms and went beyond what they considered to be a reflection of customary international law.[65] The view was also expressed that a draft principle on the duty of States to protect the environment in relation to armed conflict through national legislative measures might be an important addition.[66]

46. Several States underlined the importance of and the need for addressing preventive[67] and remedial measures.[68] It was suggested that both preventive and remedial measures should be defined in the commentary.[69] In addition, some States mentioned reparation and compensation for the post-conflict phase.[70] The need for cooperation was also referenced,[71] as was the SIDS Accelerated Modalities of Action (SAMOA) Pathway (Samoa Pathway).[72]

47. Draft principle II-1 was addressed by several States, with a number of States highlighting in particular that the environment should not be classified as civilian in nature[73] or as a civilian object.[74]

48. While a number of States expressed their support for examining the issues addressed in draft principles II-2 and II-3,[75] it was also suggested that these principles could be merged and focus on the application of the laws of armed conflict to the environment.[76] In addition, a number of States asked for further clarifications and provided drafting suggestions, including regarding the practical application of the term "environmental considerations".[77]

49. Several States supported the inclusion of draft principle II-4, on the prohibition of reprisals.[78] Some States were of the view that the status of such a

---

[64] A/70/10, footnote 378.

[65] Israel (A/C.6/70/SR.25, para. 77), Singapore (A/C.6/70/SR.23, para. 122), United Kingdom of Great Britain and the Northern Ireland (A/C.6/70/SR.24, para. 21) and United States (A/C.6/70/SR.25, para. 63).

[66] Croatia (A/C.6/70/SR.24, para. 89).

[67] Greece (A/C.6/70/SR.24, para. 3), Slovenia (A/C.6/70/SR.24, para. 40), Viet Nam (A/C.6/70/SR.25, paras. 40-42) and Republic of Korea (A/C.6/70/SR.25, para. 82).

[68] Greece (A/C.6/70/SR.24, para. 3), Lebanon (A/C.6/70/SR.24, para. 60), Republic of Korea (A/C.6/70/SR.25, para. 82), and Viet Nam (A/C.6/70/SR.25, paras. 40-42).

[69] Greece (A/C.6/70/SR.24, para. 3).

[70] Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 5), New Zealand (A/C.6/70/SR.25, para. 102) and Viet Nam (A/C.6/70/SR.25, para. 42).

[71] Palau (A/C.6/70/SR.25, para. 27).

[72] Palau (A/C.6/70/SR.25, para. 27); General Assembly resolution 69/15, annex.

[73] Netherlands (A/C.6/70/SR.24, para. 30), Slovenia (A/C.6/70/SR.24, para. 40-41) and Croatia (A/C.6/70/SR.24, para. 88).

[74] Belarus (A/C.6/70/SR.24, para. 16), El Salvador (A/C.6/70/SR.24, para. 96), Netherlands (A/C.6/70/SR.24, para. 30), Slovenia (A/C.6/70/SR.24, paras. 40-41) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21).

[75] Norway (on behalf of the Nordic countries) (A/C.6/70/SR.23, para. 107), statement by Italy to the Sixth Committee, seventieth session, 6 November 2015.

[76] Statement by Austria to the Sixth Committee, seventieth session, 10 November 2015.

[77] Israel (A/C.6/70/SR.25, para. 78), Netherlands (A/C.6/70/SR.24, para. 29) and United States (A/C.6/70/SR.25, para. 68).

[78] Austria (A/C.6/70/SR.24, para. 70), Italy (A/C.6/70/SR.22, para. 120), Norway (on behalf of the Nordic countries) (A/C.6/70/SR.23, para. 107), New Zealand (A/C.6/70/SR.25, para. 102) and Switzerland, (A/C.6/70/SR.25, para. 97).

prohibition under customary international law was uncertain, or that such status had not been established.[79]

50. The issue of protected zones was referenced by a large number of States. A number of States were of the view that the protection of such areas was an important aspect of protecting the environment in relation to armed conflicts.[80] Some States raised questions concerning the possible nature of and legal sources establishing such areas,[81] as well as the connection between protected zones and other areas established by related regimes under international law, such as demilitarized zones.[82] A concern was also expressed that draft principle II-5 might lower the protection afforded in draft principle II-1 by requiring that the area be of major environmental and cultural importance.[83] Some States sought to clarify what effect the designation of protected zones would have on third States, and that States not parties to the agreement would not be bound by it.[84] Different views were voiced regarding whether or not such zones should include areas of cultural importance.[85]

51. While a number of States had a preference to maintain the outcome in the format of draft principles or guidelines,[86] it was also suggested that draft articles or draft conclusions might be more pertinent.[87] The view was also expressed that the present format should be without prejudice to the possibility of the choice of a different format to be taken in due course.[88] Some States simply referred to the "draft principles" without any further comment. It was also noted that the topic might have an important element of progressive development, in line with article 1 of the Commission's statute.[89]

52. During the debate, a number of States offered examples of national and regional practice in the form of, for example, legislation, case law and military manuals.[90] They also shared their experiences of environmental consequences of

---

[79] Israel (A/C.6/70/SR.25, para. 78), Italy (A/C.6/70/SR.22, para. 120), Singapore (A/C.6/70/SR.23, para. 122), United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21) and United States, (A/C.6/70/SR.25, para. 63).

[80] Belarus (A/C.6/70/SR.24, para. 16), Croatia (A/C.6/70/SR.24, para. 88), El Salvador (A/C.6/70/SR.24, para. 97), Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 4), Italy (A/C.6/70/SR.22, para. 120), Lebanon (A/C.6/70/SR.24, para. 60), Norway (on behalf of the Nordic countries) (A/C.6/70/SR.23, para. 107), Singapore, (A/C.6/70/SR.23, para. 123) and Switzerland (A/C.6/70/SR.25, para. 98).

[81] Japan (A/C.6/70/SR.25, para. 31) and Lebanon (A/C.6/70/SR.24, para. 60).

[82] Austria (A/C.6/70/SR.24, para. 68), Croatia (A/C.6/70/SR.24, para. 88), Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 4), statement by Italy to the Sixth Committee, seventieth session, 6 November 2015, Singapore (A/C.6/70/SR.23, para. 123), Switzerland (A/C.6/70/SR.25, para. 98) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21).

[83] Netherlands (A/C.6/70/SR.24, para. 31).

[84] Statement by Austria to the Sixth Committee, seventieth session, 10 November 2015 and United States of America (A/C.6/70/SR.25, paras. 65 and 66).

[85] Italy (A/C.6/70/SR.22, para. 120) and United States of America (A/C.6/70/SR.25, para. 66).

[86] Netherlands (A/C.6/70/SR.24, para. 28), Singapore (A/C.6/70/SR.23, para. 124) and United Kingdom of Great Britain and Northern Ireland (A/C.6/70/SR.24, para. 21).

[87] Poland (A/C.6/70/SR.25, para. 19).

[88] Italy (A/C.6/70/SR.22, para. 116).

[89] Belarus (A/C.6/70/SR.24, para. 16) and Portugal (A/C.6/70/SR.24, para.78).

[90] Croatia (A/C.6/70/SR.24, para. 89), Cuba (A/C.6/70/SR.24, para. 10), Czech Republic (A/C.6/70/SR.24, para. 45), Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 4), Lebanon (A/C.6/70/SR.24, para. 59), New Zealand (A/C.6/70/SR.25, para. 102) and Palau (A/C.6/70/SR.25, para. 27).

armed conflicts.[91] The Special Rapporteur remains grateful for those helpful comments and encourages other States to provide such examples of national practice for the purposes of the work of the Commission on this topic.

## E. Responses to specific issues on which comments would be of particular interest to the Commission

53. In its report on the work of its sixty-seventh session, in accordance with established practice, the Commission sought information on specific issues on which comments would be of particular interest to it.[92] The request partly repeated the invitation contained in the report on its sixty-sixth session.[93] The Commission also sought "information from States as to whether they have any instruments aimed at protecting the environment in relation to armed conflict", including but not be limited to "national legislation and regulations; military manuals, standard operating procedures, rules of engagement or status-of-forces agreements applicable during international operations; and environmental management policies related to defence-related activities".[94] The Commission underlined that it would, in particular, be interested in instruments related to preventive and remedial measures.[95]

54. The following States responded to the Commission's request: the Federated States of Micronesia, the Netherlands, Lebanon, Paraguay, Slovenia, Switzerland, Spain and the United Kingdom of Great Britain and Northern Ireland.

### Federated States of Micronesia

55. The Federated States of Micronesia submitted an extensive and substantive contribution in which it emphasizes the importance of protecting the marine environment. It indicates that the hundreds of islands that make up the Federated States of Micronesia have a long history of being theatres of war and staging grounds for military activities, particularly in the prelude to and during the Second World War. Wrecks of military ships and aircraft, as well as hulking weaponry and unexploded ordnance, litter the land and sea of the Federated States of Micronesia. For example, there are 60 military wrecks in the Chuuk Lagoon, in an area that is only 65 kilometres wide, and these wrecks retain large caches of oil that have reportedly begun leaking. A further example is a military vessel in the Ulithi Atoll

[91] Iran (Islamic Republic of) (A/C.6/70/SR.25, para. 7), Lebanon (A/C.6/70/SR.24, para. 58) and Palau (A/C.6/70/SR.25, para. 26).

[92] A/70/10, paras. 25 and 27.

[93] Ibid., para. 27: "The Commission would appreciate being provided by States with information on whether, in their practice, international or domestic environmental law has been interpreted as applicable in relation to international or non-international armed conflict. The Commission would particularly appreciate receiving examples of:

(a) treaties, including relevant regional or bilateral treaties;

(b) national legislation relevant to the topic, including legislation implementing regional or bilateral treaties;

(c) case-law in which international or domestic environmental law was applied to disputes in relation to armed conflict."

The following States submitted information in 2015: Austria, Belgium, Cuba, Czech Republic, Finland, Germany, Peru, Republic of Korea, Spain and the United Kingdom of Great Britain and Northern Ireland (see A/CN.4/685, paras. 29-60).

[94] A/70/10, para. 28.

[95] Ibid.

which has leaked [oil] into the water space of the atoll, "resulting of millions of dollars of environmental damage and disrupting the maritime food supply of the inhabitants of Ulithi". It is against this background that the Federated States of Micronesia expresses its keen interest in the present topic.[96]

56. The Federated States of Micronesia supports the temporal approach as used by the Special Rapporteur, and notes that the obligations of belligerents — potential and actual — under international law in relation to the protection of the environment span all three phases identified by the Special Rapporteur. It is observed that armed conflicts do not occur in a vacuum, that planning for a conflict often inflicts serious harm on natural environments, and that the post-conflict phase is not usually devoid of negative consequences for the environment. In general, the Federated States of Micronesia supports the working definitions for the terms "armed conflict" and "environment". Regarding weapons, the Federated States of Micronesia accepts the current preference of the Special Rapporteur not to focus on specific weapons, with the understanding that the Commission's consideration of the topic encompasses "any and all types of weapons that may be utilized in an armed conflict".[97]

57. Moreover, the Federated States of Micronesia strongly underlines the need for the Commission to consider the connections between protection of the environment and the safeguarding of cultural heritage, particularly that of indigenous peoples. Specifically, the indigenous population of the Federated States of Micronesia is of the view that linkages between the environment and cultural integrity are important. It is submitted that "belligerents have legal obligations to ensure that they protect all facets of life that depend on the environment, including cultural heritage and practice".[98]

58. The Federated States of Micronesia is a party to a number of relevant multilateral and regional conventions, including Additional Protocol I to the Geneva Conventions. It subscribes fully to the prohibitions in articles 35 and 55 and takes the view that the "intentional destruction of [the] natural environment for military gain is a type of total warfare that is abhorrent under international law, particularly in situations where the populations depend of that natural environment for its survival".[99]

59. The Federated States of Micronesia is a party to a number of disarmament treaties (the Treaty on the Non-Proliferation of Nuclear Weapons, the Chemical Weapons Convention and the Comprehensive Nuclear-Test-Ban Treaty) "that (at least indirectly) protect the environment in relation to armed conflicts". Insofar as the obligation to protect the environment in relation to armed conflicts encompasses multiple temporal phases, the Federated States of Micronesia views the testing, proliferation and deployment of weapons covered under the aforementioned instruments as violations of those obligations.[100]

60. The Federated States of Micronesia lists a number of universal and regional treaties to which it is a party and which it views as being directly or indirectly

[96] Note verbale dated 29 January 2016 from the Permanent Mission of the Federated States of Micronesia to the United Nations addressed to the Secretariat, para.1.
[97] Ibid., paras. 2-4.
[98] Ibid., para. 5.
[99] Ibid., para. 7.
[100] Ibid., para. 8.

applicable in relation to armed conflicts. They include the United Nations Convention on the Law of the Sea; the 1986 Convention for the Protection of the Natural Resources and Environment of the South Pacific Region (Noumea Convention) and two of its protocols, the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping and the Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region (Pollution Emergencies Protocol); the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal; the 1992 Convention on Biological Diversity; the 1993 Agreement establishing the South Pacific Regional Environment Programme; the 1995 Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (Waigani Convention); and the 2001 Stockholm Convention on Persistent Organic Pollutants.[101]

61. In its submission, the Federated States of Micronesia explains its stance on a number of international rules and principles relating to the protection of the marine environment in relation to armed conflict, including regarding hazardous wastes. The Federated States of Micronesia is of the view that "hazardous wastes" produced as a result of the military activities of parties to the Basel Convention are subject to the obligations and conditions of the Convention, regardless of whether the waste is produced before, during or after armed hostilities.[102] Moreover, the Waigani Convention should be understood to be applicable to the management of hazardous wastes discharged by military vessels and military activities into the convention area before, during and after military activities and hostilities.

62. The Federated States of Micronesia refers to one of the central principles contained in article 3 of the Convention on Biological Diversity, namely that its Contracting Parties have 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". This no-harm principle applies in relation to armed conflicts, including during the build-up to actual military hostilities and after those hostilities have ended. This principle may be implemented through designating protected areas where special conservation measures are undertaken to protect biodiversity. In the aftermath of armed conflicts, Contracting Parties to the Convention on Biological Diversity can rehabilitate and restore ecosystems degraded by the conflict. Article 8 (a) of the Convention should be interpreted as including the possibility of protecting areas and zones of particular interest in connection with armed conflict and hostilities.[103] The Federated States of Micronesia also notes that the provisions of the Convention on Biological Diversity shall not affect the existing rights and obligations of Contracting Parties under other international agreements, except in accordance with article 22, "where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity". This prioritization persists during all three phases of armed conflict, including during the build-up to and aftermath of actual hostilities.

---

[101] Ibid., para. 9. With respect to the United Nations Convention on the Law of the Sea, the Federated States of Micronesia underlines the importance of the rule of due regard in para. 10.

[102] As an example, the Federated States of Micronesia cites military vessels with intact and inflammable fuel caches that are decommissioned and subject to scrapping.

[103] See Convention on Biological Diversity, art. 8 (a), which establishes a system of protected areas or areas where special measures need to be taken to conserve biological diversity.

63. Regarding the Pollution Emergencies Protocol, the Federated States of Micronesia is of the view that the Protocol "applies to pollution incidents involving military vessels and military activities in the Convention Area whether prior to, during or in the aftermath of actual military hostilities".[104] The importance of provisions of the Protocol that relate to mutual assistance and operational measures is emphasized, as they relate to reparations and remedial measures more broadly.

64. In addition, the Federated States of Micronesia is of the view that the obligations to cooperate and to prevent, reduce and control pollution caused by discharge of vessels under the Noumea Convention are applicable to military vessels discharging pollutants in the area covered by the Convention. This applicability remains prior to, during and in the aftermath of military hostilities, and it includes pollution emergencies in the convention area. In connection with the Noumea Convention, the Federated States of Micronesia also submitted that the parties to the Agreement establishing the South Pacific Regional Environment Programme are obligated to work through the Secretariat of the Pacific Regional Environment Programme to address any impacts on the environment caused by military activities in the area covered by the Agreement. Such actions include, but are not limited to, measures to manage and prevent different types of pollution in environments stemming from discharges by military vessels. Currently, the Secretariat is developing a "Regional Strategy to Address Marina Pollution from World War II Ships". The Federated States of Micronesia notes the importance of international cooperation in this regard.

65. In its submission, the Federated States of Micronesia states that obligations in the Stockholm Convention on Persistent Organic Pollutants are considered to be applicable to its parties during all temporal phases of an armed conflict. Thus, a party to the Convention engaged in an armed conflict cannot produce or use any of the persistent organic pollutants during an armed conflict, with the exception of limited and exempted purposes and uses. Moreover, such usage must be undertaken in an environmentally sound manner which protects human health and the natural environment.[105]

66. The Federated States of Micronesia refers to international declarations and other high-level outcomes such as the 1992 Rio Declaration on Environment and Development, the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States and the Samoa Pathway. The latter documents contain paragraphs that "strongly encourage (if not obligate) small island developing States like the Federated States of Micronesia and flag States of sunken vessels to work on a bilateral basis to address oil leaks from those vessels into the marine and coastal environments of affected small island developing States".[106]

67. In accordance with the Federated States of Micronesia Environmental Protection Act — originally adopted in 1982 and amended into its current form in 2012 — there may be some restrictions on such an effort by the Federated States of Micronesia regarding certain military activities, such as seeking civil relief for environmental harms caused by warships. That does not mean that the Federated States of Micronesia cannot take steps to ensure that its foreign affairs actions

[104] Note verbale from the Federated States of Micronesia, *supra* note 96, para. 15.
[105] Ibid., para. 13.
[106] Ibid., para. 19.

relating to armed conflict do not undermine the efforts to protect the country's natural environment. Even if the Federated States of Micronesia would be barred from seeking civil relief for the environmental harms caused by certain military vessels, the Federated States of Micronesia states that "the State that flags/owns those vessels remains obligated under international law to address the environmental harms caused by those vessels in the Federated States of Micronesia".[107]

68. The Federated States of Micronesia explains in detail the so-called Compact of Free Association with the United States of America, concluded in 1986 and amended in 2003.[108] The Compact contains both an obligation of the United States to defend the Federated States of Micronesia and its people from an attack or the threat of an attack, as well as an option to establish and use military areas and facilities subject to the terms of a separate agreement referred to in the Compact.[109] The Compact allows the United States to conduct operations necessary to its responsibilities in the territory of the Federated States of Micronesia. The two parties have concluded a status of forces agreement which further regulates the activities of the United States. That agreement provides the Federated States of Micronesia with the ability to seek damage and other reparations from the United States for the defence and security-related activities of United States armed forces in the Federated States of Micronesia. The status of forces agreement "does limit such claims to those arising from 'non-combat activities' of United States armed forces".[110] Such claims "arguably apply to military activities conducted in preparation for, and/or in the aftermath of, actual combat hostilities, especially (but not limited to) activities involving aircraft, vessels, and vehicles of the United States armed forces".[111]

69. The Compact's carefully chosen language controlling the use, storage, disposal and movement of radioactive, toxic chemicals and biological weapons and materials by the United States in the Federated States of Micronesia "attempts to strike a balance between the military security and defence objectives of the United States on the one hand, and the health and safety of the Federated States of Micronesia public on the other".[112]

70. In its submission, the Federated States of Micronesia describes US Public Law 92-32, the Micronesian Claims Act, which provides for compensation for losses incurred during and immediately following the Second World War by the inhabitants of the Pacific islands that comprised the Trust Territory of the Pacific Islands. In the view of the Federated States of Micronesia, the Act "constituted State practice in relation to the provision of compensation to address destructive impacts on natural environments from armed conflicts".[113] The United States provided compensation ex gratia, but at the same time the compensation was "intended to help discharge the United States' 'responsibility for the welfare of the Micronesian peoples as the Administering Authority of the [Trust Territory of the Pacific Islands]',which was a legitimate and legal responsibility of the United States with regard to the lingering aftereffects of World War II hostilities (albeit separate from a

[107] Ibid., para. 30.
[108] Ibid., paras. 20-30.
[109] Ibid., para. 20.
[110] Ibid., para. 23.
[111] Ibid.
[112] Ibid., para. 27.
[113] Ibid., para. 31.

legal compensation to provide reparations for war damages)".[114] Even if the United States under the Act would provide compensation for those damages as a function of its administrative responsibilities to provide for the welfare of inhabitants of the Trust Territory rather than out of a legal obligation to provide reparations for war damages, "such compensation would still constitute a form of legal obligation, regardless of the administrative nature of its provision, and the compensation would still be in relation to the environmental harms arising from World War II hostilities between the United States and Japan".[115]

**Netherlands**

71. In its submission, the Netherlands indicates that it is not a State party to any regional or bilateral treaties which regulate the protection of the environment in relation to armed conflict.[116]

72. Some of the Netherlands' national legislation is of relevance to the topic. Any national legislation that regulates the protection of the environment is, in principle, also applicable to its armed forces, but exceptions can be made to such application.[117] For example, article 9.2.1.5 of the Environmental Management Act "sets out an integrated approach to environmental management in the Netherlands and provides the legal framework by defining the roles of national, provincial or regional, and municipal government".[118] However, article 9.2.1.5 of the Act also provides an exception to its application: some of the prohibitions and obligations provided in terms of the Act may be excluded if it is in the interest of national defence. Such exceptions can, however, only be made through implementing legislation or by Royal Decree.[119] The Environmental Management Act is the only national legislation of the Netherlands concerning the protection of the environment which makes specific reference to a situation of armed conflict.[120] Title 17 2 of the Act regulates the "taking of certain measures in case of environmental damage or the imminent threat thereof" and article 17.8(a)(1) "excludes from the scope of application of this title environmental damage or the imminent threat thereof as a result of an act of war, hostilities, civil war or insurrection".[121]

73. In addition, the Netherlands states that "intentionally launching an attack in the knowledge that such attack will cause widespread, long-term and severe damage to the natural environment which would clearly be excessive in relation to the concrete and direct overall military advantage anticipated, when committed in an international armed conflict" is a crime under Netherlands criminal law.[122]

74. No case law currently exists in which environmental law was applied by Netherlands courts to disputes relating to armed conflict.[123]

---

[114] Ibid.
[115] Ibid., para. 32.
[116] Note verbale dated 20 April 2016 from the Permanent Mission of the Netherlands to the United Nations addressed to the Secretariat, para.1.
[117] Ibid., para. 2.
[118] Ibid.
[119] Ibid.
[120] Ibid.
[121] Ibid.
[122] Ibid., para. 3 (see the International Crimes Act (Wet internationale misdrijven), art. 5 (5)(b)).
[123] Ibid., para. 4.

75. Regarding instruments aimed at protecting the environment, the Netherlands indicates that numerous documents used by its armed forces make reference to the protection of the environment. Both the Netherlands military manual, which is used by all military personnel, and the manual for military law, which is used at the military academy, include the environment as one of the protected elements during armed conflict.[124] The "Manual on International Humanitarian Law" is a relevant instrument because it discusses the protection of the environment in detail.[125]

76. Environmental considerations are also taken into account when determining whether new weapons or means or methods of warfare conform with international humanitarian law, in terms of article 36 of Additional Protocol I to the Geneva Conventions of 1949.[126]

77. Lastly, the Netherlands is not a party to any status of forces agreements which specifically include rules regulating the protection of the environment in relation to armed conflict, and it does not consider the protection of the environment in the context of international humanitarian law to be an appropriate subject for such treaties.[127]

**Lebanon**

78. The submission of Lebanon contains five annexed documents, four of which directly address the "Oil slick on Lebanese shores". In addition, Lebanon notes that it is a State party to Additional Protocol I to the Geneva Conventions, the Chemical Weapons Convention and the Convention on Cluster Munitions. Lebanon is also a party to the United Nations Convention on the Law of the Sea, and considers article 192(2) to be of particular relevance. The Government of Lebanon adopted a national mine action policy in 2007, according to which the Government "shall take full responsibility for the humanitarian, socioeconomic and environmental impact caused by these devices and shall rid Lebanon from the impact associated with these devices in an expeditious and efficient manner in line with international standards and mine action best practices".

79. The documentation provided by Lebanon revealed the following: In the aftermath of the marine oil spill caused by the destruction of the oil storage tanks at the Jiyeh electric power plant by the Israeli Air Force in 2006, several United Nations agencies and other international, regional and national organizations were involved in assessing the implications of the oil spill.[128] The oil spill consisted in the release of approximately 15,000 tons of fuel oil into the Mediterranean Sea, which contaminated about 150 km of the coastline of Lebanon and of the Syrian Arab Republic.[129] The General Assembly has adopted a yearly resolution on the topic of "Oil slick on Lebanese shores" since its sixty-first session.[130]

---

[124] Ibid., para. 5.
[125] Ibid. The Netherlands notes that this is a generic manual which "focuses on specific rules of international humanitarian law, rather than on preventive and remedial measures".
[126] Ibid.
[127] Ibid.
[128] General Assembly resolution 69/212, paras. 4 and 5.
[129] A/69/313, para. 4.
[130] Note verbale dated 29 January 2016 from the Permanent Mission of Lebanon to the United Nations addressed to the Secretariat.

80. A number of the resolutions and subsequent reports of the Secretary-General speak to the work undertaken by the United Nations Compensation Commission established pursuant to Security Council resolution 692 (1991). In this context, it has been suggested to use certain cases of claims as guidance for the oil slick in terms of measuring and quantifying damage and determining a payable amount of compensation.[131]

81. In its resolution 68/206, the General Assembly requested the Secretary-General to urge agencies and bodies of the United Nations to undertake further studies to measure and quantify the environmental damage sustained by Lebanon and by neighbouring countries.[132] This resulted in a study commissioned by the United Nations Development Programme (UNDP). The study concluded that previous studies undertaken by international and national agencies, such as the International Union for the Conservation of Nature, the World Bank, UNEP and the Food and Agricultural Organization of the United Nations, constituted a solid basis for the measurement and quantification of the environmental damage caused to Lebanon by the oil spill.[133] The study, issued in August 2014, quantified the environmental damage caused by the oil spill at $856.4 million (as at mid-2014).[134]

82. In his 2015 report on the subject, referenced in annex III of the submission of Lebanon, the Secretary-General notes that "there are no further relevant findings available in relation to the environmental impacts sustained by Lebanon and neighbouring countries, beyond the assessments of the environmental impact on the area affected by the oil slick that have been presented to the General Assembly in the corresponding reports of the Secretary-General".[135] It is further noted in this context that UNEP "has indicated that the scientific viability of gathering additional insights through further studies on environmental impacts is limited".[136] Nonetheless, the UNDP report of 2014 suggests that "periodical surveys should be conducted and relevant reports made on the newly manifested ecological injury".[137]

83. The documentation provided by Lebanon also refers to General Assembly resolution 69/212, which notes that "the oil slick has heavily polluted the shores of Lebanon and partially polluted Syrian shores and consequently has had serious implications for livelihoods and the economy of Lebanon, owing to the adverse implications for natural resources, biodiversity, fisheries and tourism, and for human health in the country".[138]

### Paraguay

84. Paraguay observes that it is a party to Additional Protocol I to the 1949 Geneva Conventions, and that this instrument was translated into domestic law through *Ley*

[131] See, for example, General Assembly resolution 67/201 of 21 December 2012, paras. 6 and 7, and resolution 66/192 of 22 December 2011, para. 6, as well as A/68/544, paras. 18 and 19.
[132] General Assembly resolution 68/206 of 20 December 2013, para. 5.
[133] Note verbale from Lebanon, *supra* note 130; see also United Nations Development Programme, *Report on the Measurement and Quantification of the Environmental Damage of the Oil Spill on Lebanon*, July 2014, para. 44.
[134] Ibid., para. 46.
[135] A/70/291, para. 6.
[136] Ibid.
[137] United Nations Development Programme, *supra* note 133, para. 45.
[138] General Assembly resolution 69/212, para. 3.

*Nº 28* in 1990.[139] The provisions prohibiting different means and methods of warfare that may cause widespread, long-term and severe harm to the environment are mentioned specifically in this context, as is the prohibition against reprisals attacking the natural environment. The national "white paper" on military defence, as adopted by the National Defence Council on 7 October 1999, contains a number of provisions that are pertinent to the topic, including an obligation to ensure protection and conservation of the environment. Perfecting the defence of the environment was specifically listed as one of the ways of realizing the overall objectives of national defence.[140] In addition, the environment was listed as one of the most important national interests to be defended by the State, in accordance with article 8 of the Constitution of Paraguay. Moreover, the "white paper" contains a dedicated section on control of the environment (*control del medio ambiente*), in which obligations to protect the environment are outlined.

**Switzerland**

85. Switzerland is a party to the 1949 Geneva Conventions, the three Additional Protocols and the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (Environmental Modification Convention). Switzerland also recognizes the obligations stemming from customary international law, notably those pertaining to international humanitarian law. Switzerland welcomes the work by the Commission on this topic, as it could serve to reinforce the protection of the environment in times of armed conflict. Switzerland notes that the environment should be afforded the same protection that is afforded to civilian objects under international humanitarian law. International humanitarian law provides a valuable basis which should be adequately reflected in the elaboration of new and specific protection regimes. Regarding the applicability of international environmental law, Switzerland considers treaties of international environmental law to continue to apply during armed conflict. Switzerland encourages the Commission to integrate reflections on applicable law as part of the commentaries, and notes that the mandate of the Commission comprises the progressive development of international law.

86. The general obligations to protect the environment in a domestic context stem from the *Loi fédérale sur la protection de l'environnement* of 1983.[141] The law addresses numerous major themes related to environmental protection, namely protection against dangerous substances, waste management and remediation of polluted sites. The framework legislation stipulates fundamental rules, while more detailed provisions, such as specific standards or requirements, can be found in specific ordinances and related materials on the respective subtopic. In a situation of armed conflict, the law remains operational in principle and should be respected. In

[139] Note verbale dated 19 January 2016 from the Permanent Mission of Paraguay to the United Nations addressed to the Secretariat.

[140] Consejo de la Defensa Nacional, *Política de Defensa Nacional de la Republica de Paraguay*, 7 October 1999, para. I (A), available from www.mdn.gov.py/application/files/1114/4242/5025/Politica_de_Defensa.pdf.

[141] Loi fédérale du 7 Octobre 1983 sur la protection de l'environnement (LPE, RS 814.01), available from www.admin.ch/opc/fr/classified-compilation/19830267/index.html.

addition, other aspects of environmental protection, such as the protection of water,[142] forests,[143] nature and the countryside,[144] are dealt with in specific laws.

87. Switzerland also comments on the proposed draft principles. Regarding the scope of the principles, Switzerland stresses the significance of the draft principle for both international and non-international armed conflicts, and drew attention also to the relevance of the obligations stemming from the Environmental Modification Convention, including the obligation to refrain from using any modification techniques which may have long-term, severe or damaging effects on the environment.

88. In connection with draft principles II-2 and II-3, Switzerland emphasizes that the principle of military necessity does not allow for derogations from the existing rules of international humanitarian law, as the rules of international humanitarian law themselves strike a balance between military necessity and the principle of humanity. Therefore, the principles of military necessity and proportionality could not be invoked to justify damage to the environment.

89. Switzerland supports the proposed draft principle prohibiting reprisals against the natural environment (draft principle II-4), as provisionally adopted by the Drafting Committee. As regards the draft principle on protected zones, Switzerland takes note with interest of the proposal and suggests that the proposed regime on protected zones be compared with similar regimes establishing other protected areas, and that it could be helpful to examine potential synergies between them.

90. Switzerland also refers to the possibility of individual criminal responsibility in accordance with the Rome Statute of the International Criminal Court, and comments on the connection between the protection of installations containing dangerous forces and protection of objects indispensable to the survival of the civilian population on the one side, and the protection of the environment on the other.

**Slovenia**

91. Slovenia has ratified all key instruments of international humanitarian law and international law of armed conflict, including Additional Protocol I to the Geneva Conventions. Moreover, members of the Slovenian Armed Forces have disciplinary responsibility, criminal liability and liability for damages under the Defence Act.[145] No case law currently exists in Slovenia on violations of environmental legislation arising from military activities.

92. Moreover, Slovenia provided examples of provisions that specifically address the conduct of the Slovenian Armed Forces in relation to environmental protection, such as provisions on environmental training of members of the Slovenian Armed Forces, cooperation on the implementation of environmental protection measures in

[142] Article 5 of the Loi fédérale sur la protection des eaux (www.admin.ch/opc/fr/classified-compilation/19910022/index.html).

[143] Article 15 of the Loi fédérale sur les forêts (www.admin.ch/opc/fr/classified-compilation/19910255/index.html).

[144] Article 11 of the Loi fédérale sur la protection de la nature et du paysage (www.admin.ch/opc/fr/classified-compilation/19660144/index.html).

[145] Defence Act, Official Gazette of the Republic of Slovenia No. 103/04, official consolidated text, arts. 4 and 48.

international operations and missions,[146] and a general provision on environmental awareness.[147] Systematic military education and training on environmental protection, and specific information about environmental protection prior to the departure of units deployed for crisis response operations, were listed as additional means to ensure environmental protection. Slovenia has also implemented the relevant North Atlantic Treaty Organization (NATO) standards and policies on environmental protection.

