

About this study

This report reviews Canada's state practice on the protection of the environment in relation to armed conflicts, or PERAC. It uses draft legal principles developed by the UN's International Law Commission as benchmarks and is the second review of this kind prepared by CEOBS; the first reviewed the practice of the United Kingdom. In conducting this review, we hoped not only to understand more about Canada's PERAC policy but also to understand more about the potential that the adoption and implementation of the PERAC principles could have for encouraging positive change in national policies. We also hope that the report will be of use to the government of Canada, and to Canadian civil society organisations concerned about the environmental dimensions of armed conflicts and military activities.

About the Conflict and Environment Observatory (CEOBS)

CEOBS is a UK charity that was launched in 2018 with the primary goal of increasing awareness and understanding of the environmental and derived humanitarian consequences of armed conflicts and military activities. In this, we seek to challenge the idea of the environment as a 'silent victim of armed conflict'.

We work with international organisations, civil society, academia and communities to: monitor and publicise data on the environmental dimensions of armed conflicts; develop tools to improve data collection and sharing; monitor and scrutinise developments in law and policy that could contribute towards the reduction of humanitarian and environmental harm; and promote environmental mainstreaming in humanitarian disarmament. CEOBS' overarching aim is to ensure that the environmental consequences of armed conflicts and military activities are properly documented and addressed, and that those affected are assisted.

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Cover image: A CAF Chinook takes off over farmland in Afghanistan during Operation Athena in 2011. Credit: ©CAF/Cpl Jean-François Carpentier.

Executive summary

This report outlines Canada's practice on the Protection of the environment in relation to armed conflicts, or PERAC. As in the case of our review of the UK's practice on PERAC, our analysis is conducted by reference to the 28 draft legal principles on this topic that have recently been adopted on first reading by the UN's International Law Commission (ILC). The report's aim is threefold: firstly, to seek to identify Canada's position regarding each draft principle; secondly, to trace potential discrepancies between Canada's positions and the draft principles; and thirdly, to provide recommendations that will enhance environmental protection throughout the cycle of conflicts. The report follows the temporal approach that is utilised by the ILC, considering practice before, during, and after armed conflicts, and in situations of occupation.

Because of the broad scope of the principles, we have had to rely on a wide range of sources in an effort to interpret Canada's policy and practice. And because Canada does not currently report its own practice with respect to the ILC's draft principles, some of these sources can only provide an indicative view on its practice. It is important to note at the outset that Canada has not so far expressed its views on the ILC's draft principles at the Sixth Committee of the UN General Assembly. As a result, some of the findings of this report should be viewed as preliminary and subject to change as Canada's position becomes clearer, which will hopefully be the case if Canada responds to the ILC's call to submit written comments on the 28 draft principles, as adopted on first reading, by the end of June 2021. The table below summarises the findings of our analysis.

Conflict phase	Implementation status	Observations	
Practice before armed conflicts	Insufficient evidence of alignment.	Canada should take appropriate measures to ensure the environmentally sound conduct of corporations and other business enterprises in areas affected by armed conflicts and in post-conflict situations. Canada should also take appropriate measures to protect the environment of the territories that Indigenous peoples inhabit, including by designating them as protected zones.	
Practice during armed conflicts	Some evidence of alignment.	Canada views nuclear weapons as exempt from international humanitarian law's core environmental provisions.	
Practice in situations of occupation	Insufficent evidence of alignment.	Canada's environmental objectives and aspirations may point to the acceptance of the PERAC principles applicable in situations of occupation, but more clarity is required.	
Practice after armed conflicts	Reasonable evidence of alignment	Canada's post-armed conflict practice appears to be broadly aligned with the PERAC principles but clearer documentation and reporting is needed.	

^{1.} CEOBS, Report: The United Kingdom's practice on the protection of the environment in relation to armed conflicts, October 2019, available at https://ceobs.org/report-the-united-kingdoms-practice-on-the-protection-of-the-environment-in-relation-to-armed-conflicts. All links cited in this report were last accessed on 9 December 2020.

Introduction

The topic the *Protection of the environment in relation to armed conflicts* (PERAC) has recently gained momentum on the agenda of the international community, as evidenced by the adoption on first reading of 28 draft principles by the UN International Law Commission (ILC) during its 2019 session. In the same vein, the International Committee of the Red Cross (ICRC) published a revised version of its 1994 *Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict* in September 2020. Other legal initiatives have addressed water in conflicts, and the humanitarian consequences of conflict pollution. Specifically, the *Geneva List of Principles on the Protection of Water Infrastructure* was launched in August 2019, while principles outlining standards for victim assistance for those affected by toxic remnants of war were launched in September 2020.

The aim of this report is to map out Canada's practice in relation to PERAC by reviewing a wide range of material, such as Canada's statements before international fora, official documents issued by Canada's organs that reflect national policy, and certain instances of material acts. The objective is to gauge Canada's views and practice against the benchmark of the ILC's draft principles on PERAC. Where discrepancies are observed, recommendations are proposed.

The approach employed in the present report is inspired by the temporal approach adopted by the ILC in its PERAC study. In essence, the report is divided into four sections reflecting the different phases of the cycle of conflicts: the first part corresponds to the pre-armed conflict phase, which includes weapons reviews; the second to practice during armed conflicts; the third section is devoted to the occupation stage, and the last part deals with the post-armed conflict period.