**Spain**

93. Spain reported that it is a party to treaties on the protection of cultural property in the event of armed conflict. Spanish environmental legislation contains a reference to armed conflicts in Act No. 26/2007 on environmental liability. The Act, which regulates the responsibility of operators to prevent, avoid and remedy environmental damage, excludes environmental damage resulting from an armed conflict from its scope of application.[148] Spain notes that the provision does not specify whether such conflicts are international or non-international.[149] Article 610 of the Spanish Penal Code moreover provides that:

> "Anyone who, in the context of an armed conflict, uses or orders the use of methods or means of combat that are prohibited or are intended to cause unnecessary suffering or superfluous injury, or that are designed to or can reasonably be expected to cause excessive, lasting and serious damage to the natural environment, thus compromising the health or survival of the population, or who orders that no quarter shall be given, shall be penalized with a term of imprisonment of 10 to 15 years, without prejudice to the penalty imposed for the resulting damage".[150]

94. However protection of the environment in relation to armed conflict has not been the subject of any ruling by the Spanish judicial bodies on Act No. 26/2007, article 610 of the Penal Code, or any other instrument.

**United Kingdom of Great Britain and Northern Ireland**

95. In its submission, the United Kingdom notes that multilateral environmental agreements are generally silent on questions concerning the protection of the environment in relation to armed conflict, but that these issues are, however, expressly addressed within the United Kingdom Manual of the Law of Armed Conflict within the framework of international humanitarian law.[151]

96. The United Kingdom also draws attention to examples that can be found in the context of the Basel Convention where waste is exported and there is therefore a

[146] Rules of Service in the Slovenian Armed Forces, item 210.

[147] Service in Slovenian Armed Forces Act, Official Gazette Nos. 68/07 and 58/08, ZSPJS-I, art. 17.

[148] Act No. 26/2007 of 23 October, on environmental liability (Official Gazette, No. 255, of 24 October 2007), art. 3.

[149] Note verbale dated 17 February 2016 from the Permanent Mission of Spain to the United Nations addressed to the Secretariat.

[150] Spanish Penal Code (Organic Law No. 10/1995 of 23 November, published in Official Gazette No. 281 of 24 November 1995), art. 610.

[151] Note verbale dated 24 March 2016 from the Permanent Mission of the United Kingdom of Great Britain and Northern Ireland to the United Nations addressed to the Secretary-General (The United Kingdom Manual of the Law of Armed Conflict can be found at www.gov.uk/government/collections/jsp-383).

question about compliance by the receiving State with its obligations under the Convention. The Kosovo Force entered into a bilateral agreement with Germany to export waste there.[152] Similarly, the United Kingdom states that it "received some chemical waste precursors from Syria in 2014. No bilateral agreement was entered into because the United Kingdom applied an exemption set out in the European Union Regulation implementing the Convention." The United Kingdom observes that in practice, the receipt of the waste was handled in the usual way, but with the Ministry of Defence of the United Kingdom rather than Syrian authorities completing the documentation. The United Kingdom notes that: "The imperative was to safely destroy the chemicals, but in a way that would protect the environment. Given the difficulties for the Syrian authorities to comply, the United Kingdom found a way to comply with the notification regime controlling transboundary movements of hazardous waste. Once the chemical waste was here, the United Kingdom made sure that proper environmental controls were applied."

# II. Rules of particular relevance applicable in post-conflict situations

## A. General observations

97. The first (preliminary) report on the protection of the environment in relation to armed conflicts (A/CN.4/674) did not contain any draft principles. At the time, the Special Rapporteur considered that this would be premature since the report provided an introductory overview of the relevant rules and principles applicable to a potential armed conflict (peacetime obligations). The report therefore did not address measures to be taken during or after armed conflict per se, even though preparatory acts necessary to implement such measures may need to be undertaken prior to the outbreak of an armed conflict.[153]

98. Preventive measures and reparative measures are interlinked. It may therefore be useful to return to some aspects of preventive measures in the present report. Although the focus of the report is on measures taken after an armed conflict, it is useful to see the connection between the pre-conflict and post-conflict phases.

99. The preventive measures addressed in the present report are primarily measures with direct connections to armed conflict. For reasons stated in the previous report (A/CN.4/685), it is not possible to go through every single environmental treaty obligation in order to assess its applicability during armed conflict. The preliminary report therefore identified general principles of international environmental law that continue to apply in situations of armed conflict. It is to be reiterated that the law of armed conflict is *lex specialis*, but at the same time this area of international law continuously develops and this development is informed by the development of other areas of international law.

[152] See www.basel.int/Portals/4/Basel%20Convention/docs/article11/germany-kosovo.pdf.
[153] A/CN.2/674, para. 49.

**Applicability of peacetime agreements, including references from practice of international organizations**

100. It has been proposed that the Special Rapporteur should analyse environmental treaties in order to examine whether or not they continue to apply also during armed conflict.[154] Given the vast number of multilateral environmental agreements in existence, it would be a challenging task to analyse each and every one of them. The growth of environmental treaties since the end of the nineteenth century has been described as "mushrooming".[155] In one article the total number of treaties worldwide is said to be over 500.[156] Another claims the number to be over 700 for multilateral agreements and over 1,000 for bilateral treaties, conventions, protocols and amendments.[157] Needless to say, it is not possible to examine them all in the context of the present report.

101. The Commission decided not to proceed with such an analysis during its work on the effects of armed conflicts on treaties, and the Special Rapporteur has found no convincing reason to use a different methodology in the work on the present topic. Needless to say, the applicability of multilateral environmental agreements is only a question of concern during the active hostilities themselves. Fewer (if any) problems will occur that are of relevance to the present topic in the pre-conflict and post-conflict phases.

102. The result of the Commission's work on the effects of armed conflict on treaties remains valid to the present topic. The Commission recognized that international law applicable during an armed conflict may well go beyond the law of armed conflict. That work takes, as its starting point, the presumption that the existence of an armed conflict does not ipso facto terminate or suspend the operation of treaties.[158] It is worth recalling draft article 3, which sets out the general principle that:

> "The existence of an armed conflict does not ipso facto terminate or suspend the operation of treaties:
>
> (a) as between States parties to the conflict;
>
> (b) as between a State party to the conflict and a State that is not."

103. The Commission stated that article 3 is of overriding significance, and that it establishes the general principle of legal stability and continuity.[159] At the same

---

[154] A/70/10, para.142.

[155] Philippe Roch and Franz Xaver Perrez, "International environmental governance: the strive towards a comprehensive, coherent, effective and efficient international environmental regime", *Colorado Journal of International Environmental Law and Policy*, vol. 16, No. 1 (2005), p. 1 at pp. 5-6.

[156] Ibid., p. 6.

[157] Ronald B. Mitchell, "international environmental agreements: a survey of their features, formation, and effects", *Annual Review of Environment and Resources*, p. 429, at p. 430.

[158] A/66/10, chap. VI, sect. E.1, art. 3.

[159] The Commission explained in the commentary to article 3 (A/66/10, chap. VI, sect. E.2) that it "consciously decided not to adopt an affirmative formulation establishing a presumption of continuity, out of concern that such approach would not necessarily reflect the prevailing position under international law, and because it implied a reorientation of the draft articles from providing for situations where treaties are assumed to continue, to attempting to indicate situations when such a presumption of continuity would not apply. The Commission was of the view that such a reorientation would be too complex and fraught with risks of unanticipated a

time, the Commission made it clear that: "Where a treaty itself contains provisions on its operation in situations of armed conflict, those provisions shall apply."[160] The Commission furthermore adopted article 6, which lists factors that may indicate whether a treaty is susceptible to termination, withdrawal or suspension. Relevant factors in ascertaining this include the nature of the treaty and, in particular, its subject matter.[161] An indicative list of such treaties is found in the annex to the draft articles. It is explained in the commentary that the provision "establishes a link to the annex which contains an indicative list of categories of treaties involving an implication that they continue in operation, in whole or in part, during armed conflict". A further indication of this is that commentaries are attached to each category of treaties.[162]

104. Among the treaties listed in the commentaries to the annex we find treaties such as the World Heritage Convention, the African Convention on the Conservation of Nature and Natural Resources and the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention).[163]

105. The World Heritage Convention is one of the most important global conventions applicable also in times of armed conflict. The Convention was discussed in the previous report.[164] In accordance with article 6.3 of the Convention, each Party "undertakes not to take any deliberate measures which might damage directly or indirectly the cultural and natural heritage" of another Party (i.e. the objects and sites defined earlier in the Convention). The World Heritage Committee has the mandate to enlist objects and areas under the List of World Heritage in Danger. This is a special list of objects and areas which require major operations and for which assistance has been requested under this Convention. Many of the areas listed are in conflict zones.

---

contrario interpretations. It considered that the net effect of the present approach of seeking merely to dispel any assumption of discontinuity, together with several indications of when treaties are assumed to continue, was to strengthen the stability of treaty relations."

[160] A/66/10, chap. VI, sect. E.1, art. 4. The Commission decided not to include the qualifier "expressly", inter alia because "such a qualifier could be unnecessarily limiting, since there were treaties which, although not expressly providing therefor, continued in operation by implication through the application of articles 6 and 7" (A/66/10, chap. VI, sect. E.2, commentary to article 4).

[161] A/66/10, chap. VI, sect. E.1, art. 6, which reads:

"In order to ascertain whether a treaty is susceptible to termination, withdrawal or suspension in the event of an armed conflict, regard shall be had to all relevant factors, including:

(a) the nature of the treaty, in particular its subject matter, its object and purpose, its content and the number of parties to the treaty; and

(b) the characteristics of the armed conflict, such as its territorial extent, its scale and intensity, its duration and, in the case of non-international armed conflict, also the degree of outside involvement."

[162] Ibid., article 7 and the annex (which contains the indicative list of treaties referred to in article 7).

[163] Convention Concerning the Protection of the World Cultural and Natural Heritage (United Nations, *Treaty Series*, vol. 1037, No. 15511); African Convention on the Conservation of Nature and Natural Resources (revised version), done at Maputo on 11 July 2003, available from www.au.int/en/sites/default/files/treaties/7782-file-african_convention_conservation_nature_natural_resources.pdf; Convention on Wetlands of International Importance especially as Waterfowl Habitat (United Nations, *Treaty Series*, vol. 996, No. 245).

[164] A/CN.4/685; see, for example, paras. 224-228. See also the List of World Heritage in Danger established pursuant to article 11(4) of the Convention Concerning the Protection of the World Cultural and Natural Heritage.

106. The Ramsar Convention allows a Contracting Party to delete or restrict the boundaries of a wetland already included in the List of Wetlands of International Importance, established under the Convention, because of "urgent national interests". [165] Such deletions or restrictions should be compensated for by the designation of another wetland with similar habitat values, either in the same area or elsewhere, as a Ramsar Site.[166]

107. The revised version of the African Convention on the Conservation of Nature and Natural Resources[167] directly regulates military and hostile activities in article XV. Not only does it include measures to be taken during an armed conflict, but also ones that should be taken before and after an armed conflict.[168] The original version of the Convention did not include references to military hostilities. The revised version of the Convention is not yet in force, but it nevertheless serves as an example of how States have chosen to address the protection of the environment in relation to armed conflicts.[169]

108. The Convention contains strong wording with respect to the parties' obligations before and during armed conflict. It is particularly notable that the parties "undertake to refrain from employing or threatening to employ methods or means of combat which are intended or may be expected to cause widespread, long-term, or severe harm to the environment and ensure that such means and methods of warfare are not developed, produced, tested or transferred". The formulation is stronger than the wording of the equivalent article 35 (3) of Additional Protocol I to the Geneva Conventions. In addition to covering the employment of certain means and measures of combat, it also covers the threat to employ such means and measures. Furthermore, it has replaced the cumulative requirement (widespread, long-term *and* severe damage to the environment) with a non-cumulative one (widespread, long-term *or* severe harm to the environment). It thus mirrors the formulation of the obligation in the Environmental Modification Convention, and also contains a prohibition on reprisals against the natural environment. Of particular relevance to the present report is the new undertaking by the parties to restore and rehabilitate areas damaged in the course of armed conflicts.[170] Finally, the Convention imposes an obligation on the

---

[165] Art. 2.5.

[166] Art. 4.2. Only a handful of boundary restrictions have occurred; see, for example, Ramsar Convention Secretariat, *The Ramsar Convention Manual: A Guide to the Convention on Wetlands (Ramsar, Iran, 1971)*, 6th edition (Gland: Ramsar Convention Secretariat, 2013), p. 51. Available from www.ramsar.org/sites/default/files/documents/library/manual6-2013-e.pdf.

[167] African Convention, *supra* note 163.

[168] Article XV on military and hostile activities reads:

"1. The Parties shall:

(a) take every practical measure, during periods of armed conflict, to protect the environment against harm;

(b) refrain from employing or threatening to employ methods or means of combat which are intended or may be expected to cause widespread, long-term, or severe harm to the environment and ensure that such means and methods of warfare are not developed, produced, tested or transferred;

(c) refrain from using the destruction or modification of the environment as a means of combat or reprisal;

(d) undertake to restore and rehabilitate areas damaged in the course of armed conflicts."

[169] This Convention was ratified by 13 States (as at the beginning of 2016). A total of 15 States is needed for entry into force, see www.au.int/en/sites/default/files/treaties/7782-sl-revised_-_nature_and_natural_resources_1.pdf.

[170] Art. XV, para. 1 (d).

parties to cooperate "to establish and further develop and implement rules and measures to protect the environment during armed conflicts".[171] The Convention does not make a distinction between international and non-international armed conflict.

109. Article 29 of the Convention on the Law of the Non-navigational Uses of International Watercourses contains an article dealing with international watercourses and installations in times of armed conflict.[172] It provides that such watercourses and related installations, facilities and other works "shall enjoy the protection accorded by the principles and rules of international law applicable in international and non-international armed conflict and shall not be used in violation of those principles and rules". Furthermore, article 31 obliges States Parties to "cooperate in good faith with the other watercourse States with a view to providing as much information as possible" in terms of information and data vital to national security.

**Post-conflict liability**

110. A number of liability conventions explicitly exempt damage caused by acts of war or armed conflict.[173] The fact that such liability is exempted cannot lead to the automatic conclusion that the application of the conventions per se are limited to peacetime.[174]

---

[171] Art. XVI, para. 2.

[172] See also the references to the Convention in A/CN.4/674, paras. 97-101.

[173] Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, done at Lugano on 21 June 1993 (Council of Europe, *European Treaty Series*, No. 150), art. 8(a), under which the operator is not liable under the Convention if he proves that the damages were "caused by an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character"; International Convention on Civil Liability for Oil Pollution Damage (United Nations, *Treaty Series*, vol. 973, No. 14097), art. III, para. 2: "No liability for pollution damage shall attach to the owner if he proves that the damage: (a) resulted from an act of war, hostilities, civil war, insurrection or a natural phenomenon of an exceptional, inevitable and irresistible character"; Vienna Convention on Civil Liability for Nuclear Damage (United Nations, *Treaty Series*, vol. 1063, No. 16197), art. IV(3)(a): "No liability under this Convention shall attach to an operator if he proves that the nuclear damage is directly due to an act of armed conflict, hostilities, civil war or insurrection"; Convention on Third Party Liability in the Field of Nuclear Energy (United Nations, *Treaty Series*, vol. 956, No. 13706) (as amended by the 1964, 1982 and 2004 Protocols), art. 9: "The operator shall not be liable for nuclear damage caused by a nuclear incident directly due to an act of armed conflict, hostilities, civil war, or insurrection". The reservations made by Austria and Germany in annex 1 to the Convention are notable, stating a "[r]eservation of the right to provide, in respect of nuclear incidents occurring in the Federal Republic of Germany and in the Republic of Austria respectively, that the operator shall be liable for damage caused by a nuclear incident directly due to an act of armed conflict, hostilities, civil war, insurrection or a grave natural disaster of an exceptional character". In addition, the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution (United Nations, *Treaty Series*, vol. 1110, No. 17146) (as amended by the 1976 and 1991 Protocols) excludes compensation for damages resulting from armed conflict in its article IV(2). United Nations Environment Programme, *Protection of the Environment during Armed Conflict: An Inventory and Analysis of International Law* (Nairobi: UNEP, 2009), p. 39 notes that "this limitation prevented the use of the Fund in responding to the oil spill at Jiyeh, Lebanon in 2006".

[174] See, for example, Silja Vöneky, "Peacetime environmental law as a basis of State responsibility for environmental damage caused by war" in Carl Bruch and Jay Austin, *The Environmental Consequences of War* (Cambridge: Cambridge University Press, 2000), p. 198: "International conventions establishing civil liability regimes exempt damage caused by measures and means of warfare. Nevertheless, this does not mean that the applicability of these conventions during

111. Other conventions contain sovereign immunity clauses, or explicitly exclude certain actors. This is often the case with conventions regulating law of the sea matters, such as the United Nations Convention on the Law of the Sea.[175] Article 32 stipulates that nothing in the Convention shall affect the immunities of warships and government ships operated for non-commercial purposes. Even if a warship or a government ship enjoys immunities, it does not necessarily follow that the flag State can be absolved from its obligation to follow the rules in the Convention.[176] Explicit provisions are often included to make clear that certain provisions are not meant to apply to warships or certain other vessels or aircraft. A prominent example is article 236 of the Convention, which deals with sovereign immunity.[177]

112. Similar provisions are found in the International Convention for the Prohibition of Pollution from Ships[178] and the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention).[179] The implications of obligations are not always apparent. At the same time, it should be noted that the International Maritime Organization (IMO) invoked the Barcelona Convention as a basis for providing assistance to Lebanon following the bombing of the facility at Jiyeh, which had caused an extensive oil spill in the Mediterranean Sea.[180]

113. Some conventions contain explicit provisions on the right of the State party to suspend, in whole or in part, the operation of a particular convention in case of war or other hostilities. The International Convention for the Prevention of Pollution of

---

armed conflicts is per se excluded, as their application is not limited to peacetime but to non-military conduct only."

[175] United Nations Convention on the Law of the Sea (United Nations, *Treaty Series*, vol. 1833, No. 31363). See also references in A/CN.4/685, para. 181, footnotes 244 and 270, paras. 216 and 217, footnotes 287 and 295, para. 221, footnote 306.

[176] See also A/CN.4/674, footnote 113, referring to the London Dumping Convention, art. VII, para. 4. Provisions providing for exemptions are of another legal character than provisions providing for immunity.

[177] United Nations Convention on the Law of the Sea, art. 236: "The provisions of this Convention regarding the protection and preservation of the marine environment do not apply to any warship, naval auxiliary, other vessels or aircraft owned or operated by a State and used, for the time being, only on government non-commercial service. However, each State shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such vessels or aircraft owned or operated by it, that such vessels or aircraft act in a manner consistent, so far as is reasonable and practicable, with this Convention.

[178] The International Convention for the Prohibition of Pollution from Ships (United Nations, *Treaty Series*, vol. 1340, No. 22484) contains a similar clause in article 3 (3), which acknowledges that the Convention "shall not apply to any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government non-commercial service. However, each Party shall ensure by the adoption of appropriate measures not impairing the operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable, with the present Convention."

[179] Convention for the Protection of the Mediterranean Sea against Pollution (United Nations, *Treaty Series*, vol. 1102, No. 16908). The 1995 amendment contains a similar sovereignty immunity clause in art. 3(5) which excludes the possibility of any effects on "the sovereign immunity of warships or other ships owned or operated by a State while engaged in government non-commercial service. However, each Contracting Party shall ensure that its vessels and aircraft, entitled to sovereign immunity under international law, act in a manner consistent with this Protocol."

[180] United Nations Environment Programme, *supra* note 173, p. 36. See also Ole Fauchald, David Hunter and Wang Xi (eds.), *Yearbook of International Environmental Law 2008* (Oxford: Oxford University Press, 2009), p. 23 and footnotes 114 and 115.

the Sea by Oil (OILPOL) and the London Dumping Convention serve as examples.[181] Nonetheless, States are sometimes obliged to give notice of the suspension (see, for example, OILPOL) or to consult with other Parties and IMO.[182]

114. A number of treaties are simply silent on the issue of their applicability in armed conflict. Such treaties include the Convention on Biological Diversity, the Nagoya Protocol, the Aarhus Convention, the United Nations Framework Convention on Climate Change, the United Nations Convention to Combat Desertification, the Convention on International Trade in Endangered Species, the Basel Convention and the Convention on Migratory Species.[183]

---

[181] International Convention for the Prevention of Pollution of the Sea by Oil (United Nations, *Treaty Series*, vol. 327, No. 4714), art. XIX: "In case of war or other hostilities, a Contracting Government which considers that it is affected, whether as a belligerent or as a neutral, may suspend the operation of the whole or any part of the present Convention in respect of all or any of its territories. The suspending Government shall immediately give notice of any such suspension to the Bureau."; Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Dumping Convention) (United Nations, *Treaty Series*, vol. 1046, No. 15749), art. V(2): possibility to deviate if obtaining special permit due to "emergencies, posing unacceptable risk relating to human health and admitting no other feasible solution". See also references in A/CN.4/674, footnote 113.

[182] London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, art. V(2): "the Party shall consult any other country or countries that are likely to be affected and the Organization which, after consulting other Parties, and international organizations as appropriate, shall, in accordance with article XIV promptly recommend to the Party the most appropriate procedures to adopt."

[183] Convention on Biological Diversity, United Nations, *Treaty Series*, vol. 1760, No. 30619 (although there are possible indications of applicability in article 3 and in article 14 regarding the obligation, as far as possible, to notify the potentially affected States of any grave danger to biodiversity; see also references in A/CN.4/674, note 226 and A/CN.4/685, para. 48 (contribution of Peru)); Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (see United Nations Environment Programme, document UNEP/CBD/COP/10/27, annex, decision X/1) (although note the possible indication of applicability in article 4); Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, United Nations, *Treaty Series*, vol. 2161, No. 37770 (see also reference in A/CN.4/674, note 123); United Nations Framework Convention on Climate Change, United Nations, *Treaty Series*, vol. 1771, No. 30822 (see also reference in A/CN.4/685, para. 48 (contribution of Peru)); United Nations Convention to Combat Desertification in those Countries Experiencing Serious Droughts and/or Desertification, Particularly in Africa, United Nations, *Treaty Series*, vol. 1954, No. 33480 (simply has a standard clause noting that the "provisions of this Convention shall not affect the rights and obligations of any Party deriving from a bilateral, regional or international agreement into which it has entered prior to the entry into force of this Convention for it", in article 8 (2)); Convention on International Trade in Endangered Species of Wild Fauna and Flora, United Nations, *Treaty Series*, vol. 993, No. 14537 (see also reference in A/CN.4/685, para. 48 (contribution of Peru)); Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, United Nations, *Treaty Series*, vol. 1673, No. 28911 (art. 4(12) notes that the Convention shall not "affect in any way the sovereignty of States over their territorial sea established in accordance with international law, and the sovereign rights and the jurisdiction which States have in their exclusive economic zones and their continental shelves in accordance with international law, and the exercise by ships and aircraft of all States of navigational rights and freedoms as provided for in international law and as reflected in relevant international instruments"); (see also reference in A/CN.4/685, para. 66 (contribution of Romania)); Convention on the Conservation of Migratory Species of Wild Animals, United Nations, *Treaty Series*, vol. 1651, No. 28395 (art. III (4)(b): "Parties that are Range States of a migratory species listed in Appendix I shall endeavour (…) to prevent, remove, compensate for or minimize the adverse effects of activities or obstacles that seriously impede or prevent the migration of the species.").

**International investment agreements (including bilateral investment treaties) and environmental protection**

115. It can be argued that international investment agreements are covered under article 5 and the related annex of the draft articles on the effects of armed conflict on treaties as treaties that are likely applicable in times of armed conflict. In particular, they may fall within the category of "Treaties of friendship, commerce and navigation and agreements concerning private rights". The commentaries to the draft articles note that the "use of the category of human rights protection may be viewed as a natural extension of the status accorded to treaties of [friendship, commerce and navigation] and analogous agreements concerning private rights, including bilateral investment treaties",[184] and that "treaty mechanisms of peaceful settlement for the disputes arising in the context of private investments abroad" may also fall within the category as "agreements concerning private rights".[185] Moreover, the memorandum compiled by the Secretariat in 2005 observes that the friendship, commerce and navigation treaties "were viewed as being in force during and after armed conflict in the overwhelming majority of cases outlined" and references the statement by Anthony Aust that "[t]reaties like investment protection agreements may not be suspended, given that their purpose is the mutual protection of nationals of the parties".[186]

116. Another compelling argument that international investment agreements continue to apply during armed conflict relates to the "full safety and security" provisions that most of these agreements contain, which provide for the protection of investments during situations of, for example, armed conflict (and thus indicate that the instrument would not cease to apply at the outbreak of such a conflict).

117. In a 2011 study of international investment agreements concluded by the Organization for Economic Cooperation and Development (OECD) countries, it was noted that 66 of such agreements contained provisions on the protection of the environment as a concern to both parties.[187] It was also noted that the frequency of such provisions in newly concluded agreements had increased greatly over the last decade. In terms of the substance of environmental protection in those provisions, the environmental concerns were nonetheless found to be surprisingly generic, which led the OECD analysts to suspect a "limited exchange between the investment and environmental policy communities".[188]

118. The increasing number of provisions on environmental protection in bilateral investment treaties by States across all regions serves as an interesting indicator of State practice relating to environmental protection. It is particularly interesting that certain States have a very high percentage of agreements that include clauses on environmental concern, particularly the following five countries (listed in order of percentage of international investment agreements that contained provisions for environmental protection in 2011): Canada, Japan, Mexico, New Zealand and the United States. For instance, the latest iteration of the United States model treaty in 2012 contains numerous provisions on environmental protection, including, for

[184] A/66/10, chap. VI, sect. E.2, commentary to the annex, para. (48).
[185] Ibid., para. (69).
[186] A/CN.4/550, para. 74 and footnote 267.
[187] Kathryn Gordon and Joachim Pohl, *Environmental Concerns in International Investment Agreements: A Survey* (OECD Working Papers on International Investment, 2011/01), available from http://dx.doi.org/10.1787/5kg9mq7scrjh-en.
[188] Ibid.

example, references to the "control of environmentally hazardous or toxic chemicals, substances, materials, and wastes, and the dissemination of information related thereto".[189]

119. Sometimes States choose to include a provision reserving policy space to regulate on environmental matters.[190]

120. Thus, a number of international investment agreements contain explicit provisions on environmental protection and/or provisions ensuring policy space for additional protection of the environment when foreign investments are involved.[191] International investment agreements may consequently provide additional incentives for States to protect the environment in peacetime and in times of armed conflict. It should be noted in this context that the commentary to the draft articles on the effects of armed conflicts on treaties observes that applicability is mainly a question regarding individual provisions, rather than the instrument as a whole, and references the case of *Clark v. Allen*, where the Supreme Court of the United States noted that the outbreak of a conflict does not necessarily suspend or abrogate treaty provisions, rather than referring to treaties or instruments as a whole.[192]

**Indigenous peoples**

121. As emphasized in previous reports,[193] indigenous peoples have a special relationship with their land. This is of particular importance since 95 per cent of the top 200 areas with the highest and most threatened biodiversity are indigenous territories.[194]

122. The special relationship between indigenous peoples and the natural environment has been recognized, protected and upheld by instruments such as the International Labour Organization (ILO) Indigenous and Tribal Peoples Convention and the United Nations Declaration on the Rights of Indigenous Peoples.[195] In

[189] United States Model Bilateral Investment Treaty (2012) (available from https://ustr.gov/sites/default/files/BIT%20text%20for%20ACIEP%20Meeting.pdf), art. 12(4)(b); see also, for example, art. 8(3)(c).

[190] Kathryn Gordon and Joachim Pohl, *supra* note 187. See also Wan Pun Lung, "Pre-conflict military activities: environmental obligations and responsibilities of States", *Chinese Journal of International Law*, vol. 14, No. 3 (2015) p. 465.

[191] As also noted by Wan Pun Lung, *supra* note 190. Regarding environmental policy space in international investment agreements, see also Åsa Romson, *Environmental Policy Space and International Investment Law* (PhD thesis, Stockholm University, 2012).

[192] A/66/10, chap. VI, sect. E.2, commentary to the annex, para. (33).

[193] See, for example, A/CN.4/674, paras. 164-166 and A/CN.4/685, para. 224. The issue has also been addressed in oral presentations by the Special Rapporteur.

[194] A/CN.4/674, para. 164. See also Gonzalo Oviedo, Luisa Maffi and Peter Bille Larsen, *Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity* (Gland: World Wide Fund for Nature, 2000), available from wwf.panda.org/wwf_news/?3781/Indigenous-and-Traditional-Peoples-of-the-World-And-Ecoregion-Conservation-An-Integrated-Approach-to-Conserving-the-worlds-Biological-and-Cultural-Diversity-English.

[195] United Nations Declaration on the Rights of Indigenous Peoples (General Assembly resolution 61/295, annex); ILO Indigenous and Tribal Peoples Convention, 1989 (No. 169) (United Nations, *Treaty Series*, vol. 1650, No. 28383), which revised the Indigenous and Tribal Populations Convention (No. 107) of 1957. The reports of the Special Rapporteur on the rights of indigenous peoples and the Special Rapporteur on human rights and the environment (previously the independent expert on human rights and the environment) provide a good overview of the rights of indigenous peoples in connection with the environment and natural resources.

addition, there is extensive case law of the Inter-American Court of Human Rights which demonstrates that the land and territories of indigenous peoples must be protected, regardless of whether or not they are owned.[196] The case law of the Court builds primarily, but not exclusively, on article 21 of the American Convention on Human Rights, which protects the close relationship between indigenous peoples and their lands, as well as with the natural resources on their ancestral territories, and the intangible elements arising from them.[197]

123. For instance, in *Río Negro Massacres v. Guatemala*, the Court held that "the culture of the members of the indigenous communities corresponds to a specific way of being, seeing and acting in the world, constituted on the basis of their close relationship with their traditional lands and natural resources, not only because these are their main means of subsistence, but also because they constitute an integral component of their cosmovision, religious beliefs and, consequently, their cultural identity".[198]

124. A large part of legislation and case law on the connection between indigenous peoples and the environment relate to participation in issues relating to their land and territories. Participatory rights of indigenous peoples are also outlined in ILO Convention C169, which requires that "special measures shall be adopted as appropriate for safeguarding the persons, institutions, property, labour, cultures and environment of the peoples concerned",[199] and in article 23 of the American Convention on Human Rights, which has been interpreted by the Court as allowing indigenous peoples to participate through "their own institutions and according to their values, practices, customs and forms of organization".[200]

125. In addition, the Inter-American Court of Human Rights has established safeguards requiring States to obtain the "free, prior, and informed consent [of indigenous peoples], according to their customs and traditions".[201] States are also required to confirm that any restrictions on indigenous and tribal peoples' property rights (such as the granting of concessions on their territories) still preserve, protect and guarantee the special relationship that they have with their ancestral lands and do not endanger their survival.

126. Certain national legislation provides interesting examples of State practice on the duty to consult and to seek the free, prior and informed consent of indigenous and local communities. For instance, the legislation of the Philippines provides for the right to free, prior and informed consent in a number of provisions, including

[196] See also A/CN.4/685, para. 117.

[197] For example, ILO Convention No. 169 (*supra* note 195). See also the reference in A/CN.4/674, para. 166.

[198] *Río Negro Massacres v. Guatemala*, Judgment (Preliminary Objection, Merits, Reparations and Costs), Case No. C-250, 4 September 2012, para. 177. As observed in A/CN.4/685 at footnote 157, the Court makes a cross-reference to the *Case of the Yakye Axa Indigenous Community v. Paraguay*, Judgment, Case No. C-125, 17 June 2005, para. 135, and the *Case of Chitay Nech et al. v. Guatemala*, Judgment, Case No. C-212, 25 May 2010, para. 147. See also, *Afro-Descendant Communities Displaced from the Cacarica River Basin (Operation Genesis) v. Colombia*, Judgment (Preliminary Objections, Merits, Reparations and Costs), Case No. C-270, 20 November 2013, paras. 346, 352, 354, 356 and 459.

[199] ILO Convention No. 169 (*supra* note 195), art. 4.

[200] *Case of Yatama v. Nicaragua*, Judgment (Preliminary Objections, Merits, Reparations and Costs), Series C No. 127, 23 June 2005, para. 225.

[201] *Case of the Saramaka People v. Suriname*, Judgment (Preliminary Objections, Merits, Reparations, and Costs), Series C No. 172, 28 November 2007, para. 134.

section 58 of Republic Act No. 8371, which provides that the "consent of the [indigenous communities] should be arrived at in accordance with its customary laws without prejudice to the basic requirements of existing laws on free and prior informed consent", when maintaining, managing and developing "[a]ncestral domains or portions thereof, which are found to be necessary for critical watersheds, mangroves, wildlife sanctuaries, wilderness, protected areas, forest cover, or reforestation as determined by appropriate agencies with the full participation of the [indigenous communities] concerned".[202]

127. The traditional knowledge of indigenous peoples on the usage of natural resources of the environment has also been emphasized by article 8(j) of the Convention on Biological Diversity and in the 2010 Nagoya Protocol to the Convention on Biological Diversity on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization, which includes specific references to indigenous and local communities. For example, article 5(2) stipulates that "[e]ach Party shall take legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from the utilization of genetic resources that are held by indigenous and local communities, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over these genetic resources, are shared in a fair and equitable way with the communities concerned, based on mutually agreed terms".