^{2.} ILC, 'Protection of the environment in relation to armed conflicts: Text and titles of the draft principles provisionally adopted by the Drafting Committee on first reading', 6 June 2019, available at http://legal.un.org/docs/?symbol=A/

^{3.} ICRC, '2020 Guidelines on the Protection of the Natural Environment in Armed Conflict', available at www.icrc.org/en/document/guidelines-protection-natural-environment-armed-conflict-rules-and-recommendations-relating

^{4.} Geneva List of Principles on the Protection of Water Infrastructure, available at https://www.genevawaterhub.org/sites/default/files/atoms/files/gva_list_of_principles_protection_water_infra_20190826low_0.pdf

^{5.} Harvard Law School International Human Rights Clinic and Conflict and Environment Observatory, 'Confronting Conflict Pollution: Principles for Assisting Victims of Toxic Remnants of War' available at http://hrp.law.harvard.edu/wpcontent/uploads/2020/09/Confronting-Conflict-Pollution.pdf

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Significant IHL treaties to which Canada is a party

1. Context

In 2016, the Canadian government co-sponsored a UN Environment Assembly resolution that urged all states 'to take all appropriate measures to ensure compliance with the relevant international obligations under international humanitarian law in relation to the protection of the environment in times of armed conflict'; and to 'implement applicable international law related to the protection of the environment in situations of armed conflict, including in their domestic legislation as appropriate ... , and to consider expressing consent to be bound by relevant international agreements to which they are not yet parties'.

Canada established a National Committee on International Humanitarian Law in 1998, and the Canadian Red Cross is a member of its Secretariat. This Committee includes four government departments, namely Global Affairs Canada, the Royal Canadian Mounted Police (RCMP), the Department of National Defence, and the Department of Justice.

As a matter of principle, it can be inferred that the Canadian Department of National Defence (DND) and the Canadian Armed Forces (CAF) are environmentally conscious and are working to mainstream environmental protection throughout their activities and operations. This is apparent in their espoused objective of 'greening defence' so as to promote the Canadian government's goal of a clean environment.8 The DND has repeatedly declared an

aspiration of being 'a good steward of the environment by working proactively to mitigate the impacts of military activities.' A policy that appears primarily, but not exclusively, focused on its domestic activities. Pursuant to the applicable Code of Values and Ethics, employees of the DND and members of CAF 'shall responsibly use resources by: ... [c]onsidering the present and long-term effects that their actions have on people and the environment.'

The following excerpt of Canada's Defence Policy is an example of Canada's declared domestic commitment to environmental protection on behalf of the DND:

'We work hard every day to be good stewards of the environment ... The Defence team has a plan to reduce greenhouse gas emissions by 40 percent from the 2005 levels by 2030 in support of the Federal Sustainable Development Strategy.'10

Furthermore, the DND has pledged to improve the ways it reports and measures its environmental performance, declaring at the same time that '[m] ilitary operations and environmental protection and stewardship are not mutually exclusive – ensuring that the environmental impact of defence activities is minimized is paramount to the success of operations, whether at home or abroad.' In other words, the DND envisions environmental protection as an essential

^{6.} Resolution 2/15, United Nations Environment Assembly, 'Protection of the Environment in Areas Affected by Armed Conflict' (4 August 2016) UNEP/EA.2/Res.15, para 4.

^{7.} See https://www.redcross.ca/how-we-help/international-humanitarian-law/what-is-international-humanitarian-law/ihl-in-canada

^{8.} Canadian Department of National Defence, 'Public Statement for the Strategic Environmental Assessment of Defence Policy, Strong, Secure, Engaged', 13 December 2018, available at https://www.canada.ca/en/department-national-defence/services/greening-defence/public-statement-strategic-environmental-assessment-defence-policy.html. In a similar tone: the Department of National Defence 'assigns a high priority to its environmental programs and is committed to conducting its operations in ways that protect human health and the environment'. Canadian Department of National Defence, 'Greening Defence', 21 February 2018, available at https://www.canada.ca/en/department-national-defence/services/greening-defence.html

^{9.} Department of National Defence and Canadian Forces Code of Values and Ethics, 16 November 2020, available at https://www.canada.ca/en/department-national-defence/services/benefits-military/defence-ethics/policies-publications/code-value-ethics html

^{10.} National Defence represents more than half of the Government of Canada's greenhouse gas emissions. Consequently, it has a critical role to play in helping the Government of Canada meet its climate objectives. National Defence is committed to meet its Federal Sustainable Development Strategy goal of reducing its emissions by 40 percent from the 2005 levels by 2030 (excluding military fleets). Canada's Defence Policy: Strong, Secure, Engaged, 2017, 75. As of 2019-20, Defence had reduced GHG emissions from our buildings and non-military vehicles by about 31% from 2005 levels. Canadian Department of National Defence and Canadian Armed Forces, 'Defence Energy and Environment Strategy: Harnessing energy efficiency and sustainability: Defence and the road to the future 2020-2023', 2020, 4.

^{11.} Canada's Defence Policy: Strong, Secure, Engaged, 2017, 76.

component of its activities.

Against this background, the DND and CAF aspire to be 'recognized as a leader in contributing to the sustainable development goals of Canada through the effective and innovative integration of environmental considerations into activities supporting the Defence mandate.' This is to say that Canada envisages its army as one of the basic pillars to meet its obligations and expectations of sustainable development.