128. Traditional knowledge and usage of the environment can also contribute to education, as referenced, for example, in Expert Mechanism advice No. 1 (2009) on the right of indigenous peoples to education.[203] The document notes that the right of indigenous peoples to education is a "holistic concept incorporating mental, physical, spiritual, cultural and environmental dimensions".[204] This provides an interesting parallel to article 29(1)(e) of the Convention of the Rights of the Child, which stipulates that "States Parties agree that the education of the child shall be directed to: […] The development of respect for the natural environment".[205]

129. The following draft principle is proposed:

**Draft principle IV-1**
**Rights of indigenous peoples**

1. The traditional knowledge and practices of indigenous peoples in relation to their lands and natural environment shall be respected at all times.

2. States have an obligation to cooperate and consult with indigenous peoples, and to seek their free, prior and informed consent in connection with usage of their lands and territories that would have a major impact on the lands.

[202] Republic Act No. 8371 of 29 October 1997, which aims to "recognize, protect and promote the rights of indigenous cultural communities/indigenous peoples, creating a national commission on indigenous peoples, establishing implementing mechanisms, appropriating funds therefor, and for other purposes". It is available from www.gov.ph/1997/10/29/republic-act-no-8371/.
[203] See A/HRC/12/33, annex, available from www.refworld.org/docid/4ac1c3822.html.
[204] Ibid., para. 3.
[205] Convention on the Rights of the Child (United Nations, *Treaty Series*, vol. 1577, No. 27531).

**Access to and sharing of information and obligation to cooperate**

130. "Access to information" and "sharing of information" have been subject to an increasing number of international agreements in recent decades. Both concepts are closely connected to the duty to cooperate, since they often rely on cooperation for their effective implementation. It is well known that the Commission has long had its focus on the meaning and extent of these aspects. Various provisions on sharing of information can be found in conventions that have been adopted on the basis of the work of the Commission.[206] The same is the case with the "duty to cooperate" and several conventions also contain provisions on cooperation based on the work of the Commission.[207] Moreover, there are numerous provisions relating to the sharing of information[208] *and* cooperation[209] in texts that the Commission has developed.

---

[206] Vienna Convention on Consular Relations (United Nations, *Treaty Series*, vol. 596, No. 8368), arts. 5(c) and 37; Convention on Special Missions (United Nations, *Treaty Series*, vol. 1400, No. 23431), art. 11(1) (f); Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons, including Diplomatic Agents (United Nations, *Treaty Series*, vol. 1035, No. 15410), arts. 4(b), 5 and 11; Vienna Convention on the Representation of States in their Relations with International Organizations of a Universal Character (United Nations publication, Sales No. E.75.V.12), arts. 15(1)(e) and 47; Convention on the Law of the Non-navigational Uses of International Watercourses (General Assembly resolution 51/229, annex), arts. 9, 11, 12, 14-16, 19, 30, 31 and 33 (7).

[207] Convention on the High Seas (United Nations, *Treaty Series*, vol. 450, No. 6465), arts. 12(2), 14 and 25 (2); Convention on Fishing and Conservation of the Living Resources of the High Seas (United Nations, *Treaty Series*, vol. 559, No. 8164), art. 1 (2) and art. 2; Convention on Special Missions (United Nations, *Treaty Series*, vol. 1400, No. 23431), p. 231, preambular para. 2; Vienna Convention on the Law of Treaties (United Nations, *Treaty Series*, vol. 1155, No. 18232), preambular paras. 2 and 7; Convention on the Prevention and Punishment of Crimes against Internationally Protected Persons, including Diplomatic Agents (United Nations, *Treaty Series*, vol. 1035, No. 15410) art. 4 and preambular paras. 1 and 2; Vienna Convention on the Representation of States in their Relations with International Organizations of a Universal Character, arts. 6, 7 and 76 and preambular paras. 2 and 4; Vienna Convention on Succession of States in respect of Treaties (United Nations, *Treaty Series*, vol. 1946, No. 33356), preambular para. 5; Vienna Convention on Succession of States in respect of State Property, Archives and Debts (United Nations publication, Sales No. E.94.V.6), art. 28 (4) and preambular para. 5; Vienna Convention on the Law of Treaties between States and International Organizations or between International Organizations, done at Vienna on 21 March 1986 (United Nations publication, Sales No. E.94.V.5), preambular para. 9; Convention on the Law of the Non-navigational Uses of International Watercourses, arts. 5 (2), 6 (2), 8, 14, 23, 25 (1), 28 (3) and (4), 30 and 31 and preambular para. 6.

[208] International Law Commission, Articles on nationality of natural persons in relation to the succession of states (1999), art. 18; International Law Commission, Articles on the prevention of transboundary harm from hazardous activities (2001), arts. 8, 12-14 and 17; International Law Commission, Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities (2006), principle 5; International Law Commission, Articles on the law of transboundary aquifers (2008), arts. 8, 13, 15, 17 and 19.

[209] International Law Commission, Draft Convention on the Elimination of Future Statelessness, 1954, preambular para. 2; Model Rules on Arbitral Procedure, 1958, art. 18(2); Draft Statute for an International Criminal Court, 1994, arts. 26(2)(e), 44(2), 51, 53(1), 56 and preambular para. 1; Articles on the Responsibility of States for Internationally Wrongful Acts, 2001, art. 41(1); Articles on the prevention of transboundary harm from hazardous activities, 2001, arts.4, 14, 16 and preambular para. 5; Principles on the allocation of loss in the case of transboundary harm arising out of hazardous activities, 2006, principles 5(c) and 8(3); Articles on the law of transboundary aquifers, 2008, arts. 7, 11(2), 16, 17(2)(b), 17(4), 19 and preambular paras. 8 and 10; Conclusions on the reservations dialogue, 2011, art. 9; Articles on the responsibility of international organizations, 2011, art. 42(1); draft articles on the protection of persons in the event of disasters, first reading, 2014 (A/69/10, chap. V, sect C.1), arts. 8, 9 and 10.

131. The duty to cooperate is often referred to as a well-established principle of international law, including through the work of the Commission.[210] Since it is not the aim of the present report to repeat what the Commission has already done in this area, but rather to build upon it, the Special Rapporteur starts from the assumption that "[t]he duty to cooperate is well established as a principle of international law and can be found in numerous international instruments", as it has recently been formulated.[211]

132. As will be shown below, States involved in an armed conflict are obliged to record and share information with the Protecting Power even during the armed conflict, for example on missing persons and on identity cards, just to give a few examples.[212] They are also obliged to record the laying of mines and share information in order to clear landmines and explosive remnants of war. The latter obligations have become more and more stringent with every new treaty.[213]

133. However, obligations to provide access to and to share information go beyond the relatively limited regulations in the law of armed conflict. The obligations have become crucial also in other areas of international law. This is a reflection of new realities, including the trend of increasing international cooperation. Unless States and organizations have access to data and are willing to share this information with other relevant actors, the outcome of international cooperation will be limited. Access to and sharing of information is cost-effective. But more importantly, access to information is part of human rights. An overarching right to information can be found in the Universal Declaration of Human Rights[214] and in the International Covenant on Civil and Political Rights.[215] A right to environmental information has also been developed within the context of the European Convention on Human Rights as exemplified in the case of *Guerra and Others v. Italy*, where the European Court of Human Rights decided that the plaintiffs had a right to environmental information on the basis of article 8 of the Convention (the right to family life and privacy).[216] The implementation guide to the Aarhus Convention correspondingly notes that "[i]n the past few years, access to information has also gained increasing recognition as a human right, implicit in the right to freedom of expression

---

[210] See, for example, para. 1 of the commentary to draft article 8 [5] of the draft articles on the protection of persons in the event of disasters adopted by the Commission on first reading (A/69/10, chap. V, sect C.2).

[211] Ibid.

[212] Protocol additional to the Geneva Conventions of 12 August 1949 and relating to the protection of victims of international armed conflicts (Additional Protocol I) (United Nations, *Treaty Series*, vol. 1125, No. 17512), art. 33; Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field (First Geneva Convention) (United Nations, *Treaty Series*, vol. 75, No. 970), art. 16; Geneva Convention relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention) (United Nations, *Treaty Series*, vol. 75, No. 373), art. 137; Geneva for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea (Second Geneva Convention) (United Nations, *Treaty Series*, vol. 75, No. 971), arts. 19 and 42; Geneva Convention Relative to the Treatment of Prisoners of War (Third Geneva Convention) (United Nations, *Treaty Series*, vol. 75, No. 972), art. 23.

[213] See sect. II.D of the present report.

[214] General Assembly resolution 217 A (III), art. 19.

[215] See International Covenant on Civil and Political Rights (United Nations, *Treaty Series*, vol. 1057, No. 14688), arts. 19 (freedom of expression) and 25 (right to take part in public affairs).

[216] *Guerra and Others v. Italy*, Application No. 14967/89, European Court of Human Rights, 1998.

guaranteed by a number of global and regional treaties".[217] Furthermore, access to reliable information about the environment is critical for its protection, and for proving liability in terms of damages.

134. It is evident that the access to and sharing of information on the territory of a foreign State rests on the consent of that State, either through its consent to be bound by an international agreement or through the granting of permission on a case-by-case basis. This is also one of the reasons that some Conventions have provisions which regulate security and defence concerns.

135. Since the Convention on Environmental Impact Assessments in a Transboundary Context (Espoo Convention) has already been mentioned at some length in the preliminary report in 2014, it will not be addressed extensively in this context.[218] However, regarding environmental impact assessments, it is worth mentioning that a recent decision by the International Court of Justice in the joined cases between Costa Rica and Nicaragua has widened the scope from that provided in the case of *Pulp Mills on the River Uruguay*.[219] According to the Court, environmental impact assessments have to be done in connection to any activity that may be potentially harmful, and not just industrial activities, as was the case in *Pulp Mills on the River Uruguay*.[220]

136. The requirement to collect information and data pertaining to the environment can be found in numerous sources of international law, both at the global and regional levels. As the applicability of these agreements has already been discussed on a more general level, the following section will focus on some of the substantive obligations outlined in these agreements as they pertain to collecting and sharing environmental information.

137. The Aarhus Convention[221] was of pivotal importance when it was concluded in 1998. The reason is that the Convention "grants the public rights and imposes on Parties and public authorities obligations regarding access to information and public participation".[222]

138. The Aarhus Convention defines "environmental information" as any information pertaining to the state of elements of the environment, to factors affecting or likely to affect elements of the environment, and to the state of human

---

[217] United Nations Economic Commission for Europe, *The Aarhus Convention: An Implementation Guide*, second edition (2014), p. 76, available from www.unece.org/fileadmin/DAM/env/pp/Publications/Aarhus_Implementation_Guide_interactive_eng.pdf.

[218] See A/CN.4/674, para. 150.

[219] Joined Cases concerning *Certain Activities carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica), Merits, Judgment, I.C.J Reports 2015*, available from www.icj-cij.org/docket/files/152/18848.pdf. See also *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, *I.C.J. Reports 2006*, para. 204: "it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource".

[220] *Certain Activities carried out by Nicaragua in the Border Area* and *Construction of a Road in Costa Rica along the San Juan River*, *supra* note 219, para 104.

[221] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (United Nations, *Treaty Series*, vol. 2161, No. 37770).

[222] United Nations Economic Commission for Europe, *supra note* 217, p. 15. The Convention has 47 parties, including the European Union.

health and safety insofar as it may be affected by these elements.[223] It further stipulates that parties must "make such (environmental) information available to the public, within the framework of national legislation". Such a right of citizens necessarily entails a duty for States to collect such environmental information for the purposes of making it available to the public if and when requested to do so.[224]

139. Other conventions also regulate the exchange of information between the parties to the convention. These include, for example, the Convention on Biological Diversity[225] and the United Nations Convention on Combating Desertification.[226] Further examples include the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade[227] and the Stockholm Convention on Persistent Organic Pollutants,[228] both of which contain provisions on access to information. Similarly, the 2013 Minamata Convention on Mercury stipulates that parties shall "promote and facilitate" access to such information.[229]

140. A number of soft law documents also address the issue of information, more or less explicitly. These include the 1972 Action Plan for the Human Environment,[230] the Rio Declaration[231] and the 2002 Johannesburg Plan of Implementation.[232]

---

[223] Aarhus Convention, art. 2.

[224] Ibid., art. 4.

[225] Convention on Biological Diversity, arts. 14 and 17.

[226] United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (United Nations, *Treaty Series*, vol. 1954, No. 33480); see, for example, articles 16 and 19, which call for parties to make information on desertification "fully, openly and promptly available".

[227] See the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (United Nations, *Treaty Series*, vol. 2244, No. 337), art. 15.

[228] Stockholm Convention on Persistent Organic Pollutants (United Nations, *Treaty Series*, vol. 2256, No. 119), art. 10.

[229] Minamata Convention on Mercury, done at Kumamoto, Japan on 10 October 2013, art 18. It could also be noted in this context that the United Nations Framework Convention on Climate Change addresses access to information in article 6, noting that the Parties shall: "Promote and facilitate at the national and, as appropriate, subregional and regional levels, and in accordance with national laws and regulations, and within their respective capacities: […] public access to information on climate change and its effects". The recently concluded Paris Agreement similarly addresses access to information in numerous paragraphs and articles, for example, as part of the responsibility for States to provide Intended Nationally Determined Contributions in article 4 (8) of the Agreement, and more generally regarding climate change education and public access to information in article 12 (see FCCC/CP/2015/L.9/Rev.1).

[230] See *Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972* (A/CONF.48/14/Rev.1), part one, chap. II, recommendation 7 (a). The relevant text is available from www.unep.org/documents.multilingual/default.asp?DocumentID=97&ArticleID=1506&l=en. Although the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration) did not address access to information as such, the Action Plan recommended that Governments and the Secretary-General "provide equal possibilities for everybody […] by ensuring access to relevant means of information, to influence their own environment by themselves".

[231] Principle 10 of the Rio Declaration states that "at the national level, each individual shall have appropriate access to information that is held by public authorities, including information on hazardous materials and activities in their communities" and calls upon States to "facilitate and encourage public awareness and participation by making information widely available". See the Rio Declaration on Environment and Development and Agenda 21 (*Report of the United Nations*

141. The outcome document of the 2012 United Nations Conference on Sustainable Development, "The future we want", echoes the importance of access to information: "We underscore that broad public participation and access to information and judicial and administrative proceedings are essential to the promotion of sustainable development".[233]

142. Scholars have linked the obligation to collect and gather environmental information to the principle of precaution and the duty of care of the natural environment under article 55(1) of Additional Protocol I to the Geneva Conventions, remarking that "[t]he principle of precaution therefore imposes certain duties of precaution on belligerent parties to take measures to protect the natural environment. In this respect advance information gathering is crucial".[234] Hulme makes a similar suggestion, noting that the environment cannot be sufficiently protected without intelligence gathering, and notes that this intelligence gathering

---

*Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992*, vol. I, *Resolutions Adopted by the Conference* (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annexes I and II). The 2015 Oxford Commentary on the Rio Declaration provides that even though the principle is crafted so as to avoid including the term "right", "it is reasonably impossible for a State to properly comply with Principle 10 without granting, in some sense, rights to access to information", cf. Jonas Ebbesson, "Principle 10: Public Participation" in Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development. A Commentary* (Oxford: Oxford University Press, 2014), pp. 287-311 (Rio Commentary), at p. 291: "Although Principle 10 is carefully drafted so as to not include the term right, it is reasonably impossible for a State to properly comply with Principle 10 without granting, in some sense, rights to access to information". The Commentary also notes that access to information is the element of Principle 10 that is most frequently addressed in environmental agreements, see p. 293 of the Commentary: "Among the elements of Principle 10, public access to information is most widely provided for in environmental agreements. The information to be made publicly available and the opportunities for public participation to be provided depend on the scope and purpose of agreement itself."

[232] Building on the commitments in the Stockholm Declaration and the Rio Declaration, the 2002 Johannesburg Plan of Implementation committed States to "[e]nsure access, at the national level, to environmental information and judicial and administrative proceedings in environmental matters", and facilitate access to information regarding water resources and management, and to "[p]rovide affordable local access to information to improve monitoring and early warning related to desertification and drought". See *Plan of Implementation of the World Summit on Sustainable Development* (2002) (available from www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf), paras. 128 and 41 (e), respectively. See also, for example, paras. 112 and 164. In 2002, the International Law Association published its New Delhi Declaration of Principles of International Law Relating to Sustainable Development, which includes access to information as one of seven core principles, and concedes that public participation "requires a right of access to appropriate, comprehensible and timely information held by governments and industrial concerns on economic and social policies regarding the sustainable use of natural resources and the protection of the environment, without imposing undue financial burdens upon the applicants and with due consideration for privacy and adequate protection of business confidentiality". See International Law Association, *New Delhi Declaration of Principles of International Law Relating to Sustainable Development* (2 April 2002), Resolution 2/2002.

[233] See General Assembly resolution 66/288, annex, para. 43.

[234] Cordula Droege and Marie-Louise Tougas, "The Protection of the Natural Environment in Armed Conflict — Existing Rules and Need for Further Legal Protection", *Nordic Journal of International Law*, vol. 82, No. 1 (2013), p. 21, at p. 34.

"undeniably […] resembles the concept of environmental impact assessments (EIA) as utilised in environmental law".[235]

143. Having access to relevant information on the environment is also necessary to justify how a military decision that has been made complies with the obligations under the rule of military necessity. As noted by the recent United States Law of War Manual, the available environmental information in turn affects military necessity, in that "[t]he limited and unreliable nature of information available during war has influenced the development of the law of war. For example, it affects how the principle of military necessity is applied".[236] The manual also notes that this "limited and unreliable nature of information […] is recognized in the law of war's standards for how persons are to assess information".[237]

144. As regards the practice of international organizations on this topic, it is worth recalling that the UNEP guidelines on integrating environment in post-conflict assessments include a reference to the importance of public participation and access to information, as "natural resource allocation and management is done in an ad hoc, decentralized, or informal manner" in post-conflict contexts.[238]

145. The United Nations environmental policy for United Nations field missions stipulates that peacekeeping missions shall assign an environmental officer to provide environmental information relevant to the operations of the mission and promote awareness of environmental issues. The policy also contains a requirement to disseminate and study information on the environment, which would presuppose access to information which can in fact be disseminated — and thus is not classified. In a similar vein, the NATO military guidelines on environmental protection contain a standard concerning the "exchange of information on [environmental protection] procedures, standards [and] concerns (…)".[239] In addition, the 1992 ICRC guidelines for military manuals and instructions on the protection of the environment in times of armed conflict contain a paragraph on the protection of organizations.[240] This could include environmental organizations gathering environmental data as a means of "contributing to preventing or repairing damage to the environment", for instance by using modern technology to gather data through civil society organizations and individuals, as reflected in a recent report on the Syrian Arab Republic.[241]

---

[235] Karen Hulme, *War Torn Environment: Interpreting the Legal Threshold* (Leiden: Brill, 2004), p. 82.

[236] United States of America Department of Defense, *Law of War Manual* (June 2015), p. 17 (emphasis added). Available from www.dod.mil/dodgc/images/law_war_manual15.pdf.

[237] Ibid., p. 18.

[238] See UNEP Guidance Note, *Integrating Environment in Post-Conflict Needs Assessments* (Geneva, 2009), available from http://postconflict.unep.ch/publications/environment_toolkit.pdf.

[239] North Atlantic Treaty Organization, *NATO Military Principles and Policies for Environmental Protection*, MC 469, para. 8(5): Information exchange.

[240] See A/49/323, annex, guideline 19, referring to the Fourth Geneva Convention, art. 63.2 and Additional Protocol I, arts. 61-67.

[241] See PAX, *Amidst the Debris… A Desktop Study on the Environmental and Public Health Impact of Syria's Conflict*, (PAX, 2015), available from www.paxforpeace.nl/stay-informed/news/amidst-the-debris-environmental-impact-of-conflict-in-syria-could-be-disastrous. It should be noted that ICRC Guideline 19 refers to pursuant to special agreements between the parties or (…) permission granted by one of them.

146. In the case before the International Court of Justice between Uganda and the Democratic Republic of the Congo, one of the challenges related to the lack of data necessary to prove environmental harm and damage caused in connection to a violation of the prohibition against attacking installations containing dangerous forces.[242] Such a lack of information was also mentioned in the final report to the Prosecutor of the International Tribunal for the Former Yugoslavia by the committee established to review the NATO military operations during the Balkan wars.[243] Efforts to gather reliable information would be more manageable if the information was less fragmented and could be collected in a more systematic fashion. Improving the expediency of justice would benefit both the claimant and defendant in such cases. The evidence required is naturally closely related to the definition of harm, both in terms of what is required to meet the threshold as defined in the Rome Statute, the Environmental Modification Convention and other international instruments, as well as any requirements for necessity that may not meet that threshold, but which still needs to be balanced against the different interests.

147. Regarding "environmental damage" generally, it has been noted that there is no commonly accepted definition of what such damage entails.[244] The definition of the concept naturally affects the standard of proof, and the amount and quality of data that is needed.

148. The United Nations Convention on the Law of the Non-navigational Uses of International Watercourses, which entered into force in August 2014, stipulates that State parties shall cooperate in good faith in order to achieve adequate protection of an international watercourse.[245] The Convention also requires parties to provide prior notification and exchange information with regard to any planned measure that might significantly harm other transboundary watercourse states. Importantly, the Convention requires parties to cooperate in good faith also regarding information that is vital for national security and defence.[246]

149. A breach of this duty to share information and to notify other parties of any activities and measures that may affect the watercourses, can, in accordance with the general principles of international law, enable other parties to claim damages, in accordance with international tort law.[247]

---

[242] See, for example, *Armed Activities on the Territory of the Congo (Democratic Republic of Congo v. Uganda), Application Instituting Proceedings, I.C.J Reports 1999*, pp. 15 and 17, available from www.icj-cij.org/docket/files/116/7151.pdf.

[243] *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia* (June 2000), available from www.icty.org/x/file/About/OTP/otp_report_nato_bombing_en.pdf, paras. 22 and 24. See also Mara Tignino, "Water, International Peace, and Security", *International Review of the Red Cross*, vol. 92 No. 879 (2010), pp. 647-675, at p. 662.

[244] Cf. Akiva Fishman and others, "Peace Through Justice: International Tribunals and Accountability for Wartime Environmental Wrongs" in Carl Bruch, Carroll Muffett and Sandra S. Nichols (eds.), *Governance, Natural Resources, and Post-Conflict Peacebuilding* (Earthscan, forthcoming 2016), p. 21.

[245] Convention on the Law of the Non-navigational Uses of International Watercourses (General Assembly resolution 51/229, annex), art. 8.

[246] Ibid., art. 31. References to these obligations were also made in the preliminary report, see A/CN.4/674, para. 100.

[247] Cf., for example, Alistair Rieu-Clarke, Ruby Moynihan and Bjørn-Oliver Magsig, *UN Watercourses Convention User's Guide* (IHP-HELP Centre for Water Law, Policy and Science) (available from www.gwp.org/Global/Our%20Approach/Strategic%20Allies/User's%20Guide

150. The joint mechanisms and commissions provide an additional example of possibilities for cooperation and trust building in the context of shared resources.[248] Improving water governance has been used as a tool for mitigating tension and hostilities in several different contexts, such as, for example in Liberia, Afghanistan and Nigeria.[249] One commission that may serve as a promising example is the Lake Victoria Basin Commission, which is supported by the East African Community. The Commission describes its function as "to promote, facilitate and coordinate activities of different actors towards sustainable development and poverty eradication of the Lake Victoria Basin", and maintains an aquatic biodiversity database to that end.[250] The Southern African Development Community (SADC) Revised Protocol on Shared Watercourses concluded between Namibia, Botswana and Angola has been mentioned as another useful example that may serve as a role model for others.[251] The Protocol requires the Parties to "exchange available information and data regarding the hydrological, hydro geological, water quality, meteorological and environmental condition of shared watercourses"[252] and more generally "individually and, where appropriate, jointly, protect and preserve the ecosystems of a shared watercourse".[253]

151. In conclusion, it can be seen that the importance of baseline studies and information has been repeatedly emphasized in numerous consultations between the Special Rapporteur and States, and in consultations with international organizations. As mentioned above, providing such information would also be important for determining military necessity and assessing environmental damage in the aftermath of conflicts. Military manuals and handbooks would be valuable in this regard and could also facilitate discussions on these issues. It would also be useful to draw on the experience and resources already existing within international organizations.[254]

---

%20to%20the%20UN%20Watercourses%20Convention%20(2012).pdf), p. 134: "The legal effect of a breach of the duty to notify can be deduced from general principles of international law, for example, a state might be liable under the principles of international tort law for the damage caused to co-riparians by its failure to transmit relevant data and information."

[248] Convention on the Law of the Non-navigational Uses of International Watercourses, arts. 8 and 9.

[249] See, for example, Erika Weinthal, Jessica Troell and Mikiyasu Nakayama (eds), *Water and Post-Conflict Peacebuilding* (New York: Earthscan, 2014), available from http://environmentalpeacebuilding.org/publications/books/water-and-post-conflict-peacebuilding/. See also David Jensen, Alec Crawford, Carl Bruch, "Policy Brief: 4: Water and Post-Conflict Peacebuilding" (2014), available from www.environmentalpeacebuilding.org/assets/Documents/LibraryItem_000_Doc_425.pdf.

[250] See the International Water Governance website for more information: www.internationalwatersgovernance.com/lake-victoria-basin-commission-and-the-lake-victoria-fisheries-organization.html.

[251] Communications between the Stockholm International Water Institute and the Special Rapporteur. For more information about the Protocol, see Southern African Development Community, Revised Protocol on Shared Watercourses, done at Windhoek on 7 August 2000, available from www.sadc.int/documents-publications/show/Revised_Protocol_on_Shared_Watercourses_-_2000_-_English.pdf.

[252] Ibid., art. 3(6).

[253] SADC Protocol Ibid., art. 4(2)(a).

[254] Cf. International Law and Policy Institute, "Protection of the Environment in Times of Armed Conflict", Report from the Expert Meeting on Protection of the Environment in times of Armed Conflict (Helsinki, 14-15 September 2015), para. 2.3.4: "It was emphasized that the military offers an opportunity of implementation as including the protection of the environment in military frameworks can have huge reverberating effects into the system without a lot of costs. The time is ripe to work on the military and the cultural norms. One possible concrete measure

At times, armed forces may already have access to such data and information — or at least be able to retrieve it without incurring high costs.[255]

152. The following draft principle on access to and sharing of information is therefore proposed:

**Draft principle III-5**
**Access to and sharing of information**

In order to enhance the protection of the environment in relation to armed conflicts, States and international organizations shall grant access to and share information in accordance with their obligations under international law.

## B. Practice of States and international organizations

153. The present section addresses certain forms of practice of States and international organizations which have not been included in the previous chapters of this report. It is often difficult to divide this practice between practice that relates to the planning of an operation, for example, and practice that relates to the termination of an operation. Therefore, some references to preparatory measures are included in this section. This serves the purpose of showing the relatively new approach that States and international organizations have taken so as to prevent and mitigate environmental harm.

### Peace agreements

154. Modern peace agreements often contain provisions on the protection or management of the environment and associated natural resources. Such provisions may range from a mere encouragement or obligation to cooperate, to provisions which set out in detail the authority that will be responsible for matters relating to the environment, such as preventing environmental crimes and enforcing national laws. Regulations on natural resources and the sharing of communal resources are often prominent. Provisions on environmental protection are common in agreements that aim to end non-international armed conflicts, and there seem to be few agreements where such provisions are entirely absent. Most of the examples referred to below are peace agreements between a Government and a non-State actor.

155. There are several examples of modern peace agreements that regulate the distribution of responsibility for matters relating to the environment. The 1992 Chapultepec Agreement between the Government of El Salvador and the Frente Farabundo Martí para la Liberación Nacional prescribes that it is the role of the Environment Division of the National Civil Police to "be responsible for preventing and combating crimes and misdemeanours against the environment".[256] The 1998 Northern Ireland Peace Agreement (the Good Friday Agreement) is another

---

may be to add a negative for all World Heritage sites into targeting databases."

[255] Ibid., para. 2.3.4.

[256] Peace Agreement between the Government of El Salvador and the Frente Farabundo Martí para la Liberación Nacional (Chapultepec Agreement), done at Mexico City on 16 January 1992 (A/46/864, annex; available from http://peacemaker.un.org/elsalvador-chapultepec92), chap. II. Further regulations are found in annex II, art. 13.

example. It consists of an agreement reached in the multiparty negotiations and stipulates that agricultural, environmental, aquaculture and marine matters may be included in areas for North-South cooperation. It also prescribes that the Government of the United Kingdom will make rapid progress with "a new regional development strategy for Northern Ireland…. protecting and enhancing the environment".[257] The 1999 Interim Agreement for Peace and Self-Government in Kosovo (Rambouillet Accords) contains an interim Constitution which prescribes which authorities are responsible for the protection of the environment.[258] According to the interim Constitution, the Assembly is responsible for protecting the environment where intercommunal issues are involved, while the communes are responsible for protecting the communal environment.[259] The 2000 Arusha Peace and Reconciliation Agreement for Burundi[260] contains several references to the protection of the environment, one of which prescribes that one of the missions of the intelligence services is "[t]o detect as early as possible any threat to the country's ecological environment".[261] Furthermore, it states that "[t]he policy of distribution or allocation of new lands shall take account of the need for environmental protection and management of the country's water system through protection of forests".[262]

156. The 2003 Final Act of the Inter-Congolese Political Negotiations encompasses numerous references to the protection of the environment and its natural resources.[263] This includes a specific resolution "[r]elating to disputes over the reconstruction of the environment destroyed by war".[264] In considering the damage caused to the ecosystems and the living environment in the Democratic Republic of the Congo by the presence of a huge number of Rwandan refugees in 1994, as well as the wars of 1996-1997 and 1998, the resolution requested and recommended "the establishment of a special ad hoc Commission of Inquiry within the transitional Parliament, if necessary with the participation of national and international experts, with a view to identifying destroyed sites, assessing the extent of the damage, apportioning responsibility, identifying perpetrators and victims and determining the nature and level of compensation and reparation".[265] The resolution further requested and recommended that the international community recognize "the state of destruction of the environment in the Democratic Republic of Congo as a disaster of world-wide proportions".[266] Resolution 23 of the Final Act is devoted entirely to the setting up of an emergency programme for the environment.[267]

---

[257] The Northern Ireland Peace Agreement (Good Friday Agreement), done at Belfast on 10 April 1998, available from http://peacemaker.un.org/uk-ireland-good-friday98, at p. 20.

[258] See S/1999/648, annex.

[259] Ibid., pp. 14 and 25.

[260] Arusha Peace and Reconciliation Agreement for Burundi, done at Arusha on 28 August 2000, available from http://peacemaker.un.org/node/1207, at p. 62 at art. 12(3)(e) and p. 81 at art. 8(h).

[261] Ibid., Protocol III, p. 62 at art. 12(3)(e).

[262] Ibid., Protocol IV, p. 8 at art. 8 (h).

[263] These are contained in its 36 binding resolutions annexed to the Final Act. See Final Act of the Inter-Congolese Political Negotiations, done at Sun City on 2 April 2003, available from http://peacemaker.un.org/drc-suncity-agreement2003.

[264] Ibid., Resolution No: DIC/CEF/03, pp. 40-41.

[265] Ibid., p. 41.

[266] Ibid.

[267] Ibid., at p. 23. Resolution No: DIC/CHSC/03 at pp. 62-65. The Congolese authorities were requested to establish this programme in order to rehabilitate flora and fauna, especially in

157. The 2005 Comprehensive Peace Agreement between the Government of the Republic of the Sudan and the Sudan People's Liberation Movement/Sudan People's Liberation Army contains several provisions on the management and sustainable use of natural resources. It specifically provides that the National and State Governments shall have concurrent legislative and executive competencies with respect to environmental management, conservation and protection.[268]

158. The 2006 Darfur Peace Agreement is clearly focused on three aspects: wealth sharing, the need to address environmental degradation and the implementation of principles of sustainable development.[269] This includes the development, management and planning of land and natural resources.[270] The 2008 Juba Peace Agreements include the Agreement on Comprehensive Solutions between the Government of the Republic of Uganda and Lord's Resistance Army/Movement.[271] The section on economic and social development of North and North-Eastern Uganda addresses the significant environmental degradation that has been caused by the conflict in these areas and holds that "measures shall be taken to restore and manage the environment sustainably".[272]

159. There are also agreements that regulate the management of natural resources without referring to environmental protection as such. For example, the 1999 Lomé Peace Agreement regulates strategic mineral resources.[273]

160. These examples clearly show that environmental considerations have become an accepted part of peace agreements. The following draft principle is therefore proposed:

**Draft principle III-1**
**Peace agreements**

Parties to a conflict are encouraged to settle matters relating to the restoration and protection of the environment damaged by the armed conflict in their peace agreements.

---

national parks, reserves, and other protected sites; secure national parks, reserves, and all other protected sites; clean up the urban and rural environment; fight against erosion and landslides; restore the ecology and ecosystems by more efficient management of population migration; return illegally exported species and protect endangered species; preserve medicinal flora with which the Democratic Republic of the Congo is exceptionally richly endowed, and de-mine affected rural areas.