At the same time, Canada is strongly committed to multilateralism and its participation in the informal Group of Friends of Environment of the Organization for Security and Co-operation in Europe, which was launched in September 2019,¹³ is an example of both of these Canadian policy objectives.

On a final note, it is worth quoting the policy statement on environmental protection and stewardship, which is intended to apply to DND employees, and to officers and non-commissioned members of the CAF:

'The DND and the CAF shall demonstrate responsiveness to and responsibility for respecting the environment in all their activities by: ... adhering to the code of environmental stewardship; implementing a sustainable development strategy; conducting environmental assessments; exercising due diligence; developing, operating and maintaining an environmental management system (EMS) in accordance with the International Standards Organization (ISO) 14001 standards; committing to continual improvement; and communicating this policy.'14

^{12.} Canadian Department of National Defence, 'Defence Environmental Strategy: A plan for ensuring sustainable military operations', 7.

^{13.} See https://osce.usmission.gov/announcement-on-the-launch-of-the-group-of-friends-of-the-environment-at-the-27th-osce-economic-and-environmental-forum-meeting-in-prague

^{14.} Department of National Defence, DAOD 4003-0, Environmental Protection and Stewardship (issued 31 March 1999, modified 30 July 2004), available at https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/4000-series/4003/4003-0-environmental-protection-and-stewardship.html, para 3(5).

2. Principles of general application

Principle 1 Scope¹⁵ Principle 2 Purpose¹⁶

The **first of the ILC's draft principles** affirms that the principles are intended to apply to the protection of the environment before, during or after an armed conflict. While there is an understandable focus on the environmental conduct of states during armed conflicts, there are steps that can be taken in peacetime that can help reduce harm to the environment in the event of conflict arising. These actions may be driven by norms, obligations and regulations under both domestic and international environmental law, even where states may seek exemptions for their militaries. To this end, **draft principle 3(1)** stipulates that 'States shall, pursuant to their obligations under international law, take effective legislative, administrative, judicial and other measures to enhance the protection of the environment in relation to armed conflict'.

Principle 3 Measures to enhance the protection of the environment.

The ILC Commentary outlines various measures that could further enhance PERAC and Canada is faring pretty well in this respect. Canada has included PERAC provisions in its military manual, ¹⁸ thus facilitating the dissemination of relevant information to its armed forces, in line with its obligation under article 83(1) of Additional Protocol I. ¹⁹ In addition, Canada

15. The present draft principles apply to the protection of the environment before, during or after an armed conflict.

has not only incorporated the environment-specific war crime stipulated in article 8(2)(b)(iv) of the Rome Statute, 20,21 to which Canada is a party, but has further acknowledged that war crimes described in article 8 of the Rome Statute, including its environment-specific war crime, are crimes under customary international law. 22

Shifting the focus to policy statements, the Canadian Army Environmental Policy appears to be well-attuned to the domestic requirements and recommendations embodied in DP 3, providing that:

'The Army will conduct its activities in a sustainable way, exercise due diligence and will: Comply with applicable environmental legislation and departmental environmental policies; Integrate environmental considerations in decision-making processes; Improve environmental performance through the Environmental Management System; Minimize environmental risks and impacts associated with Army training and operations; Identify environmental training needs and ensure their delivery; Raise awareness and promoting environmental matters; and Contribute to the

in their respective countries and, in particular, to include the study thereof in their programmes of military instruction and to encourage the study thereof by the civilian population, so that those instruments may become known to the armed forces and to the civilian population.' Art 83(1), Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (adopted 8 June 1977, entered into force 7 December 1978) 1125 UNTS 3 (Additional Protocol I).

- 20. Canada 2000 Crimes Against Humanity and War Crimes Act, Schedule: Provisions of Rome Statute, para 2 of art 8.
- 21. Art 8(2)(b)(iv), Rome Statute of the International Criminal Court (adopted 17 July 1998, entered into force 1 July 2002) 2187 UNTS 3 (Rome Statute).
- 22. Canada 2000 Crimes Against Humanity and War Crimes Act, sections 4-5, art 4. This position has been reiterated in the context of Canada's Federal Court Sapkota case, whereby the 'Federal Court dismissed a request for review of a decision denying refugee protection to the applicant on grounds of complicity in crimes against humanity in Nepal between 1991 and 2009. While reviewing the submissions of the respondent, Canada's Minister of Citizenship and Immigration, the Court stated: "The Respondent notes that the Rome Statute of the International Criminal Court... is endorsed in Canada as a source of customary law." Canada, Federal Court, Sapkota case, Reasons for Judgment and Judgment, 15 July 2013, para 28, as cited in ICRC, IHL Database on Customary IHL, Practice Relating to Rule 43. Application of General Principles on the Conduct of Hostilities to the Natural Environment, V. 'National Case-law', available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule43

^{16.} The present draft principles are aimed at enhancing the protection of the environment in relation to armed conflict, including through preventive measures for minimizing damage to the environment during armed conflict and through remedial measures.

^{17. 1.} States shall, pursuant to their obligations under international law, take effective legislative, administrative, judicial and other measures to enhance the protection of the environment in relation to armed conflict. 2. In addition, States should take further measures, as appropriate, to enhance the protection of the environment in relation to armed conflict.