[268] See chap. V of the Comprehensive Peace Agreement between the Government of the Republic of the Sudan and the Sudan People's Liberation Movement/Sudan People's Liberation Army, available from http://peacemaker.un.org/node/1369, at p. 71. Other examples can be found in chap. III at p. 45, which set out as guiding principles that "the best known practices in the sustainable utilization and control of natural resources shall be followed" (para. 1.10). Further regulations on oil resources are found in paras. 3.1.1 and 4.

[269] Darfur Peace Agreement, done at Abuja on 5 May 2006, available from http://peacemaker.un.org/node/535, chap. 2, p. 21 at art. 17 (107) (g) (h).

[270] Ibid., p. 30 at art. 20.

[271] Agreement on Comprehensive Solutions between the Government of the Republic of Uganda and Lord's Resistance Army/Movement, done at Juba on 2 May 2007, available from www.beyondjuba.org/BJP1/peace_agreements.php.

[272] Ibid., p. 10 at para. 14.6.

[273] Peace Agreement between the Government of Sierra Leone and the Revolutionary United Front of Sierra Leone (S/1999/777, annex), art. VII. Available from http://peacemaker.un.org/sierraleone-lome-agreement99.

**Status of forces and status of mission agreements**

161. The term "status of forces agreement" refers to an agreement concluded between a host State and a foreign State which is stationing military forces in the territory of the host State. Status of forces agreements somewhat resemble lease agreements.[274] Provisions concerning environmental matters are rarely included in status of forces agreements. At the same time, it should be noted that many status of forces/status of mission agreements include an obligation to respect local laws. Status of forces agreements cover a specified period of time, which ranges from short-term and rather temporary stationing to long-term stationing. Older status of forces agreements often contain exemptions, for example on responsibility for clean-up after withdrawal. This is likely to change to reflect that the foreign State has the responsibility to properly restore the environment once the base area is left or once the agreement terminates. An interesting example is the agreement between Germany and other NATO States, which not only makes it clear that German environmental law is applicable to all activities on German installations, but also explicitly regulates environmental damage claims.[275] The Australian status of forces agreement contains a similar provision.[276] Another good example, though wider than a status of forces agreement, is the new agreement between the United States and the Philippines, called the Enhanced Defense Cooperation Agreement, which was concluded in 2014. Unlike the previous agreement from 1947, it contains environmental and human health regulations.[277] The United States-Philippine agreement is a relevant agreement in many respects. The environmental provisions in this agreement focus on the prevention of environmental damage. In addition to the provisions on applicable laws and standards, it also provides for a review process. The status of mission agreement under the European Security and Defence Policy makes several references to environmental obligations.[278] A further indication that environmental factors are being taken into consideration when concluding status of forces agreements is the fact that the United States and Japan recently signed the Environmental Clarification of Status of Forces Agreement, which supplements the United States-Japan status of forces agreement and contains stricter environmental standards.[279] Another relevant example is the United States-Iraq agreement, which contained an explicit provision on the protection of the environment, providing that:

---

[274] Dinah Shelton and Isabelle Cutting, "If You Break It, Do You Own It?" *Journal of International Humanitarian Legal Studies*, vol. 6 (2015), p. 1 at p. 25.

[275] Agreement to Supplement the Agreement between the Parties to the North Atlantic Treaty regarding the Status of their Forces with respect to Foreign Forces stationed in the Federal Republic of Germany (Supplementary Agreement to the NATO Status of Forces Agreement), done on 3 August 1959, amended by the Agreements of 21 October 1971 and 18 March 1993 (United Nations, *Treaty Series*, vol. 481), p. 262.

[276] Agreement Concerning the Status of United States Forces in Australia (United Nations, *Treaty Series*, vol. 469), art. 12(7)(e)(i).

[277] Shelton and Cutting, *supra* note 274, pp. 27-28.

[278] Aurel Sari, "Status of Forces and Status of Mission Agreements under the ESDP: The EU's Evolving Practice", *European Journal of International Law*, vol. 19, No. 1 (2008), p. 67. Article 9 of the *Concordia* status of forces agreement provides a duty to respect international norms regarding, inter alia, the sustainable use of natural resources. See Sari, at p. 89.

[279] For a press release see www.pacom.mil/Media/News/tabid/5693/Article/620843/us-japan-sign-environmental-clarification-of-status-of-forces-agreement.aspx. See supplement to the Treaty of Mutual Cooperation and Security: Facilities and Areas and the Status of United States Armed Forces in Japan, United States-Japan (11 UST 1654, TIAS No. 4510).

> "Both Parties shall implement this Agreement in a manner consistent with protecting the natural environment and human health and safety. The United States reaffirms its commitment to respecting applicable Iraqi environmental laws, regulations, and standards in the course of executing its policies for the purposes of implementing this Agreement."[280]

States and international organizations have not directly provided the Special Rapporteur with information on their status of mission or status of forces agreements. However, many of the agreements are available through public channels.

**Draft principle I-3**
**Status of forces and status of mission agreements**

States and international organizations are encouraged to include provisions on environmental regulations and responsibilities in their status of forces or status of mission agreements. Such provisions may include preventive measures, impact assessments, restoration and clean-up measures.

**Resolutions of the Security Council**

162. The Security Council has continued to address the protection of the environment and natural resources in relation to armed conflict in its resolutions. The practice of the Security Council up to 31 December 2014 was described in the second report.[281] The present section is therefore limited to the practice of the Security Council from 1 January 2015 until 2 March 2016.[282]

163. Of the 76 resolutions adopted during this period, many continued to address the illicit trade, exploitation and smuggling of natural resources, as well as wildlife poaching. The connection between such acts and their threat to international peace and security is made clear through various formulations.[283] The Council continued to stress the importance of effective management of natural resources for the prospect of sustainable peace and security.[284] None of the resolutions adopted during 2015 address the protection of the environment as such. However, there is often an intermediary stage of explicitly identified threats to international peace and security, as those just mentioned above, and the protection of the environment.

164. Many resolutions continue to address non-State actors, albeit without reference to their status under international law.[285]

---

[280] Agreement between the United States of America and the Republic of Iraq on the Withdrawal of United States Forces from Iraq and the Organization of Their Activities during their Temporary Presence in Iraq, done in Baghdad on 17 November 2008, art. 8.

[281] A/CN.4/685, paras. 83 and 84. For the resolutions adopted in the context of the Iraq-Kuwait war and the subsequent establishment of the United Nations Compensation Commission, see sect. II.B of the present report.

[282] As of 1 January 2015 the Security Council had adopted a total of 2,195 resolutions, of which 242 (or 11 per cent) addressed natural resources in some manner.

[283] See, for example, Security Council resolutions 2196 (2015), 2198 (2015), 2217 (2015), 2237 (2015), 2253 (2015) and 2262 (2016).

[284] See, for example, Security Council resolutions 2202 (2015), 2210 (2015), 2237 (2015), 2239 (2015) and 2198 (2015).

[285] See, for example, Security Council resolutions 2196 (2015), 2211 (2015), 2217 (2015) and 2262 (2015).

165. The Security Council has frequently addressed the role of natural resources in fuelling and financing terrorist acts and acts by non-State actors.[286] This follows the practice referred to in the second report. However, this practice is not included in the present section since it falls outside the scope of the present topic. It should also be added that the Security Council has passed several resolutions which address the importance of clearing landmines.

166. In conclusion, the resolutions adopted between 1 January 2015 and 2 March 2016 follow a previously established pattern, as described in the second report.

**The United Nations and its specialized agencies and programmes**

167. Many of the departments, funds and programmes of the United Nations and its specialized agencies are involved in post-conflict measures which have a bearing on the environment or that aim at rebuilding and restoring damaged environments. As referred to in the preliminary report, the Secretary-General has created the so-called "Greening the Blue" initiative, which aims to function as an in-house environmental sustainable management programme.[287]

168. The Report of the High-level Independent Panel on Peace Operations provides that "[t]he impact and positive presence of [peacekeeping] missions should also be enhanced by better communications, both globally and locally, and improving the Organization's commitment to environmental impact".[288] The Secretary-General responded to this call by, inter alia, appointing a Special Adviser on Environment and Peace Operations in September 2015.

169. As noted in the 2014 preliminary report by the Special Rapporteur, the Department of Peacekeeping Operations and the Department of Field Support of the United Nations Secretariat have developed a joint environmental policy for their operations, including obligations to develop environmental baseline studies and adhere to a number of multilateral environmental agreements.[289] The policy refers to treaties and instruments such as the Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), the World Charter for Nature, the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Convention on Biological Diversity and the Ramsar Convention as standards that the mission considers when establishing its environmental objectives and procedures. Moreover, the policy notes that international environmental treaties, environmental norms and standards agreed at the United Nations provide practical information for the mission to establish minimum standards to achieve its environmental objectives. In addition, the policy contains references to energy, water and waste management, wild animals and plants, and the management of cultural and historical resources.[290]

170. The environmental impact of an international peace operation stretches from the planning phase through the entire operative part of the operation. It also carries over to the post-operation phase. The optimal goal is that the international operation should leave no negative environmental footprints at all. This is what differentiates

[286] See, for example, Security Council resolutions 2198 (2015), 2199 (2015), 2210 (2015), 2212 (2015), 2213 (2015), 2233 (2015), 2249 (2015), 2253 (2015) and 2255 (2015).
[287] See A/CN.4/674, para. 44.
[288] A/70/95-S/2015/446, summary.
[289] See A/CN.4/674, para. 43.
[290] See www.un.org/en/peacekeeping/issues/environment/approach.

it from a situation in which a State is engaged in an international or non-international armed conflict, as an armed conflict will always leave environmental footprints, some of which will be more negative than others.

171. The situation is different when an international organization operates under a mandate by the Security Council or upon the invitation of a State. On the one hand, the organization is expected to meet not only the obligations under international law, but also the policy standards that have been developed by the various branches of the organization. On the other hand, international operations require cooperation with both internal and external actors that have different goals and capabilities. States that contribute to an international operation may have a variety of environmental standards.

172. The mere presence of multiple actors (e.g. peacekeepers, humanitarian agencies, displaced persons and the local population) places pressure on the environment. The cumulative effects and strains on a fragile environment may be considerable. At the same time, it is more or less impossible to allocate legal responsibility and liability for a deteriorated environment, resulting in a situation where "[n]obody is accountable for the cumulative environmental footprint".[291]

173. Thus, it is suggested that two draft principles should specifically address how States and organizations involved in peace operations could recognize and remediate the negative environmental effects of such operations; one pertains to prevention and another to reviews at the conclusion of a peace operation.

**Draft principle I-4**
**Peace operations**

States and organizations involved in peace operations shall consider the impacts of those operations on the environment and take all necessary measures to prevent, mitigate and remediate the negative environmental consequences thereof.

**Draft principle III-2**
**Post-conflict environmental assessments and reviews**

[…]

2. Reviews at the conclusion of peace operations should identify, analyse and evaluate any environmentally detrimental effects of those operations on the environment, in an effort to mitigate or remedy those detrimental effects in future operations.

**United Nations Environment Programme**

174. Since 1999, UNEP has been involved in field-based environmental assessments and efforts to strengthen the national environmental management capacity in States affected by conflicts and disasters. This implies, for example, determining environmental impacts from conflicts and risks for human health, livelihoods and security. Since the work of UNEP is critical for the understanding of

[291] Annica Waleij and Birgitta Liljedahl, "The Gap between Buzz Words and Excellent Performance: The Environmental Footprint of Military and Civilian Actors in Crises and Conflict Settings" FOI-R-4246-SE (2016), p. 23.

post-conflict environmental measures, it is necessary to refer briefly to the mandate of UNEP and to exemplify its work.

175. UNEP has a general mandate to promote international cooperation in the field of the environment, to recommend, as appropriate, policies to that end, and to provide general policy guidance for the direction and coordination of the environmental programmes within the United Nations system.[292] This mandate has evolved in accordance with the resolutions of the Governing Council and the recently established United Nations Environment Assembly.[293] The mandate includes furthering the development of international environmental law aiming at sustainable development and advancing the implementation of agreed international norms and policies.[294] It was a UNEP report that recommended that the Commission should examine the existing international law relating to the protection of the environment during armed conflict and recommend how it could be clarified, codified and expanded.[295]

176. In addition, UNEP has a mandate to "study the feasibility of developing legal mechanisms for mitigating damage caused by military activities".[296] Relevant issues include the removal of military hardware that harms the environment and the restoration of elements of the environment which have been damaged by military activities.[297] UNEP is also encouraged to collaborate with UNESCO and other international organizations "for the protection of certain designated areas of natural and cultural heritage in times of armed conflict".[298]

177. UNEP has been called upon by the United Nations system and Member States to conduct impartial assessments of the environmental consequences of armed conflict. The first assignment for UNEP in this area was to determine the extent of

---

[292] General Assembly resolution 2997 (XXVII) of 15 December 1972.

[293] It should be noted here that in 2013, the Governing Council was given universal membership and renamed the United Nations Environment Assembly, to reflect the expanded role for UNEP following the United Nations Conference on Sustainable Development, which was held in 2012. See General Assembly resolution 67/251 of 13 March 2013. See also Assembly resolution 67/213 of 21 December 2012, paras. 4(a) and 4(b), regarding the expanded role of UNEP and universal membership of the Governing Council following the United Nations Conference on Sustainable Development.

[294] UNEP, Nineteenth session of the Governing Council, Resolution 19/1, *Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme*, 7 February 1997 (UNEP/GC.19/34), at 3(a), 3(b) and 3(c).

[295] Cf. the syllabus of the topic contained in the report of the International Law Commission on its sixty-third session (A/66/10), annex E and the preliminary report on the protection of the environment in relation to armed conflicts, A/CN.4/674, para. 8. See also UNEP, *Protecting the Environment During Armed Conflict: An Inventory and Analysis of International Law* (Nairobi: UNEP, 2009), p. 53. The report was a joint product of UNEP and the Environmental Law Institute.

[296] This mandate stems from the Montevideo Programme IV. The Montevideo Programmes for the Development and Periodic Review of Environmental Law have served as the basis for UNEP activities relating to environmental law since 1982. The Montevideo Programme IV (concluded in 2009) contains a specific section on the protection of the environment in relation to military activities, with the objective to "reduce or mitigate the potentially harmful effects of military activities on the environment and to encourage a positive role for the military sector in environmental protection". See UNEP/GC/25/INF/15, D(f).

[297] For general information on the Montevideo Programme, see www.unep.org/delc/MontevideoProgramme.

[298] UNEP/GC/25/INF/15, D(d)(iii). See also UNEP/Env.Law/MTV4/MR/1/5, para. 160.

the damage and risks to human health from the Kosovo conflict in 1999. The Secretary-General requested UNEP and the United Nations Human Settlements Programme (Habitat) to jointly undertake an independent and scientific assessment of the environmental and human settlement impacts. The assessment focused on five main conflict-related impacts: pollution from bombed industrial sites, damage to the Danube River, damage to protected areas and biodiversity, impacts on human settlements and the use of depleted uranium weapons. The assessment also considered the existing legal and institutional framework for environmental management, as well as national capacity for implementation and enforcement.

178. To conduct the assessment, UNEP established the Balkans Task Force.[299] A series of field missions was conducted with mobile laboratories which were used to analyse field samples, supplemented by remote sensing and GIS analysis. The final UNEP report detailed the environmental impacts of the conflict together with recommendations for addressing risks and building governance capacity.[300]

179. Following the establishment of the Disasters and Conflicts subprogramme, UNEP now works in four overarching areas. First, upon requests from national Governments, UNEP conducts post-conflict environmental assessments by employing in-depth fieldwork, laboratory analysis and state-of-the-art technology. In addition to the environmental assessment of the Kosovo conflict, the organization has assessed the environmental aspects of armed conflicts and crises in numerous situations, including those involving the Central African Republic, Afghanistan, Nigeria, the Occupied Palestinian Territories, Ukraine, Sudan, Sierra Leone, Haiti and the Dominican Republic, Lebanon, Liberia, Côte d'Ivoire, the Democratic Republic of the Congo, Iraq, Lebanon, Rwanda and Somalia.[301] The assessments identify major environmental impacts from the armed conflicts and provide independent technical recommendations to national authorities on how risks can be addressed and national environmental management capacity can be built. Second, UNEP manages post-crisis environmental recovery through field-based project offices, whose aim is to "support long-term stability and sustainable development in conflict and disaster-affected countries".[302] Third, the Environmental Cooperation for Peacebuilding programme has been helping the United Nations system and Member States understand and address the role of the environment and natural resources in conflict and peacebuilding, for example by building a global evidence base, developing a joint policy analysis across the United Nations system and facilitating the application of good practices in the field.[303] The fourth area is

[299] The Balkans Task Force consisted of international experts from six United Nations agencies, 19 countries and 26 scientific institutions and non-governmental organizations, as well as local advisers.

[300] United Nations Environment Programme, "The Kosovo Conflict: Consequences for the Environment and Human Settlements" (1999), available from http://postconflict.unep.ch/publications/finalreport.pdf.

[301] See the information on the UNEP website regarding post-crisis environmental recovery, at www.unep.org/disastersandconflicts/CountryOperations/UNEPsCurrentActivities/tabid/54617/Default.

[302] Ibid.

[303] See UNEP, *Addressing the Role of Natural Resources in Conflict and Peacebuilding: A Summary of Progress from UNEP's Environmental Cooperation for Peacebuilding Programme* (Nairobi: UNEP, 2015).

disaster risk reduction,[304] which will not be addressed here as it falls outside the core scope of the topic.

180. There is often a lack of reliable neutral and technical information on environmental conditions during and after armed conflict, even though such information is particularly vital in the immediate aftermath of an armed conflict (for example baseline data to assist remediation, restoration and recovery efforts).[305] The work of the Disasters and Conflicts subprogramme serves to mitigate this information shortage by providing technical information and advice on issues such as resource mediation, extractive industries and gender-responsive resource governance, in addition to conducting post-conflict environmental assessments upon request from the Government in question. Among other projects, UNEP has partnered with the World Bank at the request of the g7+ group of fragile and conflict-affected States[306] to address this information gap in conflict-affected States. One of the initiatives is developing an open data platform for the extractives sector. This platform will consolidate authoritative extractives data into a single platform, offer open data licences for users and assist community consultations and participatory monitoring of benefits sharing agreements and environmental performance.[307]

181. UNEP continues to develop capacity-building in matters relating to the environment, natural resources and conflict, for example through the recent guide on best practices for mediators on resource-sensitive dispute resolution[308] and the report entitled *Women and Natural Resources: Unlocking the Peacebuilding Potential*, which demonstrates the connections between mitigating environmental degradation, equitable access to essential resources and women's empowerment.[309]

182. While the recommendations of post-conflict environmental assessments are not legally binding, it is clear that the technical information and advice provided by UNEP has had an impact. For instance, following the findings of the UNEP assessment of the Kosovo conflict, environmental needs were included in the three humanitarian appeals from 2000 to 2002. In Afghanistan, the findings of the

---

[304] See the UNEP website for information on disaster risk reduction, at www.unep.org/disastersandconflicts/Introduction/DisasterRiskReduction/tabid/104159/Default.aspx.

[305] See, for example, David Jensen and Steve Lonergan (eds.), *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding* (New York: Earthscan, 2012), p. 128. A recent outcome report from an expert meeting in Helsinki on the protection of the environment in times of armed conflicts recommended that UNEP should devote dedicated and systematic attention to follow-up measures after environmental assessments in terms of addressing acute environmental risks and preventing further humanitarian impacts, see International Law and Policy Institute, "Protection of the Environment in Times of Armed Conflict" (Report from the expert meeting held in 14-15 September 2015), chap. 4(3).

[306] The g7+ is "an international, inter-governmental organization that exists to provide a collective voice for countries affected by conflict, to forge pathways out of fragility and conflict, and to enable peer learning on how to achieve resilience and support between member countries". More information is available on the g7+ website, www.g7plus.org/en.

[307] See the Map X information materials, Map X, "Mapping and Assessing the Performance of Extractive Industries", at www.mapx.io/data/brochure_map_x.pdf.

[308] United Nations Environment Programme, United Nations Entity for Gender Equality and the Empowerment of Women, United Nations Peacebuilding Support Office and United Nations Development Programme, *Women and Natural Resources: Unlocking the Peacebuilding Potential* (2013), available from www.undp.org/content/dam/undp/library/crisis%20prevention/WomenNaturalResourcesPBreport2013.pdf.

[309] Ibid., p. 15.

environmental assessment were reflected in the national recovery plan (Securing Afghanistan's Future) and in the common country assessment and the United Nations Development Assistance Framework, with natural resource management and rehabilitation listed as a major priority for reconstruction and development throughout.[310] States should be encouraged to continue to collaborate with and make use of the expertise of UNEP in environmental assessment and protection in the aftermath of armed conflicts.

183. At its second session, held in Nairobi from 23 to 27 May 2016, the United Nations Environment Assembly adopted a resolution on protection of the environment in areas affected by armed conflict, in which it stressed "the critical importance of protecting the environment at all times, especially during armed conflict, and of its restoration in the post-conflict period".[311] The Assembly called on all Member States to implement applicable international law related to the protection of the environment in situations of armed conflict and to consider consenting to be bound by relevant international agreements. States were also urged "to take all appropriate measures to ensure compliance with the relevant international obligations under international humanitarian law". The Assembly requests the Executive Director of UNEP "to continue interaction with the International Law Commission, inter alia by providing relevant information to the Commission at its request in support of its work pertaining to the protection of the environment in relation to armed conflict".[312]

184. The resolution of the United Nations Environment Assembly is the first of its kind since the resolutions on the protection of the environment were adopted in the General Assembly in the 1990s.[313] The resolution is important for several reasons. The basic thrust of the resolution is to encourage States to recognize the importance of safeguarding the natural environment in times of armed conflict for future generations (i.e. an intergenerational approach). It also stresses the relevance of international law in all phases of armed conflict and the importance of cooperation between States and between States and international organizations. The Executive Director of UNEP is requested to continue to provide enhanced assistance to States affected by armed conflict and States in post-conflict situations, and to report back to the Environment Assembly as soon as possible.

185. Even though the resolution is not legally binding, it may have important practical implications since it stresses international cooperation and also contains a clear directive to the Executive Director with respect to the future work of the organization.

186. Thus, it is suggested that a draft principle be included which specifically addresses how States and organizations involved in post-conflict operations should cooperate on these issues. The draft principle could read as follows.

---

[310] See, for example, David Jensen and Steve Lonergan (eds.), *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding* (New York: Earthscan, 2012) pp. 26-27 (regarding Kosovo) and p. 31 (regarding Afghanistan).

[311] UNEP/EA.2/L.16/Rev.2.

[312] UNEP/EA.2/L.16.

[313] See A/66/10, annex E, paras. 10-12.

**Draft principle III-2**
**Post-conflict environmental assessments and reviews**

1. States and former parties to an armed conflict are encouraged to cooperate between themselves and with relevant international organizations in order to carry out post-conflict environmental assessments and recovery measures.

[…]

## C. Legal cases and judgments

187. As stated before, the international jurisprudence on the protection of the environment in relation to armed conflict is not all that extensive, but it does exist. A comprehensive review of the jurisprudence of international and regional courts and tribunals was presented in the second report.[314] That analysis aimed to identify existing case law that either (a) applied provisions of international humanitarian treaty law that directly or indirectly protects the environment during times of armed conflict or (b) considered, explicitly or implicitly, that there is a connection between armed conflict and the protection of the environment. In addition, cases relating to the situation of peoples and civilian populations were reviewed.

188. The present report contains a review of relevant jurisprudence of international, regional and national courts and tribunals in order to identify cases in which provisions of international law that (directly or indirectly) protect the environment in the aftermath of armed conflict were applied or discussed.

189. The review focuses on cases considering restoration and remediation of areas of major environmental importance; environmental damages for harm resulting directly or indirectly from military activities; and effects on, and references to, provisions on human rights and the rights of indigenous peoples as a result of environmental degradation in the aftermath of armed conflict, particularly in connection to remediation and restoration efforts.

190. The analysis primarily includes a thorough review of judgments and advisory opinions rendered by the following international courts and tribunals: the International Court of Justice, the Permanent Court of International Justice, the International Criminal Court, the International Tribunal for the Former Yugoslavia, the International Criminal Tribunal for Rwanda, the Extraordinary Chambers in the Courts of Cambodia and the Special Court for Sierra Leone. The jurisprudence of three regional courts has also been studied, namely, the African Court of Human and Peoples' Rights, the Inter-American Court of Human Rights and the European Court of Human Rights. As the jurisprudence of the European Court of Human Rights is extensive, a selection had to be made in order to limit the review to the most pertinent cases. In addition to the jurisprudence of the courts mentioned above, the review considers relevant jurisprudence of the Nuremberg Military Tribunal and the United Nations War Crimes Commission. Cases adjudicated by the domestic courts of the United States, the United Kingdom, France and Italy were also reviewed.[315] The review also considers selected reports by the Governing Council of the United Nations Compensation

[314] A/CN.4/685, paras. 92-119.
[315] However, no relevant case law of United Kingdom, French or Italian courts was found.

Commission, certain aspects of the legal implications of the nuclear testing in the Pacific and cases heard by the Eritrea-Ethiopia Claims Commission.

191. No relevant case law from the Permanent Court of International Justice, the International Criminal Tribunal for Rwanda, the Extraordinary Chambers in the Courts of Cambodia, the Special Court for Sierra Leone or the African Court of Human and Peoples' Rights was found.

192. In this regard, it is worth noting that the statutes of a number of international tribunals give them the power to prosecute crimes against property and/or the environment.[316] However, the penalties that these tribunals are entitled to impose are largely limited to imprisonment (as opposed to, for example, remediation), which may explain why they rarely consider the issue of environmental protection after armed conflict.[317]

---

[316] See, for example, article 8 of the Statute of the International Criminal Court ("1. The Court shall have jurisdiction in respect of war crimes …. 2. For the purpose of this Statute, "war crimes" means: … (b) … (iv) Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated."); article 3 of the statute of the International Criminal Tribunal for the Former Yugoslavia ("The International Tribunal shall have the power to prosecute persons violating the laws or customs of war. Such violations shall include … (b) wanton destruction of cities, towns or villages, or devastation not justified by military necessity; (c) attack, or bombardment, by whatever means, of undefended towns, villages, dwellings, or buildings; (d) seizure of, destruction or wilful damage done to institutions dedicated to religion, charity and education, the arts and sciences, historic monuments and works of art and science; (e) plunder of public or private property."); article 6 of the Law on the Establishment of Extraordinary Chambers in the Courts of Cambodia ("The Extraordinary Chambers shall have the power to bring to trial all Suspects who committed or ordered the commission of grave breaches of the Geneva Conventions of 12 August 1949, such as the following acts against persons or property protected under provisions of these Conventions …: … destruction and serious damage to property, not justified by military necessity and carried out unlawfully and wantonly …"); and article 5 of the statute of the Special Court for Sierra Leone ("The Special Court shall have the power to prosecute persons who have committed the following crimes under Sierra Leonean law: … b. Offences relating to the wanton destruction of property …: i. Setting fire to dwelling — houses …; ii. Setting fire to public buildings … and … other buildings …."). On the other hand, this is not the case for the statute of the International Criminal Tribunal for Rwanda, whose jurisprudence discussed the destruction of property only for the purpose of establishing the crime of genocide (see, for example, *Prosecutor v. Elizaphan and Gérard Ntakirutimana*, Trial Chamber, Judgment and Sentence, Cases No. ICTR-96-10 & ICTR-96-17-T, 21 February 2003, paras. 334 and 365.

[317] See, for example, article 77 of the Statute of the International Criminal Court ("[T]he Court may impose one of the following penalties on a person convicted of a crime referred to in article 5 of this Statute: (a) Imprisonment for a specified number of years …; or (b) A term of life imprisonment … In addition to imprisonment, the Court may order: (a) A fine under the criteria provided for in the Rules of Procedure and Evidence; (b) A forfeiture of proceeds, property and assets derived directly or indirectly from that crime …"); article 24 of the statute of the International Criminal Tribunal for the Former Yugoslavia ("The penalty imposed by the Trial Chamber shall be limited to imprisonment. … In addition to imprisonment, the Trial Chambers may order the return of any property and proceeds acquired by criminal conduct, including by means of duress, to their rightful owners."); and article 19 of the statute of the Special Court for Sierra Leone ("The Trial Chamber shall impose upon a convicted person … imprisonment for a specified number of years. … In addition to imprisonment, the Trial Chamber may order the forfeiture of the property, proceeds and any assets acquired unlawfully or by criminal conduct, and their return to their rightful owner or to the State of Sierra Leone.").

193. As underlined in the second report of the Special Rapporteur, it is difficult to make a distinction between the protection of the environment as such and the protection of natural objects in the natural environment and natural resources.[318] The fact that "the environment" can be "property" of a person or a group of persons makes it difficult to clearly distinguish between the two. Furthermore, there is often a close link between human rights and the right of ownership to land and resources.

**Jurisprudence of international courts**

194. In the case concerning *Armed Activities on the Territory of the Congo*, one of the issues that the International Court of Justice had to decide was whether or not Uganda had violated the sovereignty of the Democratic Republic of the Congo by illegally exploiting its natural resources. The Court ultimately found that it had ample evidence that members of the Uganda People's Defence Force (UPDF) had looted, plundered and exploited the natural resources of the Democratic Republic of the Congo and held that Uganda was internationally responsible for those acts and thus had an obligation to make reparation.[319] Regarding reparations, the Court ruled that: "[F]ailing agreement between the Parties, the question of reparation due … shall be settled by the Court, and reserves for this purpose the subsequent procedure in the case."[320] On 9 July 2015, the Court decided to resume the proceedings with regard to the question of reparations, and fixed the time limits for the filing of written pleadings. This phase of the proceedings is still ongoing.

195. In its advisory opinion on the *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, the International Court of Justice found that the construction of the wall caused serious repercussions for agricultural production.[321] The Court found that reparations had to be made.[322] The Court went on to reiterate the finding of the Court in the *Factory at Chorzów* case that "reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed. …".[323] The Court ultimately concluded that: "Israel is accordingly under an obligation to return the land, orchards, olive groves and other immovable property seized from any natural or legal person for purposes of construction of the wall in the Occupied Palestinian Territory. In the event that such restitution should prove to be materially impossible, Israel has an obligation to compensate the persons in question for the damage suffered. The Court considers that Israel also has an obligation to compensate, in accordance with the applicable rules of international law, all natural or legal persons having suffered any form of material damage as a result of the wall's construction."[324]

[318] A/CN.4/685, para. 96.
[319] *Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda), Judgment, I.C.J. Reports 2005*, paras. 242, 245 and 250.
[320] Ibid., para. 259.
[321] *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004*, para. 133.
[322] Ibid., para. 152.
[323] Ibid. See *Factory at Chorzów (Germany v. Poland) Advisory Opinion* P.C.I.J. Series A 1927, No. 9, p. 47.
[324] Ibid.

**Jurisprudence of regional human rights courts**

196. The Inter-American Court of Human Rights has been active in addressing claims relating to violations of human rights and the rights of indigenous peoples as a result of environmental degradation in the aftermath of armed conflict. The case of *Plan de Sánchez Massacre v. Guatemala* concerned the massacre of 268 members of the indigenous Mayan community and the destruction of their homes and property at the village of Plan de Sánchez, which was carried out by members of the Guatemalan Army and civil collaborators who participated under the protection of the army.[325] Some of the evidence given in the case indicated that, as a result of the property damage during the attacks, the soil in the area became less productive and the community struggled to harvest and sell their crops.[326]

197. In the *Ituango Massacres v. Colombia* case, the Court held that: "[S]etting fire to the houses in El Aro constituted a grave violation of an object that was essential to the population. The purpose of setting fire to and destroying the homes of the people of El Aro was to spread terror and cause their displacement, so as to gain territory in the fight against the guerrilla in Colombia …. Therefore, the effect of the destruction of the homes was the loss, not only of material possessions, but also of the social frame of reference of the inhabitants, some of whom had lived in the village all their lives. In addition to constituting an important financial loss, the destruction of their homes caused the inhabitants to lose their most basic living conditions; this means that the violation of the right to property in this case is particularly grave. … Based on the above, this Court considers that the theft of the livestock and the destruction of the homes by the paramilitary group, perpetrated with the direct collaboration of State agents, constitute a grave deprivation of the use and enjoyment of property."[327] Regarding compensation, the Court held that although many victims were displaced after their property was destroyed by the paramilitary groups, the Court "will not establish compensation for pecuniary damage in favor of the persons who lost their homes and those who were displaced, because this damage will be repaired by other non-pecuniary forms of reparation".[328]

198. The case of *Xákmok Kásek Indigenous Community v. Paraguay* is relevant to the present report even though it does not deal with a situation of armed conflict. Members of the Xákmok Kásek, an indigenous community in Paraguay, brought a claim against the State before the Inter-American Court of Human Rights to reclaim ancestral land which had since become privately owned. The Court comprehensively discussed the rights to indigenous property and the harm that can be done to a people as a result of environmentally adverse activities.[329] The Court consistently stressed the importance of the relationship between indigenous people and their land, and ultimately held that Paraguay had violated, inter alia, the right to collective property of the community.[330] The Court held that Paraguay had to return

[325] *Plan de Sánchez Massacre v. Guatemala*, Judgment (Reparations), Case No. C-116, 19 November 2004, paras. 73, 74 and 80.
[326] Ibid., p. 9.
[327] *Ituango Massacres v. Colombia*, Judgment (Preliminary Objections, Merits, Reparations and Costs), Case No. C-148, 1 July 2006, paras. 182-183.
[328] Ibid., para. 375.
[329] *Xákmok Kásek Indigenous Community v. Paraguay*, Judgment, Case No. C-214, 24 August 2010, paras. 282-284 and 321.
[330] Ibid., paras. 85, 86, 112, 113, 281 and 315-325.

the land and also to pay compensation. To the extent that ownership of land becomes an issue in an armed conflict scenario, the language used in this case could prove useful in understanding the legal relationship of indigenous or other peoples to any piece of land in question.