^{18.} These provisions are dealt with in detail below under the section 'Principles applicable during armed conflict'.

^{19. &#}x27;The High Contracting Parties undertake, in time of peace as in time of armed conflict, to disseminate the Conventions and this Protocol as widely as possible

goals established in the Defence Energy and Environment Strategy.'23

In addition, the DND has declared that '[m]any initiatives are in place to avoid, prevent, reduce or mitigate negative environmental impacts in accordance with federal government requirements and expectations'. For example, Canada confirmed that it had assessed 'the environmental risk of all small arms ranges by 2019 to recommend modern range designs options and the sustainable use of range and training areas.'24

Weapons review

Canada is known to have put in place national mechanisms to review the legality of weapons,25 and has made the instruments establishing these mechanisms available to the ICRC,26 in line with its obligation under article 36 of Additional Protocol I.²⁷ The ICRC Guide to conducting article 36 reviews stipulates that 'the reviewing authority will have to take into account a wide range of 'military, technical, health and environmental factors'.28 It should be noted that even though the Canadian Law of Armed Conflict (LOAC) Manual limits 'the standard of the review to the LOAC instead of "any other rule of international law", as provided for in Article 36, it nevertheless references Article 36 as the legal basis for the required review.'29 In terms of publicising relevant findings, the Canadian Director of Ammunition and Explosives Regulation

published the tenth annual report in 2018.³⁰
Turning to the applicable directives and policies, according to Defence Administrative Order and Directive (DAOD) 3002-1 on Certification of Ammunition and Explosives, the Ammunitions Safety and Suitability Board (ASSB) is tasked with the validation of the evaluation of all ammunition and explosives, unless exempted under paragraph 4.5.³¹ The objective of this certification process is to ensure the safety and suitability for service (S³) of all ammunition and explosives, while '[t]he certification process is:

- a. initiated at the outset of:
- i. a capability development review which involves the ammunition or explosives, and their use: and
- ii. the acquisition of ammunition or explosives; b. continued during design, modification and development of ammunition or explosives; and c. completed prior to the introduction of the ammunition or explosives into use.'32

Quite importantly for our purposes, [t]he validation of ammunition and explosives is based on criteria from both national requirements and international obligations, including: ... f. environmental impact'.³³ Moreover, the Ammunition and Explosives Safety Program 'applies to the complete life cycle of all Ammunition and Explosives, current or obsolete, Canadian or foreign military in origin, under the direction or control of the Minister of National Defence, under the full range of circumstances in

^{23.} Commander of the Canadian Army, 'Canadian Army Environmental Policy', November 2019, available at http://www.army-armee.forces.gc.ca/en/environment/index.page

^{24.} Canadian Department of National Defence and Canadian Armed Forces, 'Defence Energy and Environment Strategy: Harnessing energy efficiency and sustainability: Defence and the road to the future 2020-2023', 2020, 3.

^{25.} Canadian LOAC Manual, para 530.

^{26.} ILC, 'Report of the International Law Commission of its 71st session' (29 April–7 June and 8 July–9 August 2019), A/74/10, Chapter VI 'Protection of the environment in relation to armed conflicts', fn 977, 219, para 7, commentary to draft principle 3.

^{27. &#}x27;In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by this Protocol or by any other rule of international law applicable to the High Contracting Party.'

^{28.} ICRC, A Guide to the Legal Review of New Weapons, Means and Methods of Warfare Measures to Implement Article 36 of Additional Protocol I of 1977 (ICRC, 2006) 17 [emphasis added].

^{29.} Natalia Jevglevskaja, 'Weapons Review Obligation under Customary International Law' (2018) 94 International Law Studies 186, fn 146, 216.

^{30.} Canada DND Director Ammunition and Explosives Regulation, 'Tenth Report to the Deputy Minister and the Chief of the Defence Staff: A Review from 1 April 2017 to 31 March 2018', 2018, 21, available at http://publications.gc.ca/collections/collection_2018/mdn-dnd/D3-27-2018-eng.pdf

^{31.} Canada DND, 'DAOD 3002-1, Certification of Ammunition and Explosives' (issued 30 July 2004, last modified 5 December 2017) para 4.2, available at <a href="https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/3000-series/3002/3002-1-certification-of-ammunition-and-explosives.html. Pursuant to para 4.5 of the same DAOD, 'ammunition and explosives are exempt from certification if they meet the following criteria: there are ammunition or explosives logistic shortfalls which may hamper the effectiveness of CAF operations and the ammunition or explosives in question have recognized interchangeability with ammunition or explosives are produced for and used exclusively by the Assistant Deputy Minister (Science & Technology) or the Munitions Experimental Test Centre; or the ammunition or explosives are intended for use on defence establishments, but only by persons other than DND employees or CAF members.'

^{32.} Ibid, paras 3.1 and 4.7.

^{33.} Ibid, para 5.8.f.

which it is used'.34

With respect to the applicable law and regulations in the certification of ammunition, it is postulated that 'ASSB members apply Canadian law, international agreements and applicable policies, orders and directions, including:

- a. CF publications;
- b. Quadripartite Standardization Agreements;
- c. NATO standardization agreements (STANAGs); and
- d. NATO AOPs.'35

Accordingly, article 36 of Additional Protocol I should form part of the certification process. In addition, the 'ASSB is guided by an environmental questionnaire',³⁶ which actually is provided for in the annex of NATO AOP-15.³⁷ It bears noting that the latter document contains a separate paragraph speaking to the importance of 'greening' the complete life-cycle of munitions,³⁸

34. Canada DND, 'DAOD 3002-3, Ammunition and Explosives Safety Program' (issued 12 December 2007, last modified 10 July 2020) para 3.7., available at <a href="https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/3000-series/3002/3002-3-ammunition-and-explosives-safety-program.html. The 'complete life cycle' of all ammunition and explosives (A&E) is further described in a non-exhaustive fashion in the same paragraph: 'the use of A&E in all sea, land, air and joint operations; the use of A&E in basic and non-basic individual training and education, and collective training; research and development relating to A&E; engineering tests and quality assurance of A&E; A&E support to other Government of Canada departments and agencies, and provincial and municipal governments; unexploded explosive ordnance clearance; explosive ordnance disposal, including improvised explosive device disposal; and A&E supply chain activities, including procurement, transportation, storage, maintenance and disposal.' Ibid, para 3.7.(a-h).

- 35. Canada DND, 'DAOD 3002-1, Certification of Ammunition and Explosives' (n 31) para 5.9.
- 36. Canada DND Director Ammunition and Explosives Regulation, 'Tenth Report to the Deputy Minister and the Chief of the Defence Staff' (n 30) 21.
- 37. NATO, 'Allied Ordnance Publication-15: Guidance on the Assessment of the Safety and Suitability for Service of Non-Nuclear Munitions for NATO Armed Forces', 3rd edn, April 2019.

38. Ibid, 4, para 4.4 ('Growing international concern with ecological issues and, in particular the potential environmental impact of munitions use on operational ranges and of industrial waste disposal processes, has focused munition suitability for service assessment attention on sustainability (i.e., assuring that munitions constituents from intended munition usage are environmentally manageable over the long term) and on the demilitarization and disposal of unused munitions. More stringent international environmental legislation and enforcement, the desire to protect and preserve natural resources and to reduce the amount of waste products, and limited space for disposal have contributed to this concern. Whereas munitions designs, to include the constituents therein, and demilitarization and disposal techniques have traditionally focused on being safe, efficient, and cost effective, new munitions designs and disposal methods must now also afford potentially exposed friendly assets appropriate protection of human health and the environment. Nations now have a responsibility to move away from munitions designs that are not "green" and from industrial processes that overlook the creation and destruction of waste towards those that minimize the inclusion of hazardous or offensive constituents and maximize the recyclability of munitions constituents').

Nevertheless, the above regulations and observations are not sufficient to dispel related concerns about the lack of transparency in the field of weapons reviews. Moreover, while the focus on reducing the toxicity of weapons constituents is welcome, materials deemed acceptable under domestic standards for firing ranges, where exposure routes to human receptors are limited, may nevertheless be problematic when used in conflict, most notably in populated areas. A lack of transparency over the review criteria makes it difficult to ascertain whether these potential harms are properly accounted for.

Principle 4 Designation of protected zones

Draft principle 4 on designation of protected zones should be read together with draft principle 17, as both of them carry untapped potential to enhance PERAC. Given that this provision progressively develops the law, coupled with Canada's silence on the ILC's work so far, it is unsafe to speculate about Canada's opinion on the issue. However, considering the environmental protection objectives of the CAF, it is hoped that Canada will approve both draft principles 4 and 17.

Principle 5 Protection of the environment of indigenous peoples.

The duty to consult with the Indigenous peoples of Canada, which include the First Nations, Inuit and Métis peoples,⁴¹ forms an essential component of the federal government's activities, 'including for regulatory project approvals, licensing and authorization of permits, operational decisions, policy development, negotiations and more.'⁴² Recognising

^{39.} States should designate, by agreement or otherwise, areas of major environmental and cultural importance as protected zones.

^{40. 1.} States should take appropriate measures, in the event of an armed conflict, to protect the environment of the territories that indigenous peoples inhabit. 2. After an armed conflict that has adversely affected the environment of the territories that indigenous peoples inhabit, States should undertake effective consultations and cooperation with the indigenous peoples concerned, through appropriate procedures and in particular through their own representative institutions, for the purpose of taking remedial measures.

^{41. 1982} Constitution Act, s 35(2) provides that "aboriginal peoples of Canada" includes the Indian, Inuit and Métis peoples of Canada, available at https://laws-lois.justice.gc.ca/PDF/CONST_E.pdf

^{42.} Government of Canada and the duty to consult, available at https://www.

and respecting the rights of Indigenous peoples in Canada constitutes an indispensable condition of reaching reconciliation, and on this account, it is expected that Canada will accept **draft principle 5 on the protection of the environment of indigenous peoples**.