199. The case of *Río Negro Massacres v. Guatemala* concerned the massacre, destruction and burning of property of the community of Río Negro. The Court addressed the impact on indigenous communities regarding the destruction of their natural resources. The Court noted the special relationship that indigenous peoples have with their land and held that "Guatemala is responsible for the violation of Article 22(1) of the American Convention, in relation to Article 1(1) thereof, to the detriment of the survivors of the Río Negro massacres".[331] On the basis of this and other violations, the Court ordered damage compensation in favour of the victims.

200. In the *Massacres of El Mozote and neighboring locations v. El Salvador* case, the Inter-American Court of Human Rights held that: "[T]he destruction and arson by the Armed Forces of the homes of the inhabitants of the village of El Mozote, the canton of La Joya, the villages of Ranchería, Los Toriles and Jocote Amarillo and the canton of Cerro Pando, and the possessions that were inside them, in addition to being a violation of the use and enjoyment of property, also constitute an abusive and arbitrary interference in their private life and home…Consequently, the Court finds that the Salvadoran State failed to comply with the prohibition of arbitrary or abusive interference with private life and home."[332] Based, inter alia, on this and other findings, the Court ordered that "the State must implement a social development program in favor of the victims in this case" and that "in order to contribute to the reparation of the victims who were forcibly displaced from their communities of origin … the State must guarantee adequate conditions so that the displaced victims can return to their communities of origin permanently, if they so wish".[333]

201. *Afro-Descendant Communities Displaced from the Cacarica River Basin (Operation Genesis) v. Colombia* is the final relevant case of the Inter-American Court of Human Rights. In this case, the Court interpreted the right to property of members of indigenous peoples and noted that "Article 21 of the Convention protects the close ties that indigenous and other tribal peoples or communities…have to their land, and to the natural resources of the ancestral territories and the incorporeal elements related to them".[334] The Court further held that, due to this "intrinsic connection that the members of the indigenous and tribal peoples have to their territory, the protection of the right to the ownership, use and enjoyment of this territory is necessary to ensure their survival".[335]

202. The Court ultimately found that: "[T]he exploitation of the collective property of the communities of the Cacarica River basin was carried out illegally;

---

[331] *Río Negro Massacres v. Guatemala*, judgment (preliminary exception, merits, reparations and costs), Case No. C-250, 4 September 2012, para. 184.

[332] *Massacres of El Mozote and neighboring locations v. El Salvador*, Judgment (Merits, Reparations and Costs), Case No. C-252, 25 October 2012, para. 182. See also para. 195.

[333] Ibid., paras. 339 and 345.

[334] *Afro-Descendant Communities Displaced from the Cacarica River Basin (Operation Genesis) v. Colombia*, Judgment, Case No. C-270, 20 November 2013, para. 346. See also paras. 252 and 254.

[335] Ibid., para. 346.

furthermore, there is evidence that the authorities failed to protect the right to collective property even though they were aware, because of several on-site visits, of the illegal exploitation that was underway. In this regard, the domestic administrative or judicial remedies were not effective to rectify this situation."[336] The indigenous community had suffered harm as a result, which was especially severe because of the special relationship that they have with their land.[337] The Court ordered the State to restore the use, enjoyment and possession of the territories of the indigenous people and to provide certain guarantees to them.[338]

203. The European Court of Human Rights has been active in dealing with cases where compensation was claimed for damage to property, including land. In the case of *Akdivar et al. v. Turkey*, the applicants claimed, inter alia, compensation for the losses incurred as a result of the destruction of their houses by the security forces which forced them to abandon their village. The applicants claimed pecuniary damage in respect of the loss of houses, cultivated land, household property and livestock. The Court held that: "[A]n award should be made in respect of the houses for which a record exists based on the surface area noted by the experts at the base rate per square metre proposed by them. The Court also considers it appropriate to make an award in respect of the remaining houses. However, due to the absence of evidence which substantiates the size of these properties any calculation must inevitably involve a degree of speculation."[339]

204. The case of *Selçuk and Asker v. Turkey* concerned the burning of houses by security forces in south-east Turkey. The applicants claimed pecuniary damages in respect of the loss of their houses, cultivated land, household property, livestock and a mill. They also claimed that an award should be made in respect of the cost of alternative accommodation. The case is noteworthy as the Court awarded both pecuniary and non-pecuniary damages.[340]

205. In the case of *Esmukhambetov et al. v. Russia*, the applicants sought pecuniary and non-pecuniary damage for damage caused when an aerial strike hit the village of Kogi, killing several people and destroying houses, livestock and crops. The Court addressed the practical issues that the applicants were faced with to obtain documents relating to their destroyed property and considered "it appropriate to award the applicants equal amounts on an equitable basis, taking into account information on the average prices of the relevant items of property at the material time."[341] However, the claim regarding compensation for plots of land was rejected due to lack of evidence.[342] The applicants were also awarded non-pecuniary damages.[343]

---

[336] Ibid., para. 356.
[337] Ibid., para. 459.
[338] Ibid., paras. 459-461.
[339] *Akdivar et al. v. Turkey,* Judgement, Application No. 99/1995/605/693, 1 April 1998, para. 18. See also the cases of *Azize Menteş et al. v. Turkey*, Judgment, Application No. 58/1996/677/867, 24 July 1998; and *Salih Orhan v. Turkey*, Chamber, Judgment, Application No. 25656/94, 18 June 2002.
[340] *Selçuk and Asker v. Turkey*, Judgement, Application No. 12/1997/796/998-999, 24 April 2008, paras. 106, 118 and 119.
[341] *Borambike Dormalayevna Esmukhambetov et al. and Others v. Russia*, Judgment, Application No. 23445/03, 15 September 2011, paras. 206, 208-211.
[342] Ibid., paras. 208-211.
[343] Ibid., paras. 214-216.

**Jurisprudence of international criminal tribunals**

206. Some cases decided by international criminal tribunals are also relevant to the present report, for example the cases of *Prosecutor v. Naser Orić, Prosecutor v. Milan Martić* and *Prosecutor v. Ante Gotovina et al* of the International Tribunal for the Former Yugoslavia. While these cases do not discuss the protection of the environment after armed conflict, they do discuss the rule that damage and destruction that occurs after fighting has ceased cannot be justified by the principle of military necessity.[344] Several examples of acts committed during armed conflict which resulted in long-term effects on the environment following the termination of the conflict were heard in the Nuremberg Military Tribunal case of *Prosecutor v. Hermann Wilhelm Gŏring et al*.[345]

**Jurisprudence of domestic courts**

207. Domestic courts in the United States have dealt with the issue of restoration and remediation of areas of environmental importance. In *United States v. Shell Oil*, oil companies which had been engaged in the production of high-octane aviation fuel during the Second World War dumped acid waste by-products at a site in California beginning in June 1942. Aviation fuel was critical for the war effort, and the Government of the United States actively supervised its production. In the 1990s, the site was cleaned, and the Federal Government sued the oil companies that had dumped the acid waste to recover the cost of the clean-up. The companies alleged that the dumping had occurred in response to an "act of war" against the United States. The District Court rejected the oil companies' argument that they were exempt from liability on the ground that the contamination was caused by an "act of war," but held that the oil companies were not liable for the clean-up costs. The Court of Appeals affirmed this.[346]

208. There is also jurisprudence from United States courts which deals with environmental damages for harm resulting from military activities. The *Agent Orange* case involved claims by Vietnamese nationals and an organization for damages allegedly done to them and their land by the United States use of Agent Orange and other herbicides during the Viet Nam war from 1965 to 1971. The Court dismissed the case, holding that there was no basis for any of the claims of the plaintiffs. Notably, the Court held that Agent Orange was not considered a poison under international law at the time of its use by the United States.[347]

---

[344] *Prosecutor* v. *Naser Oric*, Trial Chamber, Judgment, Case No. IT-03-68-T, 30 June 2006, para. 588; International Tribunal for the Former Yugoslavia, Case No. IT-95-11-T, *Prosecutor v. Milan Martić,* Trial Chamber, Judgment, Case No. IT-95-11-T, 12 June 2007, para. 93; *Prosecutor v. Ante Gotovina et al.*, Trial Chamber, Judgment (Volume II of II), Case No. IT-06-90-T, 15 April 2011, para. 1766. See also Case No. IT-98-34-T, *Prosecutor v. Mladen Naletilic et al.*, Trial Chamber, Judgment, Case No. IT-98-34-T, 31 March 2003, para. 589, where the Tribunal stated that "The destruction was not justified by military necessity as it occurred … after the actual shelling had ceased".

[345] *Trial of the Major War Criminals before the International Military Tribunal,* Vol. 1 (Nuremberg, 1947), pp. 58, 59, 60, 239-240 and 297.

[346] *United States v. Shell Oil Co.*, 294 F.3d 1045, 1060 (9th Cir. 2002).

[347] *Vietnam Association for Victims of Agent Orange/Dioxin et al. v. Dow Chemical Co. et al.* (District Court for the Eastern District of New York) Memorandum, Order and Judgment of 28 March 2005, 373 F. Supp. 2d 7 (2005), affirmed in Court of Appeals for the Second Circuit Decision of 22 February 2008, 517 F.3d 76 (2008), pp. 186, 119-124, 127-130, 132, 134, 138.

209. The Court of Appeals affirmed the judgment above in the case of *Vietnam Association for Victims of Agent Orange v. Dow Chem. Co*., ultimately denying that the defendants could have been held liable for the damages caused to the environment by Agent Orange. A further review of the case confirmed this decision. The plaintiffs filed a petition to the United States Supreme Court to hear the case. On 2 March 2009, the Supreme Court denied certiorari, and refused to reconsider the ruling by the Court of Appeals.[348]

210. It is worth noting that the United States has contributed to the efforts to remediate the environmental damage and health problems caused by Agent Orange since 2007.[349] Notably, funds have been allocated to the United States Agency for International Development to remediate the damage. This has been done through projects which aim to decontaminate "dioxin hotspots" such as the area of the Danang Airport Environmental Remediation Project and other areas such as the Bien Hoa airbase.[350] There are also numerous disability programmes run by the United States Agency for International Development in areas which were contaminated by Agent Orange.[351]

211. The case of *Corrie v. Caterpillar* dealt with the situation following Israel's occupation of the West Bank and Gaza Strip, during which the Israeli Defense Force utilized Caterpillar bulldozers to demolish homes within the Palestinian territories. Seventeen members of the plaintiffs' families were killed or injured in the course of these demolitions. Ultimately, the court dismissed the case.[352] The appeal against the decision was also denied.[353]

212. There is also jurisprudence of United States courts that deals with claims in which it has been argued that environmental degradation in the aftermath of armed conflict constituted violations of human rights and of the rights of indigenous peoples. In the case of *Beanal v. Freeport-McMoran, Inc.*, an Indonesian tribal leader brought suit against two United States corporations related to their operation of an open-pit copper, gold and silver mine in Indonesia. The case came before the court on the defendants' motion to dismiss the claims. Although there does not appear to have been sustained conflict in this case, the plaintiff did allege that defendants' security guards "in conjunction with third parties" had engaged in arbitrary arrest and detention, torture and destruction of property.[354] Although the court initially found that the plaintiff had standing to bring environmental claims,[355] the court ultimately dismissed the environmental claims because the United States Alien Tort Statue did not provide a sufficient basis on which to bring them.[356] The decision was taken on appeal where it was upheld.[357]

---

[348] *Vietnam Association for Victims of Agent Orange v. Dow Chemical Company*, 517 F.3d 104, 119-20 (2d Cir. 2008).

[349] See Michael F. Martin, (13 November 2015), Congressional Research Initiative.

[350] Ibid., pp. 10 and 13.

[351] Ibid., p. 12.

[352] *Corrie v. Caterpillar, Inc.*, 403 F. Supp. 2d 1019, 1023-27 (W.D. Wash. 2005) affirmed in *Corrie v. Caterpillar, Inc.*, 503 F.3d 974 (9th Cir. 2007) pp. 8 and 16.

[353] *Corrie v. Caterpillar, Inc.*, 503 F.3d 974, 982 (9th Cir. 2007) para. 982.

[354] *Beanal v. Freeport-McMoran, Inc.*, 969 F. Supp. 362, 368-69 (E.D. La. 1997) affirmed in *Beanal v. Freeport-McMoran, Inc.*, 197 F.3d 161 (5th Cir. 1999) 197 F.3d 161 (5th Cir. 1999) p. 369.

[355] Ibid., p. 368.

[356] Ibid., pp. 370 and 383-384.

[357] *Beanal v. Freeport-McMoran, Inc.*, 197 F.3d 161 (5th Cir. 1999).

**The nuclear testing in the Marshall Islands: compensation claims commission and the cases brought to the court in the United States**

213. During the period from 30 June 1946 to 18 August 1958, the United States conducted 67 nuclear tests in the Marshall Islands.[358] The nuclear tests led to compensation claims and legal processes both in the United States and in the Marshall Islands. The claims are characterized as war and post-war claims by the United Nations.[359]

214. Shortly after the first tests, the Marshall, Caroline and Mariana island chains became a strategic trust territory under the United Nations, administered by the United States pursuant to an agreement between the Security Council and the United States.[360] The trusteeship was terminated in 1990 and the Republic of the Marshall Islands became a Member of the United Nations in 1991.

215. In order to discharge its obligations, the Administering Authority was entitled to, inter alia, establish naval, military and air bases on the territories.[361] The responsibilities of the Administering Authority included the obligation to "protect the health of the inhabitants" and to "protect the inhabitants against the loss of their land and resources".[362] The effects of the testing programme were considerable and included the annihilation of some islands and vaporization of portions of others; permanent resettlement with substantial relocation hardships to some inhabitants; exposure of some inhabitants to high levels of radiation; and widespread contamination from radioactivity that has rendered some islands unusable by humans for indefinite future periods.[363] The Trusteeship Council was well aware of the effects on land and human beings.[364] After the so-called Bravo test in 1954, over 100 elected leaders from more than 10 atolls in the Marshall Islands requested that that the experiments be ceased immediately, or at least that all precautionary measures be taken. The Trusteeship Council responded by supporting the continuing testing, albeit with safety precautions. A similar request was made two years later, in 1956, this time with an added request that the Bikini and Enewetak people be compensated.[365] Later the same year, the United States made the first compensation,

---

[358] The tests took place at Bikini and Enewetak atoll. Nuclear Claims Tribunal *Report to the Nitijela of the Republic of the Marshall Islands, Fiscal Year 1992*, appendix A. The Bravo test that took place at Bikini on 1 March 1954 was the largest hydrogen bomb ever exploded at the time by the United States. The fallout cloud was considerable and affected also other atolls and islands, such as Rongelap and Utrik.

[359] *Yearbook of the United Nations* (1982) part 1, sect. 3, chap. 3 at p. 1280. The yearbooks of the United Nations are available from http://unyearbook.un.org.

[360] Prior to the Second World War the islands were held by Japan under a mandate arising from the League of Nations. During the Second World War they came under occupational control by the United States. By its resolution 21 (1947) of 2 April 1947, the Security Council designated the islands formerly held by Japan under mandate as a strategic area and placed them under the Trusteeship System established in the Charter of the United Nations.

[361] Security Council resolution 21 (1947), art. 5, para. 1.

[362] Ibid., art. 6, paras. 3 and 2, respectively.

[363] *People of Bikini, ex rel. Kili/Bikini/Ejit Local Gov. Council v. United States*, 77 Fed. Cl. 744, 749 (2007), *affirmed in Court of Appeals for the Second Circuit decision of 29 January 2009*; 554 F.3d 996 (Fed. Cir. 2009) at p. 749.

[364] This is evidenced by the records in the United Nations Yearbook, see, for example, *United Nations Yearbook* (1954), p. 359 (Operation of the Trusteeship Council). The yearbooks of the United Nations are available from http://unyearbook.un.org.

[365] See *Yearbook of the United Nations* (1956) part 1, sect. 3, chap. 4 at p. 365. The yearbooks of the United Nations area available from http://unyearbook.un.org.

paid in cash and in a trust fund.[366] The Trusteeship Council reaffirmed an earlier resolution on the 1954 tests and recommended that all necessary measures be taken to guard against any danger, to settle forthwith all justified claims by the inhabitants of Bikini and Enewetak relating to their displacement from their islands in connection with the nuclear tests, and to compensate families which might have to be temporarily evacuated for any losses which might result from further nuclear weapons tests.[367] Subsequent to decisions by the United States Congress, further compensation was paid. A special trust fund of $6 million was established in 1978 for the Bikini people. This was to be followed by other trust funds for compensation and resettlement. The United States also took measures to clean up and rehabilitate Enewetak.

216. The Bikini people filed the first class-action lawsuit against the United States Government in 1981. In addition, several thousand Marshall Islanders filed individual lawsuits (compensation for personal injuries). These lawsuits were dismissed by the United States Court of Claims Judge Kenneth Harkins in 1987.[368] The facts as found by Judge Harkins were later adopted and restated in later Court cases.[369]

217. It should be recalled that the so-called Compact of Free Association between the Marshall Island and the United States came into effect in 1986.[370] The Compact contains a special section on compensation for nuclear testing, section 177, according to which the Government of the United States accepts responsibility for compensation owed to the citizens of the Marshall Islands for loss or damage to property and person resulting from the nuclear testing programme. It was agreed that the United States would provide compensation for "the just and adequate settlement of all claims which have arisen in regard to the Marshall Islands and its citizens and which have not yet been compensated or which in the future may arise". The Nuclear Claims Tribunal was set up for this purpose in 1987.[371] The Tribunal functions under the laws of the Marshall Islands and deals with three main categories of claims: personal injury claims, property damage claims (for example, loss of use of land, environmental restoration) and losses due to hardship.

218. In 2006, Marshall Islanders with land rights on Bikini Atoll brought another class-action suit against the United States alleging a Fifth Amendment taking of Plaintiff's claims, a breach of fiduciary duties and obligations and a breach of implied-in-fact contracts arising from post-Second World War testing of thermonuclear bombs. The *People of Bikini* case, which has been described as a

---

[366] $25,000 in cash and $300,000 in a trust fund for the Bikini Islanders. The United States has provided information on the total amount of compensation, which is entitled "The Legacy of U.S. Nuclear Testing and Radiation Exposure in the Marshall Islands" and is available from http://majuro.usembassy.gov/legacy.html.

[367] *Yearbook of the United Nations*, *supra* note 365, p. 365.

[368] Giff Johnson, *Nuclear Past, Unclear Future* (Majuro: Micronitor News and Printing Company, 2009), pp. 20 and 23. *People of Bikini, ex rel. Kili/Bikini/Ejit Local Gov. Council v. United States*, 77 Fed. Cl. 748-749 (2007) p. 748.

[369] *People of Bikini, ex rel. Kili/Bikini/Ejit Local Gov. Council v. United States*, 77 Fed. Cl. 748-749 (2007) pp. 748-749.

[370] The Compact was amended in 2004. Compact of Free Association Amendments Act of 2003, Pub. L. No. 108-188, 117 Stat. 2720; Embassy of the Republic of the Marshall Islands, Compact, as Amended, Now Implemented (May 4, 2004). Similar compacts of free association were concluded between Micronesia and the United States and between Palau and the United States.

[371] Compact of Free Association, sect. 177 (b)-(c).

"resurrection" of the proceedings heard before the Court in the 1980s, was brought before the United States Court because the Nuclear Claims Tribunal was unable to pay the full amount of the damages it awarded.[372] The case addressed land rights and property rights of the Marshall Islanders. Ultimately, the Federal Circuit Court found that it was unable to reach the merits of the case, and the case was dismissed.

**United Nations Compensation Commission**

219. Reports of the Governing Council of the United Nations Compensation Commission are also relevant here.[373] The Commission was established by the Security Council as a subsidiary organ of the Council in 1991 to process claims and pay compensation for losses resulting from Iraq's preceding invasion and occupation of Kuwait.[374] The Council reaffirmed that "Iraq … is 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 its unlawful invasion and occupation of Kuwait".[375]

220. Iraq's responsibility under international law for these losses was reaffirmed in the Security Council resolutions establishing the Commission. The Commission was designed not to be a "court or arbitral tribunal before which the parties appear; it is a political organ that performs an essentially fact-finding function of examining claims, verifying their validity, evaluating losses, assessing payments and resolving disputed claims".[376] The Commission functions under the authority of the Security Council.[377]

221. The Commission received approximately 2.69 million claims seeking approximately $352.5 billion in compensation for death, injury, loss of or damage to property, commercial claims and claims for environmental damage resulting from Iraq's unlawful invasion and occupation of Kuwait in 1990-1991. The Commission awarded a total of $52.4 billion (equalling 15 per cent of the compensation sought) to 100 Governments and international organizations in relation to 1.5 million successful claims.[378] The resolution of such a significant number of claims with

---

[372] *People of Bikini, ex rel. Kili/Bikini/Ejit Local Gov. Council v. United States*, 77 Fed. Cl. 744, 749 (2007) pp. 744-745 and 748.

[373] A/CN.4/685, para. 81.

[374] Information on the United Nations Compensation Commission is available from www.uncc.ch/home. For an overview of the work of the Commission, see Cymie R. Payne and Peter H. Sand (eds.), *Gulf War Reparations and the UN Compensation Commission: Environmental Liability* (Oxford: Oxford University Press, 2011).

[375] Security Council resolution 687 (1991), sect. E, para. 16.

[376] S/22559, para. 20. This implies that the liability was due to Iraq's violation of the *jus ad bellum* rule rather than violations of *jus in bello* rules. Security Council resolution 692 (1991), para. 3, established the Commission in accordance with part I of the Secretary-General's report (which includes para. 4. but not para. 20).

[377] The Commission is comprised of a Governing Council, panels of commissioners and a secretariat. The Governing Council is the policymaking organ of the Commission and its membership is the same as that of the Security Council (of which the Commission is a subsidiary body). The claims were resolved by panels, each of which was composed of three commissioners. The commissioners that dealt with these claims were independent experts in various fields, ranging from law to accountancy, loss adjustment, insurance and engineering. Technical experts and consultants assisted the panels in the verification and valuation of the claims.

[378] See the Commission's website at www.uncc.ch/what-we-do and www.uncc.ch/summary-awards (last visited 30 Nov 2015).

such a large asserted value over such a short period has no precedent in the history of international claims resolution.

222. In its five reports regarding so-called "F4" claims, the Panel of Commissioners recommended that compensation be paid for a variety of claims under the following seven categories: transport and dispersion of pollution, damage to cultural heritage, damage to marine and coastal resources, damage to terrestrial resources (including agricultural and wetland resources), damage to groundwater resources, departure of persons from Iraq or Kuwait and damage to public health.

223. Many of the reports of the Panel of Commissioners are of interest for the present report. In the report concerning the first instalment of "F4" claims,[379] the Panel responded to the following issue raised by Iraq: "Can the costs of research programmes, studies and procedures for the monitoring and assessment of environmental damage and depletion of natural resources qualify as 'environmental damage and depletion of natural resources' …?"[380] The Panel noted that: "The monitoring and assessment claims present special problems in that they are being reviewed before decisions have been taken on the compensability of any substantive claims … Thus claims are being reviewed at a point where it may not have been established that environmental damage or depletion of natural resources occurred as a result of Iraq's invasion and occupation of Kuwait."[381] The Panel further noted that "the purpose of monitoring and assessment is to enable a claimant to develop evidence to establish whether environmental damage has occurred and to quantify the extent of the resulting loss".[382] The Panel also provided considerations for determining whether to compensate for monitoring and assessment activities.[383]

224. In the report concerning the second instalment of "F4" claims,[384] the Commission found that: "Iraq is not exonerated from liability for loss or damage that resulted directly from the invasion and occupation simply because other factors might have contributed to the loss or damage. Whether or not any environmental damage or loss for which compensation is claimed was a direct result of Iraq's invasion and occupation of Kuwait will depend on the evidence presented in relation to each particular loss or damage".[385] The Commission awarded compensatory damages.[386]

225. In the report concerning the third instalment of "F4" claims,[387] the Panel addressed the claim by Kuwait that, as a result of Iraqi forces' detonation of oil

[379] S/AC.26/2001/16. The first instalment of "F4" claims included 107 claims for monitoring and assessment of environmental damage, depletion of natural resources, monitoring of public health and performing medical screenings for the purposes of investigation and combating increased health risks.

[380] Ibid., para. 25.

[381] Ibid., para. 29.

[382] Ibid., para. 30.

[383] Ibid., para. 31.

[384] S/AC.26/2002/26. The second "F4" instalment consisted of claims for expenses incurred for measures to abate and prevent environmental damage, to clean and restore the environment, to monitor and assess environmental damage and to monitor public health risks alleged to have resulted from Iraq's invasion and occupation of Kuwait.

[385] Ibid., para. 25.

[386] Ibid., paras. 66-72, 96-98, 107-117, 160 and 178.

[387] S/AC.26/2003/31. The claims in the third "F4" instalment were for expenses resulting from measures already taken or to be undertaken in the future to clean and restore environment alleged to have been damaged as a direct result of Iraq's invasion and occupation of Kuwait.

wells, more than 1 billion barrels of crude oil had been released into the environment and ignited and burned for many months, which contaminated the soil, buildings and damaged aquifers. Part of the damage to the aquifers was a result of Kuwait's attempt to put out the fires by using seawater, after the occupation. In addition, desert soil and vegetation were severely disrupted by construction of military fortifications, laying and clearance of mines and movement of military vehicles and personnel. The Panel found that Iraq was liable for damages to compensate Kuwait for remediation measures for each of Kuwait's claims.[388] The Panel found that the environmental damage was a direct result of Iraq's invasion and occupation of Kuwait and that certain programs Kuwait proposed to remediate the damage were reasonable.[389]

226. Saudi Arabia claimed that it suffered damage to its shoreline as a result of oil barrels intentionally being released into the Persian Gulf and as a result of contaminants being released from oil wells, in addition to other releases of oil. Iraq argued that the damage to the shoreline was not solely attributable to the events in 1991, but rather as a result of oil released well after the Iraqi occupation of Kuwait ended.[390] The Panel found that "damage from oil contamination to the shoreline between the Kuwait border and Abu Al constitutes environmental damage directly resulting from Iraq's invasion and occupation of Kuwait, and a programme to remediate the damage would constitute reasonable measures to clean and restore the environment".[391]

227. In the report concerning part one of the fourth instalment of "F4" claims,[392] the Panel held that: "Iraq is not exonerated from liability for loss or damage simply because other factors might have contributed to the loss or damage. Whether or not any environmental damage of loss for which compensation is claimed was a direct result of Iraq's invasion and occupation of Kuwait will depend on the evidence presented in relation to each particular loss or damage. Where the evidence shows that damage resulted directly from Iraq's invasion and occupation of Kuwait but that other factors have contributed to the damage for which compensation is claimed, due account has been taken of the contribution from such other factors in order to determine the level of compensation that is appropriate for the portion of the damage which is directly attributable to Iraq's invasion and occupation of Kuwait."[393] The Commission awarded compensatory damages.[394]

228. In the report concerning part two of the fourth instalment of "F4" claims, the Panel stated that: "Where the evidence shows that damage resulted directly from Iraq's invasion and occupation of Kuwait but that other factors have contributed to the damage for which compensation is claimed, due account has been taken of the contribution from such other factors in order to determine the level of compensation that is appropriate for the portion of the damage which is directly attributable to

[388] Ibid., paras. 74, 98 and 99.
[389] Ibid., paras. 36, 38, 60 and 167.
[390] Ibid., paras. 169-193.
[391] Ibid., para. 178.
[392] S/AC.26/2004/16. The claims in the fourth "F4" instalment were for expenses resulting from measures already taken or to be undertaken to clean and restore environment alleged to have been damaged as a direct result of Iraq's invasion and occupation of Kuwait.
[393] Ibid., paras. 39 and 40.
[394] Ibid., paras. 158-189, 247-299 and 301-319.

Iraq's invasion and occupation of Kuwait." [395] The Commission awarded compensatory damages.[396]

229. In the report concerning the fifth instalment of "F4" claims,[397] the Panel established the admissibility of claims for compensation arising from "pure environmental damages" (i.e., damages to natural resources without commercial value) and found that temporary loss of the use of such resources was compensable.[398] The Panel also established that Governments could claim damages for losses or expenses resulting from a damage to public health, in terms of adverse health effects on specific categories of residents or on the general population (and not only for "monitoring of public health" and "medical screenings").[399] The Panel also addressed Habitat Equivalency Analysis, which is a methodology that determines the nature and extent of compensatory restoration based upon the loss of ecological services that resources provided before they were damaged as a consequence of the war. The Panel found that: "[I]n each case where a claimant seeks an award to undertake compensatory restoration, the Panel has considered whether the claimant has sufficiently established that primary restoration has not or will not fully compensate for the losses. Compensation is recommended only where the evidence available shows that, even after primary restoration measures have been undertaken, there are, or there are likely to be, uncompensated losses."[400] The Commission awarded compensatory damages.[401]

230. In sum it can be noted that in many cases, the Commission approved compensation for assessment and monitoring activities in order to determine the potential extent of damage under these categories. There were several distinctions of note in the reports. There was a clear difference between those countries immediately adjacent to the conflict zones in Iraq and Kuwait and countries that were not in the area of conflict. Kuwait, the Islamic Republic of Iran and Saudi Arabia, for example, all were awarded compensation for claims of direct contact with pollutants released by Iraqi actions. The Syrian Arab Republic, on the other hand, made claims on the basis of contact with airborne pollutants that allegedly reached Syrian territory on the prevailing winds. The Commission rejected many of those claims, although it did award compensation to the Syrian Arab Republic to monitor the effect on public health of the oil fires in Kuwait.

231. All of Jordan's claims in the first report concern the effect of refugees and displaced persons on the environment.[402] The Commission awarded compensation for all these claims, including for indirect damage to wetlands from water consumption by refugees.[403]

---

[395] S/AC.26/2004/17 (2004), para. 36. As noted above, the claims in the fourth "F4" instalment were for expenses resulting from measures already taken or to be undertaken to clean and restore environment alleged to have been damaged as a direct result of Iraq's invasion and occupation of Kuwait.

[396] Ibid., paras. 58-131.

[397] S/AC.26/2005/10 (2005). The claims in the fifth "F4" instalment were for compensation for damage to or depletion of natural resources, including cultural heritage resources; measures to clean and restore damaged environment; and damage to public health.

[398] Ibid., para. 57.

[399] Ibid., para. 68 and 71.

[400] Ibid., para. 82.

[401] Ibid., paras. 102-118, 353-366 and 443-456.

[402] See S/AC.26/2001/16, sect. VI.

[403] Ibid.

**Eritrea-Ethiopia Claims Commission**

232. Claims heard by the Eritrea-Ethiopia Claims Commission are relevant as far as they relate to reparations for environmental damage caused during armed conflict. The Algiers Agreement brought an end to the international armed conflict fought between Ethiopia and Eritrea from 1998 to 2000 and also established the Eritrea-Ethiopia Claims Commission.[404] The Commission had a mandate to:

> decide through binding arbitration all claims for loss, damage or injury … (a) related to the conflict that was the subject of the Framework Agreement, the Modalities for its Implementation and the Cessation of Hostilities Agreement, and (b) result from violations of international humanitarian law, including the 1949 Geneva Conventions, or other violations of international law.[405]

233. It has been noted that the military operations conducted during the conflict, involving both combat and instances of occupation, resulted in extensive environmental damage to both States.[406] Eritrea did not claim for environmental damage before the Commission, but Ethiopia claimed over $1 billion for the environmental damage which had been caused in various parts of the country.[407]

234. In the *Partial Award — Central Front Ethiopia's Claim 2*, the Commission held that there was insufficient evidence to support the claims for alleged environmental damage caused in the Mereb Lekhe Wereda area.[408] It also rejected Ethiopia's claim for alleged environmental damage caused in the Irob Wereda area, holding that:

> The allegations and evidence of destruction of environmental resources also fall well below the standard of widespread and long-lasting environmental damage required for liability under international humanitarian law.[409]

235. In the *Final Award Ethiopia's Damages Claims between the Federal Democratic Republic of Ethiopia and The State of Eritrea*, most of the environmental claims were related to the alleged loss of gum Arabic and resin plants but also included claims for the loss of trees and seedlings, and damage to terraces in Tigray.[410] Ethiopia also initially sought a claim related to a loss of wildlife, but this claim was withdrawn.[411] Ethiopia claimed that the environmental damage was a result of violations of *jus in bello* by Eritrea, and in the alternative that it was a

---

[404] Agreement Between the Government of the Federal Democratic Republic of Ethiopia and the Government of the State of Eritrea (United Nations, *Treaty Series*, vol. 2138) (Algiers Agreement), art. 1. For more detail see Sean Murphy, Won Kidane and Thomas Snider, *Litigating War: Arbitration of Civil Injury by the Eritrea-Ethiopia Claims Commission* (New York: Oxford University Press, 2013), p. 1.