It is quite telling that in 2016, Canada endorsed the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) without qualification and committed to its full and effective implementation,⁴³ while on 3 December 2020, the government introduced legislation to implement the Declaration.⁴⁴ If the bill eventually becomes law, 'the legislation will provide a roadmap for the Government and Indigenous peoples to work together to fully implement the Declaration'.⁴⁵

Draft principle 5 builds on the UNDRIP and this forms another powerful argument militating in favour of Canada's acceptance of this draft principle. Notwithstanding the above, it should be borne in mind that the applicable constitutional provisions have attracted serious criticism for being inadequate to protect certain types of Indigenous sacred sites, often falling short of the guarantees enshrined in the UNDRIP.⁴⁶ This brings into sharp relief the need to adopt the proposed bill and align Canadian legal guarantees with the protection afforded under the UNDRIP. At this juncture, it is appropriate to quote article 19 of UNDRIP in full:

'States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or

aadnc-aandc.gc.ca/eng/1331832510888/1331832636303.

administrative measures that may affect them.'47

On a related note, the Canadian DND has expressed its support for the UNDRIP,⁴⁸ but if this commitment is not further strengthened through the incorporation of the UNDRIP into the domestic legal order by the federal government, it might fall short of the meaningful protections contained in the UNDRIP.

Principle 6 Agreements concerning the presence of military forces in relation to armed conflict.

Draft principle 6 on Agreements concerning the presence of military forces in relation to armed conflict aims to address the environmental footprint of overseas military facilities. The CAF states that when it operates on the territory of another NATO member state, it abides by both the law of the receiving state, pursuant to the relevant NATO SOFA Agreement, on and Canadian federal law. By means of illustration, Canada took command of the NATO Enhanced Forward Presence in Latvia in 2016. The Canada–Latvia Technical Arrangement, concluded 18 April 2017, provided a framework for the other sending nations to that battle group to join and, as is now common practice for Canada, the technical agreement

^{43.} UN General Assembly, United Nations Declaration on the Rights of Indigenous Peoples: resolution / adopted by the General Assembly, 2 October 2007, A/ RES/61/295, available at: https://www.refworld.org/docid/471355a82.html

^{44.} Bill C-15: An Act respecting the United Nations Declaration on the Rights of Indigenous Peoples, First reading, 3 December 2020, available at https://parl.ca/DocumentViewer/en/43-2/bill/C-15/first-reading#IDOEBDCA

^{45.} Canada, 'Implementing the United Nations Declaration on the Rights of Indigenous Peoples in Canada' (date modified 4 December 2020) available at https://www.justice.gc.ca/eng/declaration/index.html

^{46.} Andrew M. Robinson, 'Governments Must not Wait on Courts to Implement UNDRIP Rights Concerning Indigenous Sacred Sites: Lessons from Canada and Ktunaxa Nation v. British Columbia' 24(10) The International Journal of Human Rights 2020, 1642, 1659.

^{47.} Art 19, UNDRIP.

^{48.} Canadian Department of National Defence and Canadian Armed Forces, 'Defence Energy and Environment Strategy: Harnessing energy efficiency and sustainability: Defence and the road to the future 2020-2023', 2020, 2 ('The Government of Canada (GoC) is committed to advancing reconciliation and renewing its relationship with Indigenous peoples based on recognition of rights, respect, cooperation and partnership. In support of whole-of government commitments and the United Nations Declaration on the Rights of Indigenous Peoples, Defence will fulfill commitments reflected in statutes, negotiated agreements and treaties, court decisions and policies through meaningful engagement with Indigenous groups in the early planning stages of its operations. We will engage, collaborate or partner with Indigenous groups on a range of operational and policy matters, including environmental remediation, land access, consultation, procurement, and major construction projects' [emphasis added].

^{49.} States and international organizations should, as appropriate, include provisions on environmental protection in agreements concerning the presence of military forces in relation to armed conflict. Such provisions may include preventive measures, impact assessments, restoration and clean-up measures.

^{50.} Agreement Between the Parties to the North Atlantic Treaty Regarding the Status of Their Forces (adopted 19 June 1951, entered into force 27 September 1953), art II, available at https://www.nato.int/cps/en/natong/official_texts_17265.htm ('It is the duty of a force and its civilian component and the members thereof as well as their dependents to respect the law of the receiving State, and to abstain from any activity inconsistent with the spirit of the present Agreement, and, in particular, from any political activity in the receiving State. It is also the duty of the sending State to take necessary of measures to that end').

included provisions for environmental protection.⁵¹

Principle 7 Peace operations²²

Following on from draft principle 6, **draft principle** 7 entitled **Peace operations** addresses the need to integrate environmental themes into peace operations. The CAF are employed in a number of countries as part of both NATO and UN-led missions.⁵³ Isolating the CAF's environmental policies and practice from those of these entities is difficult. In recent years measures have been taken to mainstream environmental protection in UN peacekeeping operations, although much remains to be done.⁵⁴

A relevant provision can be identified in Canada's 2019 Impact Assessment Act. Pursuant to this Act's paragraph 83:

'A federal authority must not carry out a project outside Canada, or provide financial assistance to any person for the purpose of enabling that project to be carried out, in whole or in part, outside Canada, unless

- (a) the federal authority determines that the carrying out of the project is not likely to cause significant adverse environmental effects; or (b) the federal authority determines that the carrying out of the project is likely to cause significant adverse environmental effects and the Governor in Council decides, under subsection 90(3), that those effects are justified in the circumstances.'557
- Considering that Canada deploys forces abroad in the

51. Major Ross Franklin, P.Eng., 'Environmental Protection Efforts in Recent NATO Operations and Exercises', 40 NATO Legal Gazette 2019, 65, 69.

context of multinational operations, it is reasonable to review NATO's policies and standards in more detail. For one, NATO's Allied Doctrine includes a range of measures to mitigate the environmental impact of operations:

'Effective environmental protection enhances force health protection, supports operations by building positive relationships with the HN [host nation] and saves money and lives by reducing the logistic burden. Factors to be considered include pollution prevention, waste management, chemical, biological, radiological and nuclear (CBRN) risk management (prevention, protection and recovery of deliberate, accidental or natural CBRN incidents), cultural property protection and protection of flora and fauna.'56

Moreover, military camps in NATO operations should '[i]mplement best waste management measures to proactively ensure the health and safety of NATOled forces and to minimize adverse environmental impacts, while respecting host nation laws in accordance with NATO environmental protection policy.'57 On a similar note, NATO Standard AJEPP-6 provides that an Environmental Baseline Study for any NATO military use should at a minimum be undertaken two times, namely 'upon occupation (the Environmental Baseline Study or EBS) and upon closeout (the Environmental Closeout Study or ECS). The EBS is conducted prior to occupying an area, or early in the deployment stage, with the goal of determining the baseline conditions of the environment. The ECS is conducted at handover/ transition or before closure of an area. The goal of the ECS is to determine the impact that NATO activities have had on the environment as well as to develop a remediation strategy.'58

^{52.} States and international organizations involved in peace operations in relation to armed conflict shall consider the impact of such operations on the environment and take appropriate measures to prevent, mitigate and remediate the negative environmental consequences thereof.

^{53.} See https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/list.html

^{54.} See Lucile Maertens and Malkit Shoshan, 'Greening Peacekeeping: The Environmental Impact of UN Peace Operations' (New York: International Peace Institute, April 2018), available at https://www.ipinst.org/wp-content/uploads/2018/04/1804_Greening-Peacekeeping.pdf

^{55.} Canada 2019 Impact Assessment Act, ch 28, s 1, para 83. Nevertheless, this obligation does not apply 'in respect of a project ... that is to be carried out in response to an emergency, and the carrying out of the project without delay is in the interest of preventing damage to property or the environment or is in the interest of public health or safety'. Ibid, para 91.

^{56.} NATO Standard AJP-3 Allied Joint Doctrine for the Conduct of Operations, Edition C Version 1, February 2019, 1-15(h).

^{57.} NATO Standard AJEPP-2 Environmental Protection Best Practices and Standards for Military Camps in NATO Operations, Edition A Version 2, November 2018, D-1, D.1.1.

^{58.} NATO Standard AJEPP-6 NATO Environmental File During NATO-Led Activities, Edition C Version 1, August 2019, 1-3, para 1.4.2.

The same NATO Standard goes on to add, quite importantly for our purposes, that 'one of the key documents which may be used to demonstrate the application of due diligence during a NATO deployment is the Environmental Impact Assessment (EIA). An EIA is generally completed for any project or activity undertaken by a NATO force, including construction projects, military activities, and manoeuvres. The primary goal of the EIA is to determine whether the project or activity will have a negative impact on the environment and the measures which will be taken to mitigate those impacts.'⁵⁹

It has been observed that NATO Standard AJEPP-6 is 'likely the NATO EP publication whose technical content is most consistently implemented by Canada'. 'Or This Standard serves as a vehicle to address 'the liability associated with potentially contaminated sites overseas and to improve environmental reconnaissance, both of which are perpetual concerns for deployed operations.' Accordingly, the NATO Standard has been considered 'a success story for interoperability' from the perspective of the Canadian army, calling for further broadening of its scope in order to make it more aspiring.

Principle 8 Human displacement¹²

In relation to **draft principle 8 on Human displacement**, Canada has expressed an interest in environmental standards in its humanitarian aid programming, and requests that its partners address these issues. A specific example of practice relevant to DP 8 is the unrestricted funding Canada has provided to the UN High Commissioner for Refugees (UNHCR), to support the latter's activities at the Cox's Bazar's refugee camp located in Bangladesh, which hosts Rohingya refugees from Myanmar. One of the UNHCR's objectives in Cox's Bazar is to reduce 'the

59. Ibid, para 1.5.

environmental impact of hosting refugees through environmental protection efforts, restoration and awareness among refugees'.63

Canada is involved in another project in Cox's Bazar aiming to secure a safe and healthy environment for the affected host community population. In light of the immense pressure on scarce natural resources in the area, resulting in degraded natural forests, barren hills and an emerging water crisis, Global Affairs Canada has partnered with the UN Development Programme (UNDP) to rehabilitate the natural resource base while preventing further environmental degradation in the region. This project is a component of the US\$118m multi-donor "UN-Joint-Project To Address Cooking Fuel Needs, Environmental Degradation and Food Security for Populations Affected By The Refugee Crisis" implemented by the International Organization for Migration, the World Food Programme and the Food and Agricultural Organization, and administered by the UNDP.64

Principle 9 State responsibility 5

The first paragraph of **draft principle 9** on **State responsibility** adjusts the general framework of the law on state responsibility to the circumstances of a violation of international law that causes wartime environmental damage. This includes providing for pure environmental damage to be addressed by reparations. This principle was established by the UN Compensation Commission, 66 and used in a peacetime

^{60.} Major Ross Franklin, P.Eng., 'Environmental Protection Efforts in Recent NATO Operations and Exercises' (n 51) 72.

^{61.} Ibid.