[405] Algiers Agreement, *supra* note 404, art. 5.

[406] Murphy, *supra* note 404, p. 228.

[407] Murphy, *supra* note 404, p. 228. See Eritrea-Ethiopia Claims Commission, *Partial Award Central Front Ethiopia's Claim 2 between the Federal Democratic Republic of Ethiopia and the State of Eritrea* (The Hague, 28 April 2004) paras. 53 and 100; Eritrea-Ethiopia Claims Commission, *Final Award Ethiopia's Damages Claims between the Federal Democratic Republic of Ethiopia and The State of Eritrea* (The Hague, 17 August 2009) para. 422.

[408] *Ethiopia Partial Award*, *supra* note 407, para. 52.

[409] Ibid., para. 100.

[410] *Ethiopia Final Award*, *supra* note 407, para. 421. See also Murphy, *supra* note 404, p. 228.

[411] *Ethiopia Final Award*, *supra* note 4, para. 422. See also Murphy, *supra* note 404, p. 228.

result of a violation of the *jus ad bellum*.[412] Ultimately both arguments were rejected.[413] The Commission found that there was a lack of proof as neither the location of the allegedly damaged natural resources nor the circumstances of their destruction were identified.[414] The evidence presented also failed to address the possibility that Ethiopian forces or civilians could have played a role in the environmental damage caused during the armed conflict.[415] The Commission held that:

> Taking account of the huge amount claimed, the lack of supporting evidence, the unanswered questions regarding the trees' location, and the manifold errors in calculating the claimed damages, Eritrea's *jus ad bellum* claim for environmental damage is dismissed.[416]

**Concluding remarks**

236. The case law based on damage and harm to the environment in relation to armed conflict relies on the availability of domestic law, international environmental peacetime agreements and — in recent years — also on international criminal law, primarily as set out in the Rome Statute. Other important examples come from ad hoc processes such as the United Nations Compensation Commission. This diverse pattern is likely to prevail for the foreseeable future, since there are few indications that States are willing to accept one comprehensive environmental crime such as "ecocide". While the concept of ecocide as a description of wilful extensive damage, destruction or loss of ecosystems has long been used, it has not been incorporated into international agreements.[417] The act of wilful destruction of the environment during the course of war, which has been described as "military ecocide",[418] is therefore also a term unlikely to be accepted by States.

237. It has also been proposed to incorporate "crimes against the environment" into the Rome Statute. The proponent discusses the *pro et con* arguments with respect to limiting the crime to the during armed conflict phase, and ultimately reaches the conclusion that attempting to cover also crimes outside the scope of armed conflict would "stretch the reach of the Court beyond situations which it was principally designated to address".[419]

---

[412] Murphy, *supra* note 404, p. 228; *Ethiopia Final Award*, *supra* note 407, para. 421.

[413] Murphy, *supra* note 404, p. 228. See *Ethiopia Final Award*, *supra* note 407, para. 425. The environmental claims were also rejected in the Partial Award, see *Ethiopia Partial Award*, *supra* note 407, paras. 53 and 100.

[414] *Ethiopia Final Award*, *supra* note 407, para. 423.

[415] Ibid., para. 423.

[416] Ibid., para. 425.

[417] See, for example, Richard A. Falk, "Environmental Warfare and Ecocide: Facts, Appraisal & Proposals" in Marek Thee (ed.), *Bulletin of Peace Proposals*, vol. 1 (1973); Arthur Westing, "Herbicides in Warfare: The Case of Indochina" in Philippe Bordeau, John A. Haines, Werner Klein and C. R. Krishna Murti (eds.), *Ecotoxology and Climate* (Chichester: John Wiley & Sons, 1989), pp. 337-357. See also http://eradicatingecocide.com/the-law/history-of-ecocide-law/ for a useful overview of the history of the concept.

[418] Peter Hough, "Defending Nature: The Evolution of the International Legal Restriction of Military Ecocide" *The Global Community — Yearbook of International Law and Jurisprudence*, vol. 1 (2014), p. 137.

[419] Steven Freeland, *Addressing the Intentional Destruction of the Environment during Warfare under the Rome Statute of the International Criminal Court* (Intersentia, 2015), pp. 229 and 230.

238. The following draft principle is therefore proposed:

**Draft principle I-1**
**Implementation and enforcement**

States should take all necessary steps to adopt effective legislative, administrative, judicial or other preventive measures to enhance the protection of the natural environment in relation to armed conflict, in conformity with international law.

## D. Remnants of war

### Remnants of war on land

239. Armed conflict has an impact on the natural environment, either as a direct result of various means and methods of warfare, or as an indirect consequence of the hostilities. The impact of armed conflict on the environment is often detrimental not only to the environment as such, but also to the health of the population that live in the affected area. Also, military use of land outside the theatre of war may leave traces that are harmful and make the land unsuitable for future civilian use. Military bases may also have negative environmental effects, although this has not been regarded as a matter of concern for the territorial State and for the State that is leasing the base area until quite recently. Status of forces agreements seldom contain provisions on environmental management. While the affected environment may be an area under the sovereignty or control of a State, it can also be an area outside the exclusive jurisdiction of a State, such as the high seas or the international seabed.

240. There are a few examples of areas that are preserved rather than negatively affected in relation to armed conflict. On the rare occasions that such areas exist, they may even resemble a natural reserve — an environmentally protected area. This may be the case with areas that are exclusively used for military purposes, such as militarily restricted areas. One prominent example is the "demilitarized zone" between the Democratic People's Republic of Korea and the Republic of Korea, which is often said to be a paradise for wildlife and biodiversity.[420]

241. There are few legal rules that regulate the environmental consequences of armed conflict. The most developed rules are to be found in the context of explosive remnants of war.

242. It is worth recalling that there is no legal definition of "remnants of war". The term has been used in General Assembly resolutions without any attempt to define it. In an early report to UNEP, the expression is said to refer to a variety of relics, residual or devices not used or left behind at the cessation of active hostilities.[421] The author, Arthur H. Westing, considers that remnants of war include non-explosive

[420] The "demilitarized zone "is not demilitarized in the ordinary sense of the word. The area is heavily fortified and littered with landmines.

[421] Arthur Westing (ed.), *Explosive Remnants of War: Mitigating the Environmental Effects* (London: Taylor and Francis, 1985); appendix 8: Explosive Remnants of War: A Report to UNEP, p. 118. The study focused primarily on unexploded mines and other unexploded munitions; i.e. potentially explosive remnants of war. A chronology of United Nations activities, from 1975-1984 with regard to the issue of explosive remnants of war, is found in appendix 2, pp. 87-89.

devices, unexploded landmines, sea-mines and booby-traps, unexploded munitions, material such as barbed wire and sharp metal fragments, wreckage of tanks, vehicles and other military equipment, as well as sunken warships and downed aircraft. The term has also been said to refer to "the residuum left in a territory after the end of an armed conflict".[422] It was not until 2003 that a partial definition was adopted, namely a definition of the term "explosive remnants of war". This definition will be reverted to later.

243. The term "remnants" clearly indicates a physical object rather than a physical area. A "remnant" can be removed, at least theoretically. In the past it was therefore appropriate to speak in terms of material remnants of war, which was the term most commonly used at the time.

244. The issue of remnants of war was the focus of much attention during the 1970s. The General Assembly adopted several resolutions that addressed material remnants of war and their effect on the environment. At the time, the resolutions were connected to the use of landmines during the Second World War, as well as colonial wars and situations of foreign occupation. Issues of liability, responsibility and compensation were at the fore. The first resolution was adopted in 1975, when the Assembly requested the Governing Council of UNEP to undertake a study of the material remnants of wars, particularly mines, and their effect on the environment, and to submit a report to the Assembly in 1976.[423] UNEP presented an interim report which the Assembly took note of.[424] Hence, the focus was not so much on the effects of mines on humans, but rather the effects of mines on the environment and on land. This is not surprising given the context. Firstly, the United Nations Conference on the Human Environment had been held in 1972 and therefore served as a platform for further initiatives. Secondly, mines were not prohibited in themselves under the law of armed conflict, their use was only restricted.[425] Clearly, the extensive use of mines during the Second World War and the armed conflicts that followed shed light on the consequences of their use. States "which created this situation" were called "to compensate forthwith the countries in which mines were placed for any material and moral damage suffered by them and to take speedy measures to provide technical assistance for the removal of such mines"[426]. The situations in States such as Libya, Malta, Egypt, Viet Nam and some Eastern European States such as Poland were most often at the forefront of international attention.[427]

---

[422] See Gabriella Blum, "Remnants of War" in the Max Planck Encyclopaedia of Public International Law (2012) available from http://opil.ouplaw.com/view/10.1093/law:epil/9780199231690/law-9780199231690-e390?prd=EPIL.

[423] General Assembly resolution 3435 (XXX) of 9 December 1975.

[424] General Assembly resolution 31/11 of 16 December 1976, para. 1.

[425] It is telling that the only convention that specifically addressed the mine weapon was the Convention (VIII) relative to the Laying of Automatic Submarine Contact Mines (*Consolidated Treaty Series*, vol. 205, p. 331). The focus of that regulation is the protection of non-parties to the conflict and neutral shipping.

[426] General Assembly resolution 3435 (XXX), para. 4.

[427] For example, through the Symposium on Material Remnants of the Second World War on Libyan Soil, organized by the United Nations Institute for Training and Research (UNITAR) and the Libyan Institute of Diplomatic Studies, held in Geneva from 28 April to 1 May 1981. See "Remnants of War", UNITAR/CR/26 (UNITAR and Libyan Institute for International Relations) available at the United Nations Library in Geneva. It is worth recalling that the decolonization of Libya was on the agenda of the General Assembly for many years. In this context, the Secretary-General was instructed in 1950 "to study the problem of war damages in connexion with the technical and

245. A second resolution was adopted in 1980.[428] It became clear that this was not a legally viable way to proceed, despite repeated attempts by the General Assembly.[429] The last resolution on "remnants of war" was adopted in 1985. The resolution requested the Secretary-General to submit a report on the implementation of the resolution. The report led to no further action since the General Assembly only took note of it.

246. During the years that the General Assembly addressed the matter, the focus clearly steered away from remnants of war in general to landmines and the threats that they pose to development, life and property. The protection of the environment as such was sidelined in the debates and resolutions. The focus was particularly on mines, and there are limited indications that other types of remnants were also the focus of attention. The legal and political results were limited, not least owing to the connection made between responsibility and compensation.

247. The United Nations Conference on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects took place nearly in parallel. The Conference led to the adoption of the Protocol on Mines, Booby-Traps and Other Devices (Protocol II), which was annexed to the Convention on Certain Conventional Weapons.[430] Article 9 of Protocol II, which deals with international cooperation in the removal of minefields, mines and booby-traps, was cautiously drafted. In essence, it encouraged States to reach agreement.[431] The aim of the article is clearly to remove minefields or otherwise render them ineffective, regardless of whether or not they are legally placed. The issues of responsibility or liability are not mentioned.

248. The rather weak formulation was strengthened in the amended Protocol II of 1996 (Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-traps and Other Devices as Amended on 3 May 1996). Article 10, which deals with the "removal of minefields, mined areas, mines, booby-traps and other devices and international cooperation", clearly places an obligation on States to clear, remove or destroy minefields. The article allocates responsibility (in the sense that it identifies

---

financial assistance which Libya may request" (General Assembly resolution 389 (V) of 15 December 1950). The question of responsibility was also raised in the Council of Europe, see, for example, Mark Anthony Miggiani, "War remnants: a case study in the progressive development of international law" (Geneva: Institut universitaire de hautes études internationales, 1988) (not printed, available at Graduate Institute of International and Development Studies, Geneva), p. 39, note 57.

[428] General Assembly resolution 35/71 of 5 December 1980.

[429] See General Assembly resolutions 36/188 of 17 December 1981, 37/215 of 20 December 1982, 38/162 of 19 December 1983, 39/167 of 17 December 1984 and 40/197 of 17 December 1985. None of the resolutions were adopted with consensus.

[430] See the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (United Nations, *Treaty Series*, vol. 1342, No. 22495) (with Protocols I, II and III) and the Amendment to the Convention on Certain Conventional Weapons (United Nations, *Treaty Series*, vol. 2260, No. 22495). For a brief recapitulation of the rules relating to mines, booby-traps and other devices, see William H. Boothby, *Weapons and the Law of Armed Conflict* (Oxford: Oxford University Press, 2009), pp. 155-194.

[431] Article 9 reads: "After the cessation of active hostilities, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of information and technical and material assistance — including, in appropriate circumstances, joint operations — necessary to remove or otherwise render ineffective minefields, mines and booby-traps placed in position during the conflict."

who should take action) and most importantly, lays the ground for cooperation between the parties and between parties and international organizations, and also encourages parties to reach agreements on technical and material assistance.[432]

249. In the view of many States and other commentators, the amended Protocol II was not sufficient. In the aftermath of the conflicts in Afghanistan, Cambodia and the former Yugoslavia, there was a growing concern over the humanitarian effects of landmines. The terms "humanitarian mine action" and "humanitarian demining" were coined.[433] The Protocol addressed various landmines. The international community recognized, slowly but surely, that the threats posed by anti-personnel landmines would remain. The initiatives to ban anti-personnel landmines led to the adoption of the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction in 1997 (the Ottawa Convention). The Ottawa Convention is the most instrumental treaty dealing with remnants of war, as it has contributed to the demining of States which have been heavily affected by anti-personnel landmines. It has been reported that at least 28 States have now completed all anti-personnel mine clearance on their territory.[434]

250. A few years later, in 2003, a fifth Protocol on Explosive Remnants of War was adopted by the Meeting of States Parties to the Convention on Certain Conventional

---

[432] Article 10 reads:

"1. Without delay after the cessation of active hostilities, all minefields, mined areas, mines, booby-traps and other devices shall be cleared, removed, destroyed or maintained in accordance with Article 3 and paragraph 2 of Article 5 of this Protocol.

2. High Contracting Parties and parties to a conflict bear such responsibility with respect to minefields, mined areas, mines, booby-traps and other devices in areas under their control.

3. With respect to minefields, mined areas, mines, booby-traps and other devices laid by a party in areas over which it no longer exercises control, such party shall provide to the party in control of the area pursuant to paragraph 2 of this Article, to the extent permitted by such party, technical and material assistance necessary to fulfil such responsibility.

4. At all times necessary, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of technical and material assistance, including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil such responsibilities."

[433] See Lincoln P. Bloomfield, "Detritus of Conflict: The U.S. Approach to the Humanitarian Problem Posed by Landmines and other Hazardous Remnants of War", *Seton Hall Journal of Diplomacy & International Relations*, vol. 4, No. 1 (2003), p. 27. See also the information available on the Halo Trust website at www.halotrust.org.

[434] Albania, Bhutan, Bulgaria, Burundi, Republic of Congo, Costa Rica, Denmark, France (in Djibouti), Gambia, Greece, Guatemala, Guinea-Bissau, Honduras, Hungary, Former Yugoslav Republic (FYR) of Macedonia, Malawi, Montenegro, Mozambique, Nicaragua, Nigeria, Rwanda, Suriname, Swaziland, Tunisia, Uganda, Venezuela and Zambia. Easily accessible information can be found on the website of the International Campaign to Ban Landmines: www.icbl.org/en-gb/finish-the-job/clear-mines/complete-mine-clearance.aspx. The organization further informs that El Salvador completed antipersonnel mine clearance in 1994 before the Mine Ban Treaty was adopted and that Germany confirmed in 2013 that the suspicion of antipersonnel mine contamination at a former military training ground had been lifted. Furthermore, Jordan declared "completion of antipersonnel mine clearance in 2011, but since then it has continued to find antipersonnel mines on its territory". The reports from States on the national implementation of the Convention can be found at www.unog.ch/80256EE600585943/(httpPages)/A5378B203CBE9B8CC12573E7006380FA?OpenDocument. For the most recent resolution, see General Assembly resolution 70/55 of 5 December 2015.

Weapons.[435] The Protocol entered into force in 2006 and has 87 State parties, including France, China, the Russian Federation and the United States.[436] With the fifth Protocol came a definition of "explosive remnants of war", which clearly excluded mines from the definition.[437] Although the incentive behind the Protocol was the serious post-conflict humanitarian problems caused by explosive remnants of war, the aim was to conclude a "[p]rotocol on post-conflict remedial measures of a generic nature in order to minimise the risks and effects of explosive remnants of war".[438]

251. Article 3 provides that "[e]ach High Contracting Party and party to an armed conflict shall bear the responsibilities set out in this Article with respect to all explosive remnants of war in territory under its control." Where a "user" of explosive ordnance, which has become an explosive remnants of war, does not have control over the territory in question at the end of active hostilities, the "user" shall provide, where feasible, technical, financial, material or human resources assistance to facilitate the marking and clearance, removal or destruction of such explosive remnants of war.[439] In accordance with article 5, Parties shall take "all feasible precautions in the territory under their control […] to protect […] civilian objects from the risks and effects of explosive remnants of war".[440]

252. In consenting to be bound by the fifth Protocol, the United States declared that: "It is the understanding of the United States of America that nothing in Protocol V would preclude future arrangements in connection with the settlement of armed conflicts, or assistance connected thereto, to allocate responsibilities under Article 3 in a manner that respects the essential spirit and purpose of Protocol V."

253. Even if the focus of the regulations on landmines became more and more connected with the protection of human beings, it cannot be denied that the regulations have had direct implications for the protection of agricultural land and property, by making the land available for use. The obligation on parties to a conflict to remove or otherwise render landmines harmless to civilians at the end of active hostilities can be considered a rule of international customary law.[441] It may therefore seem puzzling that State practice, as reflected in the ICRC customary law study, takes environmental considerations into account in military manuals, national legislation and other national practice only to a limited extent. In this context, it should be noted that obligations to remove or render harmless landmines and other explosive remnants of war have the protection of civilians as their primary aim.

---

[435] Protocol on Explosive Remnants of War to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be deemed to be Excessively Injurious or to have Indiscriminate Effects (Protocol V), United Nations, *Treaty Series*, vol. 2399, No. 22495. Available from https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVI-2-d&chapter=26&lang=en. The Protocol is open to all States for consent to be bound in accordance with article 4 of the Convention.

[436] Status of Multilateral Treaties Deposited with the Secretary-General, available at https://treaties.un.org/pages/ParticipationStatus.aspx.

[437] See the definition in art. 2, p. 1 read together with art. 2, p. 4.

[438] Protocol V, *supra* note 435, preambular paragraph 2. Cf. A/CN.4/685, paras. 142 and 143.

[439] Ibid.

[440] Ibid.

[441] Rule 83 in the ICRC customary law study; see Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law: Rules, vol. I* (Cambridge: Cambridge University Press, 2005). For practice conducted after 2005, see www.icrc.org/customary-ihl/eng/docs/v2_rul_rule83.

States have therefore focused on that aim. At the same time, it should be recalled that any removal of landmines or explosive remnants of war after the armed conflict (a point in time which is not necessarily identical to that of cessation of active hostilities) is subject to peacetime environmental national and international obligations.

254. The conventions and protocols discussed above do not apply retroactively, but they do give a clear indication of a more enlightened view on the risks emanating from explosive remnants of war.

**Draft principle III-3**
**Remnants of war**

1. Without delay after the cessation of active hostilities, all minefields, mined areas, mines, booby-traps, explosive ordnance and other devices shall be cleared, removed, destroyed or maintained in accordance with obligations under international law.

2. At all times necessary, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of technical and material assistance, including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil such responsibilities.

**Remnants of war in the marine environment**

255. Armed conflict may have long-lasting effects on the marine environment. There is increasing awareness of the environmental effects of armed conflict, in particular regarding chemical munitions dumped at sea and pollution from sunken vessels. The environmental threats and consequences from chemical munitions at sea have caused States and international and regional organizations to start addressing the matter.

256. With reference to the outcome of the United Nations Conference on the Human Environment, Agenda 21 and the Johannesburg Plan of Implementation, the General Assembly has noted the importance of raising awareness of the environmental effects related to waste originating from chemical munitions dumped at sea.[442] In this context, the Assembly has encouraged the "voluntary sharing of information on waste originating from chemical munitions dumped at sea through conferences, seminars, workshops, training courses and publications aimed at the general public and industry in order to reduce related risks".[443]

257. In its resolution 65/149, the Assembly invited the Secretary-General to seek the views of Member States and relevant regional and international organizations on issues relating to the environmental effects related to waste originating from chemical munitions dumped at sea, as well as on possible modalities for international cooperation to assess and increase awareness of the issue, and to communicate such views to the Assembly at its sixty-eighth session for further consideration. In response to that request, the Secretary-General presented a report

[442] See General Assembly resolutions 65/149 of 20 December 2013 and 68/208 of 20 December 2013.
[443] See General Assembly resolution 68/208, para. 4.

entitled "Cooperative measures to assess and increase awareness of environmental effects related to waste originating from chemical munitions dumped at sea".[444]

258. A number of States and organizations responded to the request for information, including the European Union, IMO, the World Health Organization and the Office for Disarmament Affairs of the United Nations Secretariat. The responses revealed a growing concern over the environmental risks related to waste originating from chemical munitions dumped at sea. States and organizations had therefore taken measures so as to reduce the risks. This was mainly done through international or regional cooperation, but was also through bilateral cooperation.

259. This is, in essence, also a reflection of the structure of the United Nations Convention on the Law of the Sea, since the Convention does not provide criteria for the assessment and recovery of compensation for damage, regardless of whether or not it is caused by a natural or juridical person or by a State.[445] It is also a reflection of the fact that there were no specific rules under the law of warfare that obliged States that have been engaged in an armed conflict to remove the chemical weapons or munitions which were dumped at the time. On the contrary, it was considered both legal and justifiable. The same was the case with sunken warships. No State would accept being responsible for an environmentally detrimental vessel that had come to rest at the bottom of the sea: neither the State that sunk it, nor the flag State. Depending on where the vessel was sunk, other States may also be effected, namely a coastal State. Today we may find chemical weapons, leaking vessels or hazardous waste in areas under the jurisdiction of a coastal State which was not involved in the armed conflict. In fact, the State may not even have existed at the time of the armed conflict.

260. During the course of the work on this topic, several States from the Pacific region raised the issue of leaking wrecks and dumped munitions. The environmental implication of wrecks from the Second World War and its aftermath is of increasing concern to many Pacific Island States.[446] In 2014, the General Assembly endorsed the Samoa Pathway, the outcome document of the third International Conference on Small Island Developing States.[447] The document recognizes "the concern that potential oil leaks from sunken State vessels have environmental implications for the marine and coastal ecosystems of small island developing States" and notes, inter alia, that "small island developing States and relevant vessel owners should

[444] A/68/258. Following the adoption of the resolution, an International Workshop on Environmental Effects Related to Waste Originating from Chemical Munitions Dumped at Sea was organized by Lithuania and Poland on 5 November 2012 and held in Gdynia, Poland. The aim was to advance its implementation. The Secretary-General has been requested to submit a second report on this issue at the Assembly's seventy-first session (see General Assembly resolution 68/208, para. 8).

[445] Thomas A. Mensah, "Environmental damages under the Law of the Sea Convention" in Jay E. Austin and Carl E. Bruch (eds.), *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: Cambridge University Press, 2000), p. 226 at p. 233.

[446] See, for example, the statement by Palau (A/C.6/70/SR.25) and the written contribution by the Federal States of Micronesia, *supra* note 96.

[447] General Assembly resolution 69/15, annex. The General Assembly has also welcomed the Samoa Pathway and reaffirmed its commitment to work with small island developing States towards its full implementation in its annual so-called "law of the sea resolution"; see Assembly resolutions 69/245, para. 281, and 70/235, para. 294.

continue to address the issue bilaterally on a case-by-case basis".[448] The problem of leaking vessels and remnant ammunition goes beyond the marine environment for many of the small island States, in that it affects the health and potential economic development of the States. Some of the main problems include the lack of baseline information and the unwillingness to share information. The latter may be due to security issues or simply lack of knowledge on the part of those who dumped or placed the material. The same is true for other regions of the world.

261. The present threat to the marine environment in the Pacific islands will have to be dealt with in a practical manner rather than a legal one. At the time of the dumping, there were no or few legal rules that prohibited dumping or other disposal of dangerous materials. Some of the Pacific islands now have to rely on cooperation with and financial contributions by other States.

262. It is, however, not only the Pacific islands that are affected. The problem with the remaining explosives and chemical weapons and substances is much larger. Other areas that are particularly affected include the Baltic Sea and the Skagerrak Strait, where quantities of waste[449] (often together with the vessel transporting the waste) were dumped after the Second World War by the Allied forces, which considered it an appropriate place to get rid of the substances that they had seized as occupying powers in Germany. Even if it was considered a lawful solution at the time of the dumping, the explosives and weapons are now seen in a different legal context. Fishermen in the region have from time to time encountered containers holding mustard gas or sea mines — most often well preserved owing to the brackish water in the region. What was then an area with the status of the high seas is now a well-delimited area where 10 States have exclusive economic zones and continental shelves. The munitions thus lie in areas that are heavily trafficked and subject to hydrotechnical projects, including submarine cables and pipelines, offshore wind farms and tunnels. States and operators are aware that the law applicable to such projects is the peacetime law (law of the sea, environmental law, but also European Union law and national legislation). The operative focus among States and enterprises is cooperation.

263. One such example is the Chemical Munitions, Search and Assessment (CHEMSEA) project, which was initiated in 2011 as a project of cooperation among the Baltic States and partly financed by the European Union.[450] As a result of this project, most of the munitions have been located and mapped. The information is freely accessible for all and is of crucial importance to companies that need to make compulsory environmental assessments before proceeding with costly hydrotechnical investments. This work rests on at least two pillars: the work done by the Baltic Marine Environment Protection Commission — (Helsinki Commission), which is the governing body of the Convention on the Protection of the Marine Environment

[448] General Assembly resolution 69/15, annex, para. 56: "Recognizing the concern that potential oil leaks from sunken State vessels have environmental implications for the marine and coastal ecosystems of small island developing States, and taking into account the sensitivities surrounding vessels that are marine graves, we note that small island developing States and relevant vessel owners should continue to address the issue bilaterally on a case-by-case basis."

[449] It has been calculated that at least 170,000 tons of chemical weapons were dumped in the Skagerrak Strait and at least 50,000 tons of chemical weapons were dumped in the Baltic Sea. It is assumed that these those dumped in the Baltic Sea contained roughly 15,000 tons of chemical warfare agents.

[450] See the project's website at http://www.chemsea.eu/index.php.

of the Baltic Sea Area, and financing by the European Union. The issue has been seriously addressed by the Helsinki Commission since the early 1990s.[451]

264. The Pacific and Baltic Sea regions are certainly not the only regions affected. Other regions such as the Mediterranean, the Barents Sea, the Atlantic and the Black Sea are also affected by this issue.[452]

265. In addition to the obvious threat of remnants of war to the natural environment as such, at least two features stand out in the responses and in State practice. First, it seems as though States have chosen to address these threats as a matter of environmental cooperation rather than environmental liability or responsibility. Second, there is a strong connection between the environmental threats and human health. It is therefore suggested that a draft principle on remnants of war at sea reads as follows:

**Draft principle III-4**
**Remnants of war at sea**

1. States and international organizations shall cooperate to ensure that remnants of war do not constitute a danger to the environment, public health or the safety of seafarers.

2. To this end States and organizations shall endeavour to survey maritime areas and make the information freely available.

# III. Final remarks and future programme of work

266. The main findings of the three reports presented by the Special Rapporteur indicate that there exists a substantive collection of legal rules that enhances environmental protection in relation to armed conflict. However, if taken as a whole, this collection of laws is a blunt tool, since its various parts sometimes seem to work in parallel streams. A holistic approach to the implementation of this body of law seems to be lacking at times. In addition, there are no existing or developed tools or processes to encourage States, international organizations and other relevant actors to utilize the entire body of already applicable rules.

267. The research that has underpinned the three reports presented by the Special Rapporteur, the discussions in the Commission, the views expressed in the Sixth Committee and contacts with international organizations, shows that there is a clear link between the law applicable before the outbreak of an armed conflict and the law applicable after an armed conflict. This should not be seen as being so merely because it is the body of law applicable in peacetime situations. It is also because the law applicable in the pre-conflict and post-conflict phases acts as a bridge over situations of armed conflict. In addition, it is not always clear to what extent peacetime law exists in parallel with the law of armed conflict. Against this background it is all the more noteworthy that States and international organizations

[451] See the Helsinki Commission website at www.helcom.fi/baltic-sea-trends/hazardous-substances/sea-dumped-chemical-munitions.

[452] The Helsinki Commission issued guidelines for fishermen that encounter sea-dumped chemical munitions at an early stage. For an easily accessible overview see the work done by the James Martin Center for Nonproliferation Studies at www.nonproliferation.org/chemical-weapon-munitions-dumped-at-sea/.

are often one step ahead of their international legal obligations in that they have chosen to adopt legislation or other mechanisms to regulate the conduct of armed forces in a voluntary manner that serves the aim of protecting the environment.

268. This means that the law that is relevant for the protection of the environment in relation to armed conflict has continued to grow and mature through practice, *opinio juris*, case law and treaties. The role of international organizations such as the United Nations, UNEP and UNESCO in this context is considerable. Environmental considerations have become part of the mainstream, and this is particularly notable when one looks at how different the situation was a decade or more ago.

269. The three reports have attempted to give an overview of applicable law during the three temporal phases: before, during and after an armed conflict. For obvious reasons it has not been possible to cover all the important aspects, and the Special Rapporteur is of the view that some matters may deserve further elaboration. Such matters include environmental protection during the different phases of occupation, the responsibility of non-State actors and organized armed groups and non-international armed conflicts. The reluctance on the part of States and organizations to submit information on the practice of such armed groups should not discourage the Commission from studying these matters further. The examples in the present report on peace agreements serve as an indicator that further studies may be warranted.

270. An important element for the future work on this topic continues to be consultation and contact with international organizations and bodies such as the United Nations, UNEP, UNESCO, ICRC and relevant non-governmental organizations. It is likewise important to continue to actively seek the views of States.

# Annex I

## Protection of the environment in relation to armed conflicts: proposed draft principles

…….

### Part One
### Preventive measures

#### Draft principle I-1
#### Implementation and enforcement

States should take all necessary steps to adopt effective legislative, administrative, judicial or other preventive measures to enhance the protection of the natural environment in relation to armed conflict, in conformity with international law.

…….

#### Draft principle I-3
#### Status-of-forces and status of mission agreements

States and international organizations are encouraged to include provisions on environmental regulations and responsibilities in their status-of-forces or status of mission agreements. Such provisions may include preventive measures, impact assessments, restoration and clean-up measures.

#### Draft principle I-4
#### Peace operations

States and organizations involved in peace operations shall consider the impacts of those operations on the environment and take all necessary measures to prevent, mitigate and remediate the negative environmental consequences thereof.

…….

### Part Three
### Draft principles applicable after an armed conflict

#### Draft principle III-1
#### Peace agreements

Parties to a conflict are encouraged to settle matters relating to the restoration and protection of the environment damaged by the armed conflict in their peace agreements.

#### Draft principle III-2
#### Post-conflict environmental assessments and reviews

1. States and former parties to an armed conflict are encouraged to cooperate between themselves and with relevant international organizations in order to carry out post-conflict environmental assessments and recovery measures.

2. Reviews at the conclusion of peace operations should identify, analyse and evaluate any environmentally detrimental effects of those operations on the environment, in an effort to mitigate or remedy those detrimental effects in future operations.

**Draft principle III-3**
**Remnants of war**

1. Without delay after the cessation of active hostilities, all minefields, mined areas, mines, booby-traps, explosive ordnance and other devices shall be cleared, removed, destroyed or maintained in accordance with obligations under international law.

2. At all times necessary, the parties shall endeavour to reach agreement, both among themselves and, where appropriate, with other States and with international organizations, on the provision of technical and material assistance, including, in appropriate circumstances, the undertaking of joint operations necessary to fulfil such responsibilities.

**Draft principle III-4**
**Remnants of war at sea**

1. States and international organizations shall cooperate to ensure that remnants of war do not constitute a danger to the environment, public health or the safety of seafarers.

2. To this end States and organizations shall endeavour to survey maritime areas and make the information freely available.

**Draft principle III-5**
**Access to and sharing of information**

In order to enhance the protection of the environment in relation to armed conflicts, States and international organizations shall grant access to and share information in accordance with their obligations under international law.

## Part Four
## [Additional principles]

**Draft principle IV-1**
**Rights of indigenous peoples**

1. The traditional knowledge and practices of indigenous peoples in relation to their lands and natural environment shall be respected at all times.

2. States have an obligation to cooperate and consult with indigenous peoples, and to seek their free, prior and informed consent in connection with usage of their lands and territories that would have a major impact on the lands.

# Annex II

## Select bibliography


Abascal, Christine Stockins. Protección del medio ambiente en los conflictos armados. Dissertation. Pontificia Universidad Católica de Chile, 2009.

Abouali, Gamal. Natural resources under occupation: the status of Palestinian water under international law. *Pace International Law Review*, vol. 10, No. 2 (1998), pp. 411-574.

Akande, Dapo. Nuclear weapons, unclear law? Deciphering the nuclear weapons advisory opinion of the International Court. *British Yearbook of International Law*, vol. 68, No. 1 (1997), pp. 165-217.

Al-Shaheen, Shaheen Ali and Rashid Hamad al-Anzi. Protection de l'environnement durant les conflits armés. *L'observateur des Nations Unies*, vol. 35 (2013), pp. 235-252.

Aust, Anthony. *Modern Treaty Law and Practice*. Cambridge: Cambridge University Press, 2000.

Acconci, Pia, and others, eds. *International Law and the Protection of Humanity: Essays in Honor of Judge Flavia Lattanzi* (forthcoming).

Ahlström, Christer. *Demilitariserade och neutraliserade områden i Europa*. Mariehamn: Åland Islands Peace Institute, 1995.

Ajibola, Bola. Protection of the environment in times of armed conflict. In *International Legal Issues Arising under the United Nations Decade of International Law*, Najeeb Al-Nauimi and Richard Meese, eds. The Hague: Martinus Nijhoff, 1995.

Almond, Harry H., Jr. The use of the environment as an instrument of war. *Yearbook of International Environmental Law*, vol. 2, No. 1 (1991), pp. 455-468.

Alston, Philip, Jason Morgan-Foster, and William Abresch. The competence of the UN Human Rights Council and its special procedures in relation to armed conflicts: extrajudicial executions in the "War on Terror". *European Journal of International Law*, vol. 19, No. 1 (2008), pp. 183-209.

Anderson, Terry L., and J. Bishop Grewell. The greening of foreign policy. *PERC Policy Series*, vol. 20, 2000.

Antoine, Philippe. Droit international humanitaire et protection de l'environnement en cas de conflit armé. *Revue internationale de la Croix-Rouge*, vol. 74, No. 798 (1992), pp. 537-558.

Anton, Donald K., and Dinah L. Shelton. *Environmental Protection and Human Rights*. Cambridge: Cambridge University Press, 2011.

Arraiza Navas, Fermín Luís, and Pedro J. Varela Fernández. Vieques: prácticas de guerra, derechos humanos y ambiente. *Revista Jurídica Universidad de Puerto Rico*, vol. 70, No. 1 (2001), pp. 209-233.

Asociación Española de Profesores de Derecho Internacional y Relaciones Internacionales. *Problemas Internacionales del Medio Ambiente: VIII Jornadas, Barcelona, 2 a 5 de julio de 1984*. Bellaterra, Barcelona: 1985.

Austin, Jay. *Conflict-Environment: Questions over Accountability in Kosovo*. Geneva: United Nations Environment Programme, November 1999.

Austin, Jay, and Carl E. Bruch, eds. *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*. Cambridge: Cambridge University Press, 2000.

Baker, Betsy. Legal protections for the environment in times of armed conflict. *Virginia Journal of International Law*, vol. 33, No. 2 (1993), pp. 351-383.

Banerjee, Rishav. Destruction of environment during an armed conflict and violation of international law: a legal analysis. In *Asian Yearbook of International Law*, vol. 15. B. S. Chimni, M. Masahiro and J. Rehman, eds. London: Routledge, 2009, pp. 145-188.

Bannelier, Karine. Les enjeux de la guerre aérienne pour la protection de l'environnement: remarques à propos du Manual on International Law Applicable to Air and Missile Warfare, *Guerre aérienne et droit international humanitaire*, Millet-Devalle, Anne-Sophie, ed. Paris: Pedone, 2015.

_____. L'utopie de la « guerre verte » : insuffisances et lacunes du régime de protection de l'environnement en temps de guerre. In *Permanence et mutation du droit des conflits armés*, Vincent Chetail, ed. Brussels: Bruylant, 2013.

Barboza, Julio. *The Environment, Risk and Liability in International Law*. Leiden: Martinus Nijhoff Publishers, 2011.

Barned, Ashley, and Christopher Waters. The Arctic environment and international humanitarian law. In *Canadian Yearbook of International Law*, vol. 49, J. H. Currie and R. Provost, eds. Vancouver: University of British Columbia Press, 2011, pp. 213-241.

Bassiouni, M. Cherif. International crimes: *jus cogens* and *obligatio erga omnes. Law and Contemporary Problems*, vol. 59, No. 4 (1996), pp. 63-74.

Bächler, Günther, and Kurt R. Spillman, eds. *Environmental Degradation as a Cause of War: Country Studies of External Experts*. Chur-Zürich: Rüegger, 1996.

Benvenisti, Eyal. Water conflicts during the occupation in Iraq. *American Journal of International Law*, vol. 97 (2003), pp. 860-872.

Bethlehem, Daniel. The methodological framework of the Study. In *Perspectives on the ICRC Study on Customary International Humanitarian Law*, Elizabeth Wilmshurst and Susan Breau, eds. Cambridge: Cambridge University Press, 2007.

Birnie, Patricia, Alan Boyle, and Catherine Redgewell. *International Law and the Environment*. Oxford: Oxford University Press, 2009.

Björklund, Mikaela, and Allan Rosas. *Ålandsöarnas demilitarisering och neutralisering*. Åbo: Åbo Akademi University Press, 1990.

Black, Cyril E., and others. *Neutralization and World Politics*. Princeton: Princeton University Press, 1968.

Blattmann, Heidi. Environmental damage from the Gulf war. *Swiss Review of World Affairs*, vol. 42, No. 3 (1992), pp. 27-28.

Blishchenko, Igor P., and Vladimir P. Shavrov. The legal basis of claims for damage to the environment resulting from military action. *Österreichische Zeitschrift für öffentliches Recht und Völkerrecht*, vol. 40, No. 1 (1989), pp. 29-45.

Blom, Esther, and others, eds. *Nature in War: Biodiversity Conservation during Conflict*. Leiden: Nederlandse Commissie voor Internationale Natuurbescherming, 2000.

Bloomfield, Lincoln P., Jr. Detritus of conflict: the U.S. approach to the humanitarian problem posed by landmines and other hazardous remnants of war. *Seton Hall Journal of Diplomacy and International Relations*, vol. 4, No. 1 (2003), pp. 27-41.

Blum, Gabriella. Remnants of war. In *Max Planck Encyclopaedia of Public International Law*, Oxford University Press, 2012.

Bodansky, Daniel. *Legal Regulation of the Effects of Military Activity on the Environment*. Berlin, Erich Schmidt Verlag, 2003.

Bodansky, Daniel, Jutta Brunnée, and Ellen Hey. *The Oxford Handbook on International Environmental Law*. Oxford: Oxford University Press, 2007.

Boelart-Suominen, Sonja Ann Jozef. *International Environmental Law and Naval War: The Effect of Marine Safety and Pollution Conventions during International Armed Conflict*. Newport Paper, No. 15. Newport: Naval War College, 2000.

Boisson de Chazournes, Laurence. *Freshwater and International Law: The Interplay between Universal, Regional and Basin Perspectives*. The United Nations World Water Programme. Paris: United Nations Educational, Scientific and Cultural Organization (2009).

Booley, Ashraf, and Letetia van der Poll. In our common interest: liability and redress for damage caused to the natural environment during armed conflict. *Law, Democracy and Development*, vol. 15 (2011), pp. 90-129.

Boothby, William H. *Weapons and the Law of Armed Conflict*. Oxford: Oxford University Press, 2009.

Bothe, Michael. The ethics, principles and objectives of protection of the environment in times of armed conflict. In *War and the Environment: New Approaches to Protecting the Environment in Relation to Armed Conflict*, Rosemary Rayfuse, ed. Leiden: Brill, 2014.

_____. Protection of the environment in times of armed conflict. In *International Legal Issues Arising under the United Nations Decade of International Law*, Najeeb Al-Nauimi and Richard Meese, eds. The Hague: Martinus Nijhoff Publishers, 1995.

_____. Environmental destruction as a method of warfare: do we need new law? *Disarmament*, vol. 15 (1992), pp. 101-153.

_____. The protection of the environment in times of armed conflict: legal rules, uncertainty, deficiencies and possible developments. *German Yearbook of International Law*, vol. 34 (1991), pp. 54-62.

Bothe, Michael, and others. *Protection of the Environment in Times of Armed Conflict*. Report to the Commission of the European Communities, SJ/110/85. 1985.

Bothe, Michael, and others. International law protecting the environment during armed conflict: gaps and opportunities. *International Review of the Red Cross*, vol. 92, No. 879 (2010), pp. 569-592.

Bothe, Michael, Karl Josef Partsch, and Waldemar A. Solfal. *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949*. 2nd ed. The Hague: Martinus Nijhoff Publishers, 2013.

Boutruche, Théo. Le statut de l'eau en droit international humanitaire. *Revue internationale de la Croix-Rouge*, No. 840 (2000), pp. 887-916.

Bouvier, Antoine. La protection de l'environnement naturel en période de conflit armé. *Revue internationale de la Croix-Rouge*, vol. 73, No. 792 (1991), pp. 599-611.

Bruch, Carl. *Constitutional Environmental Law: Giving Force to Fundamental Principles in Africa*. 2nd ed. Washington, D.C.: Environmental Law Institute, 2007.

Bruch, Carl E., and Jay E. Austin, eds. *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*. Cambridge: Cambridge University Press, 2000.

Bruch, Carl, and others. Post-conflict peace building and natural resources. *Yearbook of International Environmental Law*, vol. 19, No. 1 (2008), pp. 58-96.

Bunker, Alice Louise. Protection of the environment during armed conflict: one Gulf, two wars. *Review of European Community and International Environmental Law*, vol. 13, No. 2 (2004), pp. 201-213.

Cañas Vargas, Eileen Alina. Nuclear-weapon-free zones: the treaty of Tlatelolco and the proposal for a denuclearized Middle East. PhD thesis, Graduate Institute, Geneva, 2014.

Carnahan, Burris M. Protecting nuclear facilities from military attack: prospects after the Gulf War. *The American Journal of International Law*, vol. 86, No. 3 (1992), pp. 524-541.

_____. The law of land mine warfare: Protocol II to the United Nations Convention on Certain Conventional Weapons. *Military Law Review*, vol. 105 (1984), pp. 73-95.

Caron, David D. Finding out what the oceans claim: the 1991 Gulf War, the marine environment, and the United Nations Compensation Commission. In *Bringing New Law to Ocean Waters*, David D. Caron and Harry N. Scheiber, eds. Leiden: Martinus Nijhoff Publishers, 2004.

Churchill, R. R., and A. V. Lowe. *The Law of the Sea*. Manchester: Manchester University Press, 1999.

Clément, Etienne. Le réexamen de la Convention de la Haye de 1954 pour la protection des biens culturels en cas de conflit armé. In *International Legal Issues Arising under the United Nations Decade of International Law*, Najeeb Al-Nauimi and Richard Meese, eds. The Hague: Martinus Nijhoff Publishers, 1995.

Condorelli, Luigi. Nuclear weapons: a weighty matter for the International Court of Justice: jura non novit curia? *International Review of the Red Cross*, vol. 37, No. 316 (1997), pp. 9-20.

Cortina Mendoza, R., and V. Saco Chung. La protección del medio ambiente en el derecho internacional humanitario. *Revista da Faculdade de Direito da UFMG*, vol. 51, 2007, pp. 255-277.

Crawford, Alex, and Johannah Bernstein. *MEAs, Conservation and Conflict: A Case Study of Virunga National Park*, DRC. Winnipeg: International Institute for Sustainable Development, 2008.

Crawford, Emily. Armed conflict, international. In *Max Planck Encyclopaedia of Public International Law*, vol. I, Rüdiger Wolfrum, ed. Oxford: Oxford University Press, 2012.

Cusato, Eliana. The environmental impact of armed conflict and ex-post remedies: an assessment of Iraq's liability for environmental damage in the 1991 Gulf War. *Journal of International Humanitarian Studies* (forthcoming).

Dam-de Jong, Daniëlla. The role of informal normative processes in improving governance over natural resources in conflict-torn States. *Hague Journal on the Rule of Law*, vol. 7, No. 2 (2015), pp. 219-241.

_____. *International Law and Governance of Natural Resources in Conflict and Post-Conflict Situations*. Cambridge: Cambridge University Press, 2015.

_____. From engines for conflict into engines for sustainable development: the potential of international law to address predatory exploitation of natural resources in situations of internal armed conflict. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 155-178.

_____. International law and resource plunder: the protection of natural resources during armed conflict. *Yearbook of International Environmental Law*, vol. 19, No. 1 (2008), pp. 27-57.

Das, Onita. *Environmental Protection, Security and Armed Conflict: A Sustainable Development Perspective*. Cheltenham: Edward Elgar Publishing, 2013.

_____. Environmental protection in armed conflict: filling the gaps with sustainable development. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 103-128.

D'Aspremont, Jean. Towards an international law of brigandage: interpretative engineering for the regulation of natural resource exploitation. *Asian Journal of International Law*, vol. 3, No. 1 (2013), pp. 1-24.

David, Eric. The opinion of the International Court of Justice on the legality of the use of nuclear weapons. *International Review of the Red Cross*, vol. 37, No. 316 (1997), pp. 21-34.

Debonnet, Guy, and Kes Hillman-Smith. Supporting protected areas in a time of political turmoil: the case of world heritage sites in the Democratic Republic of the Congo. *Parks*, vol. 14, No. 1 (2004), pp. 9-16.

Delbrück, Jost. Demilitarization. In *Encyclopedia of Public International Law*, vol. 3, Rudolf Bernhardt and Peter Macalister-Smith, eds. Amsterdam: North-Holland, 1982, pp. 150-152.

Desch, Thomas. Haftung für Umweltschäden im Krieg: einige Bemerkungen zu I. P. Blishchenko und V. Ph. Shavrov. *Österreichische Zeitschrift für öffentliches Recht und Völkerrecht*, vol. 40, No. 1 (1989), pp. 47-71.

Desgagné, Richard. The prevention of environmental damage in time of armed conflict: proportionality and precautionary measures. *Yearbook of International Humanitarian Law*, vol. 3, 2000, pp. 109-129.

Deutsches Rotes Kreuz, and Institut für Friedenssicherungsrecht und Humanitäres Völkerrecht. Humanitäres Völkerrecht: *Informationsschriften — Journal of International Law of Peace and Armed Conflict*, vol. 26, No. 3 (2013), pp. 111-159.

Diederich, Michael D. "Law of war" and ecology: a proposal for a workable approach to protecting the environment through the law of war. *Military Law Review*, vol. 136 (1992), pp. 137-160.

Dienelt, Anne. "After the war is before the war": the hybrid function of art. 36 AP I. In *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles and Practices*, Carsten Stahn, Jens Iverson, and Jennifer Easterday, eds. Oxford University Press, 2017 (forthcoming).

_____. After the war is before the war: the environment, preventive IHL measures and their post-conflict impact. PhD thesis, University of Göttingen, 2014.

Dinstein, Yoram. The principle of proportionality. In *Searching for a 'Principle of Humanity' in International Humanitarian Law*. Kjetil Mujezinović Larsen, Camilla Guldahl Cooper and Gro Nystuen, eds. Cambridge: Cambridge University Press, 2013, pp. 72-85.

_____. *War, Aggression and Self-Defence*, 5th ed. Cambridge: Cambridge University Press, 2011.

_____. Protection of the environment in international armed conflict. In *Max Planck Yearbook of United Nations Law*, vol. 5, J. A. Frowein, and R. Wolfrum, eds. Netherlands: Kluwer Law International, 2001, pp. 523-549.

_____. The laws of air, missile and nuclear warfare. *Israel Yearbook on Human Rights*, vol. 27 (1997), pp. 1-16.

Domínguez-Matés, Rosario. New weaponry technologies and international humanitarian law: their consequences on the human being and the environment. In *The New Challenges of Humanitarian Law in Armed Conflicts: In Honour of Professor Juan Antonio Carrillo-Salcedo*, Pablo Antonio Fernández-Sánchez, ed. Leiden: Martinus Nijhoff Publishers, 2005.

_____. Desafío para el derecho internacional humanitario: responsabilidad penal internacional del individuo por daños al medio ambiente durante un conflicto armado. *American University International Law Review*, vol. 20 (2004), pp. 43-63.

Dorsey, Jessica. Conference notes on protection of the environment in armed conflict: testing the adequacy of international law. The Hague: T.M.C. Asser Instituut, 7 November 2011.

Dorsouma, Al-Hamandou, and Michel-André Bouchard. Conflits armés et environnement. *Développement durable et territoires*, vol. 8, 2006.

Doswald-Beck, Louise. *Human Rights in Times of Conflict and Terrorism*. Oxford: Oxford University Press, 2011.

_____. International humanitarian law and the advisory opinion of the International Court of Justice on the legality of the threat or use of nuclear weapons. *International Review of the Red Cross*, vol. 37, No. 316 (1997), pp. 35-55.

_____, ed. *San Remo Manual on International Law Applicable to Armed Conflicts at Sea*. Cambridge: Cambridge University Press, 1995.

Douhan, Alena. Liability for environmental damage. In *Max Planck Encyclopaedia of Public International Law*, vol. VI, Rüdiger Wolfrum, ed. Oxford: Oxford University Press, 2012.

Droege, Cordula, and Marie-Louise Tougas. The protection of the natural environment in armed conflict — existing rules and need for further legal protection. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 21-52.

DuBarry Huston, Meredith. Wartime environmental damages: financing the clean-up. *University of Pennsylvania Journal of International Economic Law*, vol. 23, No. 4 (2002), pp. 899-929.

Ebbesson, Jonas. Principle 10: public participation. In *The Rio Declaration on Environment and Development. A Commentary*, Jorge E. Viñuales, ed. Oxford: Oxford University Press, 2014.

Elias, Olufemi. Environmental impact assessment. In *Research Handbook on International Environmental Law*, Malgosia Fitzmaurice, David M. Ong and Panos Merkouris, eds. Cheltenham: Edward Elgar Publishing, 2010.

Eniang, Edem, Amleset Haile, and Teshale Yihdego. Impacts of landmines on the environment and biodiversity. *Environmental Policy and Law*, vol. 37, No. 6 (2007), pp. 501-504.

Falk, Richard. Environmental disruption by military means and international law. *Yearbook of International Environmental Law*, vol. 15 (2004), pp. 725-731.

_____. The inadequacy of the existing legal approach to environmental protection in wartime. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

_____. Environmental warfare and ecocide: facts, appraisal and Proposals. *Security Dialogue*, vol. 4, No. 1 (1973), pp. 80-96.

Fauchald, Ole Kristian, David Hunter and Wang Xi, eds. *Yearbook of International Environmental Law 2008*, vol. 19. Oxford: Oxford University Press, 2009.

Feliciano, Florentino P. Marine pollution and spoliation of natural resources as war measures: a note on some international law problems in the Gulf War. *Houston Journal of International Law*, vol. 14, No. 3 (1992), pp. 496-497.

Fenrick, William J. The law applicable to targeting and proportionality after Operation Allied Force: a view from the outside. *Yearbook of International Humanitarian Law*, vol. 3 (2000), pp. 53-80.

Fischhaber, Hans-Bjoern. Military concept on environmental protection and energy efficiency for EU-led military operations: real commitments or another “paper tiger”? *Energy Security Highlights*, vol. 10, No. 19 (2012), pp. 22-24.

Fishman, Akiva, and others. Peace through justice: international tribunals and accountability for wartime environmental wrongs. In *Governance, Natural Resources, and Post-Conflict Peacebuilding*, Carl Bruch, Carroll Muffett and Sandra S. Nichols, eds. Abingdon, Oxon: Earthscan, 2016.

Fitzmaurice, Malgosia, David M. Ong, and Panous Merkouris, eds. *Research Handbook on International Environmental Law*. Cheltenham: Edward Elgar Publishing, 2010.

Fleck, Dieter. Current legal and policy issues. In *Future Legal Restraints on Arms Proliferation: Arms Control and Disarmament Law*. United Nations publication, Sales No. E.96.0.24.

_____. The protection of the environment in armed conflict: legal obligations in the absence of specific rules. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 7-20.

Freeland, Steven. *Addressing the Intentional Destruction of the Environment during Warfare under the Rome Statute of the International Criminal Court*. Cambridge: Intersentia, 2015.

French, Duncan. Sustainable development. In *Research Handbook on International Environmental Law*, Malgosia Fitzmaurice, David M. Ong and Panos Merkouris, eds. Cheltenham: Edward Elgar Publishing, 2010.

Frigo, Manilio. Cultural property v. cultural heritage: a “battle of concepts” in international law? *International Review of the Red Cross*, vol. 86, No. 854 (2004), pp. 367-378.

Fujita, Hisakazu. The advisory opinion of the International Court of Justice on the legality of nuclear weapons. *International Review of the Red Cross*, vol. 37, No. 316 (1997), pp. 56-64.

Gardam, Judith G. Energy and the law of armed conflict. *Journal of Energy and Natural Resources Law*, vol. 15, No. 2 (1997), pp. 87-96.

Gasser, Hans-Peter. For better protection of the natural environment in armed conflict: a proposal for action. *American Journal of International Law*, vol. 89, No. 3 (1995), pp. 637-640.

Gehring, Réa. La protection de l’environnement en période de conflit armé: que peut ou pourrait apporter la Cour pénale international. Université de Lausanne, 2001.

Gill, Terry. The nuclear weapons advisory opinion of the International Court of Justice and the fundamental distinction between the jus ad bellum and the jus in bello. *Leiden Journal of International Law*, vol. 12, No. 3 (1999), pp. 613-624.

Gilman, Ryan. Expanding environmental justice after war: the need for universal jurisdiction over environmental war crimes. *Colorado Journal of International Environmental Law and Policy*, vol. 22, No. 3 (2011), pp. 447-471.

Goldblat, Jozef. Protection of the natural environment against the effects of military activities: legal implications. *Humanitäres Völkerrecht: Informationsschriften*, vol. 3, (1992), pp. 133-136.

_____. Legal protection of the environment against the effects of military activities. *Bulletin of Peace Proposals*, vol. 22, No. 4 (1991), pp. 399-406.

_____. The mitigation of environmental disruption by war: legal approaches. In *Environment Hazards of War: Releasing Dangerous Forces in an Industrialized World*, Arthur H. Westing, ed. London: Sage, 1990.

Gordon, Kathryn, and Joachim Pohl. Environmental Concerns in International Investment Agreements: A Survey, OECD Working Papers on International Investment, 2011/01.

Green, Leslie. The environment and the law of conventional warfare. In *Canadian Yearbook of International Law*, vol. 29, C. B. Bourne, ed. Vancouver: University of British Columbia Press, 1991, pp. 222-226.

Greenwood, Christopher. Jus ad bellum and jus in bello in the nuclear weapons advisory opinion. In *International Law, The International Court of Justice and Nuclear Weapons*, Laurence Boisson de Chazournes and Philippe Sands, eds. Cambridge: Cambridge University Press, 1999, pp. 247-266.

_____. State responsibility and civil liability for environmental damages caused by military operations. In *International Law Studies*, vol. 69, *Protection of the Environment During Armed Conflict*, Richard J. Grunawalt, John E. King and Ronald S. McClain, eds. Newport: Naval War College, 1996.

_____. The twilight of the law of belligerent reprisals. *Netherlands Yearbook of International Law*, vol. 20 (1989), pp. 40-43.

Gillespie, Alexander. *Conservation, Biodiversity and International Law*. Cheltenham: Edward Elgar Publishing, 2011.

Guarnacci, Emilia Schiavo. Conflictos armados y medio ambiente. Buenos Aires, Universidad de Salvador, 2006.

Guillard, David. *Les armes de guerre et l'environnement naturel: essai d'étude juridique*. Paris: Harmattan, 2006.

Hagmann, Tobias. Confronting the concept of environmentally induced conflict. *Peace, Conflict and Development*, vol. 6 (2005), pp. 1-22.

Halle, Silja, ed. *Greening the Blue Helmets: Environment, Natural Resources and UN Peacekeeping Operations*. Nairobi: United Nations Environment Programme, May 2012.

_____. *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. Nairobi: United Nations Environment Programme, February 2009.

Hampson, Françoise. Other areas of customary law in relation to the Study. In *Perspectives on the ICRC Study on Customary International Humanitarian Law*, Elizabeth Wilmshurst and Susan Breau, eds. Cambridge: Cambridge University Press, 2007, pp. 50-74.

Hannikainen, Lauri. The continued validity of the demilitarised and neutralized status of the Åland Islands. *Zeitschrift für ausländisches öffentliches Recht und Völkerrecht*, vol. 54, 1994, pp. 614-616.

Harwell, Emily E. Building momentum and constituencies for peace: the role of natural resources in transitional justice and peacebuilding. In *Governance, Natural Resources, and Post-conflict Peacebuilding*, Carl Bruch, Carroll Muffet and Sandra S. Nichols, eds. Routledge, 2013.

Harvard University, Program on Humanitarian Policy and Conflict Research. *HPCR Manual on International Law Applicable to Air and Missile Warfare*. Cambridge: Cambridge University Press, 2013.

Hawley, T. M. *Against the Fires of Hell: The Environmental Disaster of the Gulf War*. New York: Harcourt Brace Jovanovich, 1992.

Heintschel von Heinegg, Wolff, and Michael Donner. New developments in the protection of the natural environment in naval armed conflicts. In *German Yearbook of International Law*, vol. 37, Jost Delbrück, Rainer Hofmann and Andreas Zimmermann, eds. Berlin: Duncker and Humblot, 1994, pp. 281-302.

Henckaerts, Jean-Marie. Study on customary international humanitarian law: a contribution to the understanding and respect for the rule of law in armed conflict. *International Review of the Red Cross*, vol. 87, No. 857 (2005), pp. 175-212.

_____. International legal mechanisms for determining liability for environmental damage under international humanitarian law. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

Henckaerts, Jean-Marie, and Louise Doswald-Beck, eds. *Customary International Humanitarian Law*, vols. I and II. Cambridge: International Committee of the Red Cross and Cambridge University Press, 2005.

Herczegh, Géza. La protection de l'environnement naturel et le droit humanitaire. In *Etudes et essais sur le droit international humanitaire et sur les principes de la Croix-Rouge en l'honneur de Jean Pictet*. The Hague: Martinus Nijhoff Publishers, 1984.

Hough, Peter. Defending nature: the evolution of the international legal restriction of military ecocide. *The Global Community Yearbook of International Law and Jurisprudence*, vol. 1 (2014), pp. 137-152.

Huang, Ling-Yee. The 2006 Israeli-Lebanese conflict: a case study for protection of the environment in times of armed conflict. *Florida Journal of International Law*, vol. 20, No. 1 (2008), pp. 103-113.

Hourcle, Laurent R. Environmental law of war. *Vermont Law Review*, vol. 25, No. 3 (2001), pp. 653-681.

Hulme, Karen. Taking care to protect the environment against damage: a meaningless obligation? *International Review of the Red Cross*, vol. 92, No. 879 (2010), pp. 675-691.

_____. Natural environment. In *Perspectives on the ICRC Study on Customary International Humanitarian Law*, Elizabeth Wilmshurst and Susan Breau, eds. Cambridge: Cambridge University Press, 2007, pp. 204-237.

_____. *War Torn Environment: Interpreting the Legal Threshold*. Leiden: Martinus Nijhoff Publishers, 2004.

Ichim, Octavian. *Just Satisfaction under the European Convention on Human Rights*. Cambridge: Cambridge University Press, 2014.

International Law and Policy Institute. Protection of the environment in times of armed conflict, Report from the Expert Meeting on Protection of the Environment in Times of Armed Conflict, 14-15 September 2015. Helsinki: International Law and Policy Institute, 2015.

International Law and Policy Institute. Protection of the natural environment in armed conflict: an empirical study. Report 12/2014, Oslo: International Law and Policy Institute, 2014.

Jacobsson, Marie. Protection of the environment and air and missile warfare: some reflections. *Israel Yearbook on Human Rights*, vol. 45 (2015), pp. 51-66.

Jensen, David. Evaluating the impact of UNEP's post-conflict environmental assessments. In *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding*, David Jensen and Steve Lonergan, eds. Abingdon, Oxon: Earthscan, 2013.

Jensen, David, Alec Crawford and Carl Bruch. Water and post-conflict peacebuilding. *Environmental Peacebuilding*, Policy Brief, No. 4, 2014.

Jensen, David, and Silja Halle, eds. *Protecting the Environment During Armed Conflict: An Inventory and Analysis of International Law*. Nairobi: United Nations Environment Programme, November 2009.

Jensen, David, and Steve Lonergan, eds. *Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding*. New York: Earthscan, 2012.

Jensen, Eric Talbot. The international law of environmental warfare: active and passive damage during times of armed conflict. *Vanderbilt Journal of Transnational Law*, vol. 38, No. 1 (2005), pp. 145-186.

Jensen, Eric Talbot, and James J. Teixeira, Jr. Prosecuting members of the U.S. military for wartime environmental crimes. *Georgetown International Environmental Law Review*, vol. 17, No. 4 (2005), pp. 651-671.

Jha, U.C. *Armed Conflict and Environmental Damage*. New Delhi: Vij Books India, 2014.

Johnson, Giff. *Nuclear Past, Unclear Future*. Majuro: Micronitor News and Printing Company, 2009.

Jorgensen, Nikolai. The protection of freshwater in armed conflict. *Journal of International Law and International Relations*, vol. 3, No. 2 (2007), pp. 57-96.

Joyner, Christopher C., and James T. Kirkhope. The Persian Gulf war oil spill: reassessing the law of environmental protection and the law of armed conflict. *Case Western Reserve Journal of International Law*, vol. 24, No. 1 (1992), pp. 29-62.

Juste Ruiz, José. Derecho de los conflictos armados y protección del medio ambiente. In *Estudios de derecho internacional en homenaje al profesor Ernesto J. Rey Caro*, vol. 2, Zlata Drnas de Clément, ed. Córdoba: Marcos Lerner, 2002.

_____. Derecho de los conflictos armados y protección del medio ambiente. In *Cursos de derechos humanos de Donostia-San Sebastián*, vol. 3, Juan Soroeta Liceras, ed. San Sebastián: Universidad del País Vasco, 2002.

Kabai, Michael. An international call for moratorium on the use of depleted uranium in military weapons. *Journal of International Law of Peace and Armed Conflict*, vol. 26, No. 3 (2013), pp. 137-141.

Kalshoven, Frits. *Reflections on the Law of War: Collected Essays*. International Humanitarian Law Series. Leiden: Martinus Nijhoff, 2007.

_____. *Belligerent Reprisals*, 2nd ed. International Humanitarian Law Series. Leiden: Martinus Nijhoff, 2005.

_____. Belligerent reprisals revisited. *Netherlands Yearbook of International Law*, vol. 21 (1990), pp. 43-80.

Karuru, Njeri, and Louise H. Yeung. Integrating gender into post-conflict natural resource management. In *Governance, Natural Resources, and Post-conflict Peacebuilding*, Carl Bruch, Caroll Muffet and Sandra S. Nichols, eds. Routledge, 2013.

Kearns, Brendan. When bonobos meet guerillas: preserving biodiversity on the battlefield. *Georgetown International Environmental Law Review*, vol. 24, No. 2 (2012), pp. 123-168.

Kellman, Barry. The Chemical Weapons Convention: a verification and enforcement model for determining legal responsibilities for environmental harm caused by war. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

Kirchner, A. Environmental protection in time of armed conflict. *European Energy and Environmental Law Review*, vol. 9, No. 10 (2000), pp. 266-272.

Kiss, Alexandre. International humanitarian law and the environment. *Environmental Policy and Law*, vol. 31, Nos. 4-5 (2001), pp. 223-231.

Knox, John H. Assessing the candidates for a global treaty on environmental impact assessment. *New York University Environmental Law Journal*, vol. 12, No. 1 (2003), pp. 153-168.

Kohen, Marcelo G. The notion of ‘State survival’ in international law. In *International Law, The International Court of Justice and Nuclear Weapons*, Laurence Boisson de Chazournes and Philippe Sands, eds. Cambridge: Cambridge University Press, 1999.

Koppe, Erik V. The principle of ambituity and the prohibition against excessive collateral damage to the environment during armed conflict. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 53-82.

_____. *The Use of Nuclear Weapons and the Protection of the Environment during International Armed Conflict*. Oxford: Hart Publishing, 2008.

Koroma, Abdul G. Law of sustainable development in the jurisprudence of the International Court of Justice. In *International Law and Changing Perceptions of*

*Security*, Jonas Ebbesson, and others, eds. Leiden, Boston: Brill Nijhoff, 2014, pp. 189-201.

Kreß, Claus. The International Court of Justice and the law of armed conflicts. In *The Development of International Law by the International Court of Justice*, Christian J. Tams and James Sloan, eds. Oxford: Oxford University Press, 2013.

Landel, Morgane. Are aerial fumigations in the context of war in Colombia a violation of the rules of international humanitarian law? *Transnational Law and Contemporary Problems*, vol. 19, No. 2 (2010), pp. 419-513.

Lanier-Graham, Susan D. *The Ecology of War: Environmental Impacts of Weaponry and Warfare*. New York: Walker, 1993.

Lavaux, Stephanie. Degradación ambiental y conflictos armados: las conexiones. Documento de investigación, No. 7. Bogotá: Centro Editorial, Universidad del Rosario, 2004.

Lavieille, Jean-Marc. Les activités militaires, la protection de l'environnement et le droit international. *Revue juridique de l'environnement*, vol. 4 (1992), pp. 421-452.

Lijnzaad, Liesbeth, and Gerard J. Tanja. Protection of the environment in times of armed conflict: the Iraq-Kuwait War. *Netherlands International Law Review*, vol. 40, No. 2 (1993), pp. 169-199.

Lord, Janet E. Legal restraints in the use of landmines: humanitarian and environmental crisis. *California Western International Law Journal*, vol. 25, No. 2 (1995), pp. 311-355.

Low, Luan, and David Hodgkinson. Compensation for wartime environmental damage: challenges to international law after the Gulf War. *Virginia Journal of International Law*, vol. 35, No. 2 (1995), pp. 405-483.

Lubell, Noam. Challenges in applying human rights law to armed conflict. *International Review of the Red Cross*, vol. 87, No. 860 (2005), pp. 737-754.

Lujala, Päivi, and Siri Aas Rustad, ed. *High-value Natural Resources and Post-conflict Peacebuilding*. New York: Earthscan, 2012.

Lundberg, Michael A. The plunder of natural resources during war: a war crime (?) *Georgetown Journal of International Law*, vol. 39, No. 3 (2008), pp. 495-525.

Lung, Wan Pun. Pre-conflict military activities: environmental obligations and responsibilities of States. *Chinese Journal of International Law*, vol. 14, No. 3 (2015), pp. 465-496.

Mahfoudh, Haykel Ben. *L'environnement, l'humanitaire et le droit international*. Manouba, Tunisia: Centre de publication universitaire, 2010.

Mahmoudi, Said. Foreign military activities in the Swedish economic zone. *International Journal of Marine and Coastal Law*, vol. 11, No. 3 (1996), pp. 365-386.

Mainetti, Vittorio. L'intérêt culturel internationalement protégé: contribution à l'étude du droit international de la culture. PhD thesis No. 881, Graduate Institute of International and Development Studies, 2011, pp. 71-136.

Makhijani, Arjun, Howard Hu, and Katherine Yih, eds. *Nuclear Wastelands: A Global Guide to Nuclear Weapons Production and its Health and Environmental Effects — By a Special Commission of International Physicians for the Prevention of Nuclear War and the Institute for Energy and Environmental Research*. Cambridge, Massachusetts: MIT Press, 1995.

Malviya, R. A. Laws of armed conflict and environmental protection: an analysis of their inter-relationship. *ISIL Year Book of International Humanitarian and Refugee Law*, vol. I. New Delhi: Indian Society of International Law, 2001.

Marauhn, Thilo, Georg Nolte, and Andreas Paulus. Trends in international humanitarian law. *Human Rights Law Journal*, vol. 29 (2008), pp. 216-226.

Marauhn, Thilo, and Zacharie F. Ntoubandi. Armed conflict, non-international. In *Max Planck Encyclopaedia of Public International Law*, vol. I, Rüdiger Wolfrum, ed. Oxford: Oxford University Press, 2012.

Marsh, Jeremy. *Lex lata* or *lex ferenda*? Rule 45 of the ICRC study on customary international humanitarian law. *Military Law Review*, vol. 198 (2008), pp. 116-164.

Martin, Michael F. U.S. Agent Orange/dioxin assistance to Vietnam. Congressional Research Service, 13 November 2015.

McCarthy, Conor. *Reparations and Victim Support in the International Criminal Court*. Cambridge: Cambridge University Press, 2012.

McCormack, Timothy L. H. An Australian perspective on the ICRC customary international humanitarian law study. In *International Law Studies*, vol. 82, *The Law of War in the 21st Century: Weaponry and the Use of Force*, Anthony M. Helm, ed. Newport, Rhode Island: Naval War College, 2006, pp. 81-97.

McNeill, John H. Protection of the environment in times of armed conflict: environmental protection in military practice. In *Hague Yearbook of International Law*, vol. 6, 1993, A.-C. Kiss and Johan G. Lammers, eds. Dordrecht: Martinus Nijhoff, 1994.

Melvin, Neil, and Ruben De Koning. Resources and armed conflict. In *SIPRI Yearbook 2011: Armaments, Disarmament and International Security*. Oxford: Oxford University Press, 2011.

Mensah, Thomas A. United Nations Compensation Commission (UNCC). In *Max Planck Encyclopaedia of Public International Law*, vol. X, Rüdiger Wolfrum, ed. Oxford: Oxford University Press, 2012.

_____. Environmental damages under the Law of the Sea Convention. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

Mésa, R. Protection de l'environnement et armes de combat: étude de droit international penal. *Revue trimestrielle des droits de l'homme*, vol. 85 (2011), pp. 43-57.

Miggiani, Mark Anthony. War Remnants: A Case Study in the Progressive Development of International Law. Genève: Institut universitaire de hautes études internationales, 1988 (not printed, available at HEIDI, Geneva).

Miles, Cameron. Content and enforcement. In *Provisional Measures before International Courts and Tribunals*. Cambridge University Press (forthcoming).

Mitchell, Ronald B. International environmental agreements: a survey of their features, formation, and effects. *Annual Review of Environment and Resources*, vol. 28 (2003), pp. 429-461.

Mohr, Manfred and Alexander Stöcker. Summary report of workshop: Exploring a Legal Framework for Toxic Remnants of War, Freie Universität Berlin, 22 June 2012.

Mollard-Bannelier, Karine. *La protection de l'environnement en temps de conflit armé*. Paris: Pedone, 2001.

Momtaz, Djamchid. Les règles relatives à la protection de l'environnement au cours des conflits armés à l'épreuve du conflit entre l'Irak et le Koweït. *Annuaire français de droit international*, vol. 37 (1991), pp. 203-219.

Moneta, Carlos J. *La Antartida en el sistema internacional del futuro*. Buenos Aires: Grupo Editor Latinoamerícano, 1988.

Moussa, Jasmine. Can jus ad bellum override jus in bello? Reaffirming the separation of the two bodies of law. *International Review of the Red Cross*, vol. 90, No. 872 (2008), pp. 963-990.

Müllerson, Rein. On the relationship between jus ad bellum and jus in bello in the General Assembly Advisory Opinion. In *International Law, the International Court of Justice and Nuclear Weapons*, Laurence Boisson de Chazournes and Philippe Sands eds. Cambridge: Cambridge University Press, 1999, pp. 267-274.

Murphy, Sean D., Won Kidane, and Thomas R. Snider. *Litigating War: Arbitration of Civil Injury by the Eritrea-Ethiopia Claims Commission*. New York: Oxford University Press, 2013.

Nafziger, James A. R. UNESCO-centered management of international conflict over cultural property. *Hastings Law Journal*, vol. 27, No. 5 (1976), pp. 1051-1067.

Nevitt, Mark P. The commander in chief's authority to combat climate change. In *Cardozo Law Review*, vol. 37, No. 437 (2015), pp. 437-502.

Nystuen, Gro, Stuart Casey-Maslen, and Annie Golden Bersagel, eds. *Nuclear Weapons under International Law*. Cambridge: Cambridge University Press, 2014.

Okorodudu-Fubara, Margaret. Oil in the Persian Gulf War: legal appraisal of an environmental warfare. *St. Mary's Law Journal*, vol. 123 (1992), pp. 204-206.

Okowa, Phoebe. Sovereignty contests and the protection of natural resources in conflict zones. *Current Legal Problems*, vol. 66, No. 1 (2013), pp. 33-73.

_____. Environmental justice in situations of armed conflict. In *Environmental Law and Justice in Context*, Jonas Ebbesson and Phoebe Okowa, eds. Cambridge: Cambridge University Press, 2009.

_____. The legal framework for the protection of natural resources in situations of armed conflict. In *Criminal Jurisdiction 100 Years after the 1907 Hague Peace Conference: 2007 Hague Joint Conference on Contemporary Issues of International Law*, W.J.M. van Genugten, M. P. Scharf and S. E. Radin, eds. The Hague: T.M.C. Asser, 2007.

Oviedo, Gonzalo, Luisa Maffi, and Peter Bille Larsen. *Indigenous and Traditional Peoples of the World and Ecoregion Conservation: An Integrated Approach to Conserving the World's Biological and Cultural Diversity*. Gland: World Wide Fund for Nature, 2000.

Özerdem, Alpaslan and Rebecca Roberts. *Challenging post-conflict environments: sustainable agriculture*. Burlington: Ashgate, 2012.

Oxman, Bernard H. Comment: developing the environmental law of armed conflict. In *International Law Studies*, vol. 69, *Protection of the Environment During Armed Conflict*, Richard J. Grunawalt, John E. King and Ronald S. McClain, eds. Newport, Rhode Island: Naval War College, 1996.

Pantazopoulos, Stavros-Evdokimos. Towards a coherent framework of transnational corporations' responsibility in international environmental law. *Yearbook of International Environmental Law*, vol. 24, No. 1 (2013), pp. 131-165.

Parsons, Rymn James. The fight to save the planet: U.S. Armed Forces, "greenkeeping," and enforcement of the law pertaining to environmental protection during armed conflict. *Georgetown International Environmental Law Review*, vol. 10, No. 2 (1998), pp. 441-500.

Pavoni, Riccardo. Environmental rights, sustainable development, and investor-State case law: a critical appraisal. In *Human Rights in International Investment Law and Arbitration*, Pierre-Marie Dupuy, Ernst-Ulrich Petersmann and Francesco Francioni, eds. Oxford: Oxford University Press, 2009.

Payne, Cymie R. Defining the environment. In *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles and Practices*, Carsten Stahn, Jens Iverson, and Jennifer Easterday, eds. Oxford University Press, 2017 (forthcoming).

_____. Developments in the law of environmental reparations: a case study of the United Nations Compensation Commission. In *Environmental Protection and Transitions from Conflict to Peace: Clarifying Norms, Principles and Practices*, Carsten Stahn, Jens Iverson, and Jennifer Easterday, eds. Oxford University Press, 2017 (forthcoming).

Payne, Cymie R., and Peter H. Sand, eds. *Gulf War Reparations and the UN Compensation Commission: Environmental Liability*. Oxford: Oxford University Press, 2011.

Pejic, Jelena. Status of armed conflicts. In *Perspectives on the ICRC Study on Customary International Humanitarian Law*, Elizabeth Wilmshurst and Susan Breau, eds. Cambridge: Cambridge University Press, 2007, pp. 77-100.

Perna, Laura. *The Formation of the Treaty Law of Non-International Armed Conflicts*. Leiden: Martinus Nijhoff, 2006.

Pertile, Marco. *La relazione tra risorse naturali e conflitti armati nel diritto internazionale*. Milan: CEDAM, 2012.

Peterson, Ines. The natural environment in times of armed conflict: a concern for international war crimes law? *Leiden Journal of International Law*, vol. 22, No. 2 (2009), pp. 325-343.

Pimiento Chamorro, Susana, 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, Washington: Edmonds Institute, 2001.

Plant, Glen, ed. *Environmental Protection and the Law of War: A "Fifth Geneva" Convention on the Protection of the Environment in Time of Armed Conflict*. London: Belhaven Press, 1992.

_____. Legal aspects of marine pollution during the Gulf War. In *International Journal of Estuarine and Coastal Law*, vol. 7, No. 3 (1992), pp. 217-231.

Plant, Roger. *Land Rights and Minorities*. Minority Rights Group International Report 94/2. London: Minority Rights Group, 1994.

Popović, Neil A. F. Humanitarian law, protection of the environment, and human rights. *Georgetown International Environmental Law Review*, vol. 8, No. 1 (1995), pp. 67-89.

Prawitz, Jan. The concept of NWFZ with a comment on East Asia. In *Proceedings of the Forty-fifth Pugwash Conference on Science and World Affairs, Hiroshima, Japan, 23-29 July 1995: Towards a Nuclear-Weapon Free World*, Joseph Rotblat and Michiji Konuma, eds. Singapore: World Scientific, 1997, p. 24.

Prescott, Jody M. NATO gender mainstreaming and the feminist critique of the law of armed conflict. *The Georgetown Journal of Gender and the Law*, vol. XIV, No. 1 (2013), pp. 83-133.

Prescott, Michael. How war affects treaties between belligerents: a case study of the Gulf War. *Emory International Law Review*, vol. 7, No. 1 (1993), pp. 197-201.

Quénivet, Noëlle and Shilan Shah-Davis, eds. *International Law and Armed Conflict: Challenges in the 21st Century*. The Hague: T.M.C. Asser, 2010.

Quinn, John P., Richard T. Evans, and Michael J. Boock, United States Navy development of operational-environmental doctrine. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

Rayfuse, Rosemary. Rethinking international law and the protection of the environment in relation to armed conflict. In *War and the Environment: New Approaches to Protecting the Environment in Relation to Armed Conflict*, Rosemary Rayfuse, ed. Leiden: Brill, 2014.

Reuveny, Rafael, Andreea S. Mihalache-O'Keef, and Quan Li. The effect of warfare on the environment. *Journal of Peace Research*, vol. 47, No. 6 (2010), pp. 749-761.

Rich, Andy. The environment: adequacy of protection in times of war. *Penn State Environmental Law Review*, vol. 12, No. 3 (2004), pp. 445-558.

Rieu-Clarke, Alistair, Ruby Moynihan and Bjørn-Oliver Magsig. *United Nations Watercourses Convention User's Guide*. International Hydrological Programme-Hydrology for the Environment, Life and Policy Centre for Water Law, Policy and Science, 2012.

Roach, Ashley J. Certain Conventional Weapons Convention: arms control or humanitarian law? *Military Law Review*, vol. 105 (1984), pp. 3-72.

Robb, Cairo A. R., ed. *International Environmental Law Reports*, vol. 3, *Human Rights and Environment*. Cambridge: Cambridge University Press, 2001.

Roberts, Adam. The law of war and environmental damage. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

Robinson, Nicholas. International law and the destruction of nature in the Gulf War. *Environmental Policy and Law*, vol. 21 (1991), pp. 216-220.

Roch, Philippe, and Franz Xaver Perrez. International environmental governance: the strive towards a comprehensive, coherent, effective and efficient international environmental regime. *Colorado Journal of International Environmental Law and Policy*, vol. 16, No. 1 (2005), pp. 1-25.

Rogers, A.P.V. *Law on the Battlefield*. Manchester: Manchester University Press, 2004.

Romson, Åsa. *Environmental Policy Space and International Investment Law*. PhD thesis, Stockholm University, 2012.

Roscini, Marco. The cases against the nuclear weapons States. *American Society of International Law Insights*, vol. 19, No. 10 (2015).

_____. Protection of the natural environment in time of armed conflict. In *International Humanitarian Law: An Anthology*, Jahid Hossain Bhuiyan, Louise Doswald-Beck and Azizur Rahman Chowdhury, eds. Nagpur: LexisNexis Butterworths, 2009.

Roselli, Carina. At the intersection of human rights and the environment in Iraq's southern marshes. Doctor juris thesis, Vermont Law School, 2014. The thesis is on file with the Special Rapporteur.

_____. Bordering on desuetude: are Additional Protocol I's environmental provisions no longer serviceable? 17 January 2013. The article is on file with the Special Rapporteur.

_____. Restoring Iraq's southern marshes: uncertainty in post-conflict Mesopotamia. Dissertation, Vermont Law School, 20 December 2012.

Ross, Marc A. Environmental warfare and the Persian Gulf War: possible remedies to combat intentional destruction of the environment. *Dickinson Journal of International Law*, vol. 10, No. 3 (1992), pp. 515-534.

Saalfeld, Michael. Umweltschutz in bewaffneten Konflikten aus völkerrechtsgeschichtlicher Sicht. *Humanitäres Völkerrecht: Informationsschriften*, vol. 5, No. 1 (1992), pp. 23-32.

Sadeleer, Nicolas de. *EU Environmental Law and the Internal Market*. Oxford: Oxford University Press, 2014.

Sancin, Vasilka. Peace operations and the protection of the environment. In *International Environmental Law: Contemporary Concerns and Challenges*, Vasilka Sancin, ed. Ljubljana: GV Založba, 2012.

_____, ed. *International Environmental Law: Contemporary Concerns and Challenges: Papers Presented at the First Contemporary Challenges of International Environmental Law Conference, Ljubljana, June 28-29 2012*. Ljubljana: GV Založba, 2012.

Sand, Peter H. Environmental dispute settlement and the experience of the UN Compensation Commission. *Japanese Yearbook of International Law*, vol. 54 (2011), pp. 151-189.

_____. Compensation for environmental damage from the 1991 Gulf War. *Environmental Policy and Law*, vol. 35, No. 6 (2005), pp. 244-249.

Sandoz, Yvez, Christophe Swinarski, and Bruno Zimmermann. *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August of 1949*. Geneva: International Committee of the Red Cross and Martinus Nijhoff, 1987.

Sands, Philippe. Liability for environmental damage and the report of the UNEP Working Group of Experts: an introductory note. In *Liability and Compensation for Environmental Damage: Compilation of Documents*, Alexandre Timoshenko, ed. Nairobi: United Nations Environment Programme, 1998.

_____. The Gulf war: environment as a weapon. In *Proceedings of the 85th Annual Meeting of the American Society of International Law*, vol. 85, G. C. Denny and S. F. Bassuener, eds. Washington, D.C.: American Society of International Law, 1991.

Sands, Philippe, and Jacqueline Peel. *Principles of International Environmental Law*, 3rd ed. Cambridge: Cambridge University Press, 2012.

Sari, Aurel. Status of forces and status of mission agreements under the European Security and Defence Policy: the EU's evolving practice. *European Journal of International Law*, vol. 19, No. 1 (2008), pp. 67-100.

Schafer, Bernard K. The relationship between the international laws of armed conflict and environmental protection: the need to re-evaluate what types of conduct are permissible during hostilities. *California Western International Law Journal*, vol. 19, No. 2 (1988-1989), pp. 287-325.

Schiefer, H. Bruno, ed. *Verifying Obligations Respecting Arms Control and the Environment: A Post-Gulf War Assessment — Final Report, Workshop on Verifying Obligations Respecting Arms Control and the Environment: Post-Gulf War Assessment*. Saskatoon: University of Saskatchewan, 1992.

Schmitt, Michael N. ed. *Tallinn Manual on the International Law Applicable to Cyber Warfare*. Cambridge: Cambridge University Press, 2013.

_____. Humanitarian law and the environment. *Denver Journal of International Law and Policy*, vol. 28, No. 3 (2000), pp. 265-323.

_____. War and the environment: fault lines in the prescriptive landscape. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

_____. Green war: an assessment of the environmental law of international armed conflict. *Yale Journal of International Law*, vol. 22, No. 1 (1997), pp. 1-109.

Schmitt, Michael N., Charles H. B. Garraway, and Yoram Dinstein. *The Manual on the Law of Non-International Armed Conflict: With Commentary*. San Remo: International Institute of Humanitarian Law, 2006.

Schwartz, Priscilla. The polluter-pays principle. In *Research Handbook on International Environmental Law*, Malgosia Fitzmaurice, David M. Ong and Panos Merkouris, eds. Cheltenham: Edward Elgar Publishing, 2010.

Scobbie, Iain. The approach to customary law in the Study. In *Perspectives on the ICRC Study on Customary International Humanitarian Law*, Elizabeth Wilmshurst and Susan Breau, eds. Cambridge: Cambridge University Press, 2007, pp. 15-29.

Shambaugh, James, Judy Oglethorpe, and Rebecca Ham. *The Trampled Grass: Mitigating the Impacts of Armed Conflict on the Environment*. Washington, D.C.: Biodiversity Support Program, 2001.

Sharp, Walter. The effective deterrence of environmental damage during armed conflict: a case analysis of the Persian Gulf War. *Military Law Review*, vol. 137 (1992), pp. 1-67.

Shelton, Dinah L., and Alexandre Charles Kiss. Strict liability in international environmental law. In *Law of the Sea, Environmental Law and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah*, Tafsir Malick Ndiaye and Rüdiger Wolfrum, eds. Leiden: Martinus Nijhoff, 2007, pp. 1131-1152.

_____. *International Environmental Law*. 3rd ed. New York: Transnational Publishers, 2004.

Shelton, Dinah L. and Isabelle Cutting. If you break it, do you own it? *Journal of International Humanitarian Legal Studies*, vol. 6, No. 2 (forthcoming), pp. 1-46.

Shraga, Daphna. The Secretary-General's bulletin on the observance by United Nations forces of international humanitarian law: a decade later. *Israel Yearbook on Human Rights*, vol. 39 (2009), pp. 357-368.

Singh, A. P. Protection of environment during armed conflict: is a new frame of laws necessary? *Journal of the Indian Law Institute*, vol. 52, Nos. 3-4 (2010), pp. 453-466.

Sjöstedt, Britta. The role of multilateral environmental agreements in armed conflict: "green-keeping" in Virunga Park — applying the UNESCO World Heritage Convention in the armed conflict of the Democratic Republic of the Congo. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 129-153.

Smith, Tara. Creating a framework for the prosecution of environmental crimes in international criminal law. In *The Ashgate Research Companion to International Criminal Law: Critical Perspectives*, William A. Schabas, Yvonne McDermott and Niamh Hayes, eds. Farnham, Surrey: Ashgate, 2013.

Somer, Jonathan. Jungle justice: passing sentence on the equality of belligerents in non-international armed conflict. *International Review of the Red Cross*, vol. 89, No. 867 (2007), pp. 655-690.

Soons, Alfred H. A. *Marine Scientific Research and the Law of the Sea*. Utrecht: Kluwer Law and Taxation Publishers, 1982.

Spieker, Heike. Medical transportation. In *Max Planck Encyclopaedia of Public International Law*, vol. VII, Rüdiger Wolfrum, ed. Oxford: Oxford University Press, 2012.

_____. The conduct of hostilities and the protection of the environment. In *Frieden in Freiheit — Peace in Liberty — Paix en liberté: Festschrift für Michael Bothe zum 70. Geburtstag*, Andreas Fischer-Lescano and others, eds. Zürich: Dike Verlag, 2008.

_____. *Völkergewohnheitsrechtlicher Schutz der natürlichen Umwelt im internationalen bewaffneten Konflikt*. Bochum: UVB-Universitätsverlag Dr. N. Brockmeyer, 1992.

Stahn, Carsten, and Jann K. Kleffner, eds. *Jus Post Bellum: Towards a Law of Transition from Conflict to Peace*. The Hague: T.M.C. Asser, 2008.

Stahn, Carsten, Jennifer S. Easterday and Jens Iverson, eds. *Jus post bellum: Mapping the Normative Foundations*. Oxford: Oxford University Press, 2014.

Subedi, Surya P. *Land and Maritime Zones of Peace in International Law*. Oxford: Clarendon Press, 1996.

Tams, Christian J. The contentious jurisdiction of the Permanent Court. In *Legacies of the Permanent Court of International Justice*, Christian J. Tams and Malgosia Fitzmaurice, eds. Leiden: Martinus Nijhoff Publishers, 2013.

Tarasofsky, Richard G. Protecting especially important areas during international armed conflict: a critique of the IUCN draft convention on the prohibition of hostile military activities in internationally protected areas. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

_____. Legal protection of the environment during international armed conflict. *Netherlands Yearbook of International Law*, vol. 24 (1993), pp. 17-79.

Thieffry, Patrick. *Droit de l'environnement de l'Union europeenne*. 2nd. ed. Brussels: Bruylant, 2011.

Thomas, Carson. Advancing the legal protection of the environment in relation to armed conflict: Protocol I's threshold of impermissible environmental damage and alternatives. *Nordic Journal of International Law*, vol. 82, No. 1 (2013), pp. 83-103.

Ticehurst, Rupert. The Martens Clause and the laws of armed conflict. *International Review of the Red Cross*, vol. 37, No. 317 (1997), pp. 125-134.

Tignino, Mara. Principle 23: the environment of oppressed peoples. In *The Rio Declaration on Environment and Development: A Commentary*, Jorge E. Viñuales, ed. Oxford: Oxford University Press, 2015.

_____. The right to water and sanitation in post-conflict legal mechanisms: an emerging regime? In *Water and Post-Conflict Peacebuilding*, Erika Weinthal, Jessica J. Troell and Mikiyasu Nakayama, eds. New York: Earthscan, 2014.

_____. *L'eau et la guerre: éléments pour un régime juridique*. Brussels: Bruylant, 2011.

_____. The right to water and sanitation in post-conflict peacebuilding. *Water International*, vol. 36, No. 2 (2011), pp. 241-248.

_____. Water, international peace and security. *International Review of the Red Cross*, vol. 92, No. 879 (2010), pp. 647-674.

_____. Water security in times of armed conflicts. In *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts*, Hans Günter Brauch, and others, eds. Berlin: Springer, 2009.

_____. Reflections on the legal regime of water during armed conflicts. Paper presented at the Fifth Pan-European International Relations Conference, The Hague, 9-11 September 2004.

_____. Water in times of armed conflict. In *Resolution of International Water Disputes*, Papers Emanating from the Sixth Permanent Court of Arbitration International Law Seminar (8 November 2002), International Bureau of the Permanent Court of Arbitration, ed. The Hague: Kluwer Law International, 2003.

Tir, Jaroslav, and Douglas M. Stinnett. Weathering climate change: can institutions mitigate international water conflict? *Journal of Peace Research*, vol. 49, No. 1 (2012), pp. 211-225.

Tolentino, Amado S., Jr. The law of armed conflict vis-à-vis the environment. In *International Law: New Actors, New Concepts — Continuing Dilemmas: Liber Amicorum Boidar Bakoti?*, Budislav Vukas and Trpimir M. Šošić, eds. Leiden: Martinus Nijhoff, 2010.

_____. Armed conflict and the environment: legal perspectives. *Philippine Law Journal*, vol. 81, No. 3 (2007), pp. 377-389.

Toman, Jiří. *Cultural Property in War: Improvement in Protection — Commentary on the 1999 Second Protocol to the Hague Convention of 1954 for the Protection of Cultural Property in the Event of Armed Conflict*. Paris: United Nations Educational, Scientific and Cultural Organization Publishing, 2009.

_____. *The Protection of Cultural Property in the Event of Armed Conflict: Commentary on the Convention for the Protection of Cultural Property in the Event of Armed Conflict and its Protocol, Signed on 14th May 1954 in The Hague, and on Other Instruments of International Law concerning such Protection*. Brookfield: Dartmouth Publishing, 1996.

Trouwborst, Arie. *Evolution and Status of the Precautionary Principle in International Law*. International Environmental Law and Policy Series, vol. 62. The Hague: Kluwer Law International, 2002.

Tucker, Matthew L. Mitigating collateral damage to the natural environment in naval warfare: an examination of the Israeli naval blockade of 2006. *Naval Law Review*, vol. 57 (2009), pp. 161-201.

Türk, Helmut. The negotiation of a new Geneva-style convention: a government lawyer's perspective. In *Environmental Protection and the Law of War: A "Fifth Geneva" Convention on the Protection of the Environment in Time of Armed Conflict*, Glen Plant, ed. London: Belhaven Press, 1992.

Unruh, Jon, and Rhodri C. Williams, eds. *Land and Post-Conflict Peacebuilding*. New York: Earthscan, 2013.

Van der Vyver, Johan D. The environment: State sovereignty, human rights, and armed conflict. *Emory International Law Review*, vol. 23, No. 1 (2009), pp. 85-112.

Venturini, Gabriella. Disasters and armed conflict. In *International Disaster Response Law*, Andrea de Guttry, Marco Gestri and Gabriella Venturini, eds. The Hague: T.M.C. Asser, 2012.

_____. International disaster response law in relation to other branches of international law. In *International Disaster Response Law*, Andrea de Guttry, Marco Gestri and Gabriella Venturini, eds. The Hague: T.M.C. Asser, 2012.

Verwey, Wil. Observation on the legal protection of the environment in times of international armed conflict. In *Hague Yearbook of International Law*, vol. 7, 1994, A.-C. Kiss and J. G. Lammers, eds. Dordrecht: Martinus Nijhoff, 1995, pp. 35-52.

_____. Protection of the environment in times of armed conflict: in search of a new legal perspective. *Leiden Journal of International Law*, vol. 8, No. 1 (1995), pp. 7-40.

Vialle, Anne-Cécile, and others. Peace through justice? International tribunals and accountability for wartime environmental wrongs. In *Governance, Natural Resources, and Post-conflict Peacebuilding*, Carl Bruch, Carroll Muffet and Sandra S. Nichols, eds. Routledge, 2013.

Viikari, L. V. *Studies in Space Law*, vol. 3, *The Environmental Element in Space Law: Assessing the Present and Charting the Future*. Leiden: Martinus Nijhoff, 2008.

Viñuales, Jorge E. Cartographies imaginaires: observations sur la portée juridique du concept de “regime special” en droit international. *Journal du droit international*, vol. 140, No. 2 (2013), pp. 405-425.

Voigt, Christina. *Sustainable Development as a Principle of International Law: Resolving Conflicts between Climate Measures and WTO Law*. Leiden: Martinus Nijhoff, 2009.

Vöneky, Silja. *Die Fortgeltung des Umweltvölkerrechts in internationalen bewaffneten Konflikten*. Beiträge zum ausländischen öffentlichen Recht und Völkerrecht, vol. 145, Max-Planck-Institut für ausländisches öffentliches Recht und Völkerrecht. Berlin: Springer, 2001.

_____. A new shield for the environment: peacetime treaties as legal restraints of wartime damage. *Review of European Community and International Environmental Law*, vol. 9, No. 1 (2000), pp. 20-32.

_____. Peacetime environmental law as a basis of state responsibility for environmental damage caused by war. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

Waleij, Annica and Birgitta Liljedahl. *The Gap Between Buzz Words and Excellent Performance: The Environmental Footprint of Military and Civilian Actors in Crises and Conflict Settings*. Swedish Defence Research Agency, Stockholm, 2016.

Walker, George K. ed. *Definitions for the Law of the Sea: Terms not Defined by the 1982 Convention*. Leiden: Martinus Nijhoff Publishers, 2011.

Warner, Frederick. The environmental consequences of the Gulf War. *Environment*, vol. 33, No. 5 (1991), pp. 6-26.

Weinthal, Erika, Jessica Troell and Mikiyasu Nakayama, eds. *Water and Post-Conflict Peacebuilding*. New York: Earthscan, 2014.

Weir, Doug. Environmental mechanics: re-imagining post-conflict environmental assistance, report from the Toxic Remnants of War Project, 2015.

Weiss, Edith Brown. *International Law for a Water-Scarce World*. Leiden: Martinus Nijhoff Publishers, 2013.

Westing, Arthur H. *From Environmental to Comprehensive Security*, SpringerBriefs on Pioneers in Science and Practice Texts and Protocols, vol. 13, Hans Günter Brauch, ed. New York: Springer, 2013.

_____. *Pioneer on the Environmental Impact of War*, SpringerBriefs on Pioneers in Science and Practice, vol. 1, Hans Günter Brauch, ed. New York: Springer, 2013.

_____. In furtherance of environmental guidelines for armed forces during peace and war. In *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, Jay E. Austin and Carl E. Bruch, eds. Cambridge: Cambridge University Press, 2000.

_____. Constraints on environmental disruption during the Gulf War. In *War and its Consequences: Lessons from the Persian Gulf Conflict*, John O'Loughlin, Tom Mayer and Edward S. Greenberg, eds. New York: HarperCollins, 1994.

_____. Protected natural areas and the military. *Environmental Conservation*, vol. 19, No. 4 (1992), pp. 343-348.

_____. *Environmental Hazards of War. Releasing Dangerous Forces in an Industrialized World*. London: Sage Publications, 1990.

_____. Herbicides in warfare: the case of Indochina. In *Ecotoxology and Climate*, Philippe Bordeau, and others, eds. New York: John Wiley and Sons, 1989.

_____. *Global Resources and International Conflict: Environmental Factors in Strategic Policy and Action*. Oxford: Oxford University Press, 1986.

_____. *Explosive Remnants of War: Mitigating the Environmental Effects*. London: Taylor and Francis, 1985.

_____. *Environmental Warfare. A Technical, Legal and Policy Appraisal*. London: Taylor and Francis, 1984.

_____. *Warfare in a Fragile World: Military Impact on the Human Environment*. London: Taylor and Francis, 1980.

_____. *Ecological Consequences of the Second Indochina War*. Stockholm: Almqvist & Wiksell International, 1976.

Wilmshurst, Elizabeth, ed. *International Law and the Classification of Conflicts*. Oxford: Oxford University Press, 2012.

Wilmshurst, Elizabeth, and Susan Breau, eds. *Perspectives on the ICRC Study on Customary International Humanitarian Law*. Cambridge: Cambridge University Press, 2007.

Whittemore, Luke. Intervention and post-conflict natural resource governance: lessons from Liberia. *Minnesota Journal of International Law*, vol. 17, No. 2 (2008), pp. 387-433.

Wyatt, Julian. Law-making at the intersection of international environmental, humanitarian and criminal law: the issue of damage to the environment in international armed conflict. *International Review of the Red Cross*, vol. 92, No. 879 (2010), pp. 593-646.

Zemmali, Ameur. The right to water in times of armed conflict. In *Making the Voice of Humanity Heard*, Liesbeth Lijnzaad, and others, eds. Leiden, the Netherlands: Martinus Nijhoff, 2004.

_____. La protection de l'environnement en période de conflit armé dans les normes humanitaires et l'action du Comité international de la Croix Rouge. In *International Legal Issues Arising under the United Nations Decade of International Law*, Najeeb Al-Nauimi and Richard Meese, eds. The Hague: Martinus Nijhoff, 1995.

_____. The protection of water in times of armed conflicts. *International Review of the Red Cross*, No. 308 (1995), pp. 550-564.