^{62.} States, international organizations and other relevant actors should take appropriate measures to prevent and mitigate environmental degradation in areas where persons displaced by armed conflict are located, while providing relief and assistance for such persons and local communities.

^{63.} UNHCR, 'Energy & Environment Factsheet & Dashboard, UNHCR, Bangladesh, Cox's Bazar - as of August 2020', 9 November 2020, available at https://data2.unhcr.org/en/documents/details/82818

^{64.} Global Affairs Canada, 'Project profile — Environmental Rehabilitation and Improving Livelihoods in Cox's Bazar', available at https://w05.international.gc.ca/projectbrowser-banqueprojets/project-projet/details/P006361001?Lang=eng

^{65. 1.} An internationally wrongful act of a State, in relation to an armed conflict, that causes damage to the environment entails the international responsibility of that State, which is under an obligation to make full reparation for such damage, including damage to the environment in and of itself. 2. The present draft principles are without prejudice to the rules on the responsibility of States for internationally wrongful acts.

^{66.} See Cymie R. Payne, 'Developments in the Law of Environmental Reparations: A Case Study of the UN Compensation Commission' in Carsten Stahn, Jennifer S Easterday and Jens Iverson (eds), *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 329, 355-6. It is noteworthy that the UNCC found that claims from six states (Australia, Canada, Germany, the Netherlands, the United Kingdom, and the United States) for the costs they had borne in assisting the Gulf states to abate and prevent environmental damage were also reimbursable.

context by the International Court of Justice in its 2018 compensation judgement in the case between Costa Rica and Nicaragua. Even though Canada has not provided a specific view on DP 9, it is, however, hoped that it will be accepted by Canada, since it comprises a restatement of international law, adjusted to environmental damage caused during armed conflict.

Principle 10 Corporate due diligence Principle 11 Corporate liability

The ILC has sought to reflect the important role that private companies play in causing or facilitating harm to the environment in areas affected by conflicts with draft principle 10 on Corporate due diligence, and draft principle 11 on Corporate liability. The importance of Canada's position on these two DPs is easy to infer from the share of Canadian mining companies worldwide, with one account estimating that half of them are incorporated in Canada.70 In this connection, the UN Working Group on Business and Human Rights has held 'that "cases of alleged human rights abuse by Canadian companies abroad ... continue to be a cause for serious concern" and urged the federal government to do more to "set out clear expectations for Canadian companies operating overseas."'71

consistently criticised for the lack of an adequate regulatory and normative landscape and its supporting machinery. One of the basic initiatives to regulate corporate conduct is Canada's 2014 Enhanced Corporate Social Responsibility Strategy to Strengthen Canada's Extractive Sector Abroad. As the title suggests, however, this strategy is premised on voluntary, non-binding commitments, which lack effective sanction, and victim compensation and assistance mechanisms. The appropriate legal tool would be to institute far-reaching, detailed, binding obligations applicable to corporate conduct at home and abroad.

Notwithstanding the important role of Canadian

companies in resource extraction, Canada has been

The draft 2020 Modern Slavery Act also fails to meet the expectation of ensuring sound corporate conduct.74 For one, even though it is purported to impose reporting obligations on corporations, it is ambiguous whether such obligations could substantially improve the environmental performance of corporations. More importantly, the proposed bill 'fails to address the myriad other serious human rights abuses that are widespread in Canadian global supply chains, ranging from the violation of workers' rights and the rights of Indigenous peoples, to sexual violence and environmental devastation.'75 In response to such allegations, the Canadian government founded the institution of the Canadian Ombudsperson for Responsible Enterprise (CORE) in 2019 to examine complaints about Canadian corporations' activities abroad.⁷⁶ Nevertheless, CORE has been equally decried for its lack of independence and necessary powers to fulfil its mandate.

^{67.} Certain Activities Carried out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) (Compensation) [2018] ICJ Rep 15, 28, para 42.

^{68.} States should take appropriate legislative and other measures aimed at ensuring that corporations and other business enterprises operating in or from their territories exercise due diligence with respect to the protection of the environment, including in relation to human health, when acting in an area of armed conflict or in a post-armed conflict situation. Such measures include those aimed at ensuring that natural resources are purchased or obtained in an environmentally sustainable manner.

^{69.} States should take appropriate legislative and other measures aimed at ensuring that corporations and other business enterprises operating in or from their territories can be held liable for harm caused by them to the environment, including in relation to human health, in an area of armed conflict or in a post-armed conflict situation. Such measures should, as appropriate, include those aimed at ensuring that a corporation or other business enterprise can be held liable to the extent that such harm is caused by its subsidiary acting under its de facto control. To this end, as appropriate, States should provide adequate and effective procedures and remedies, in particular for the victims of such harm.

^{70.} Douglas Quan, 'New Era: Canadian Mining Industry closely watching three civil cases alleging human rights abuses', The National Post, November 27, 2017), online: http://nationalpost.com/news/canada/new-era-mining-industry-closely-watching-three-civilcases-alleging-human-rights-abuses

^{71.} Ibid.

^{72.} For a recent account, see indicatively Miriam Cohen, 'Doing Business Abroad: A Review of Selected Recent Canadian Case-studies on Corporate Accountability for Foreign Human Rights Violations', 24(10) The International Journal of Human Rights 2020, 1499-1514.

^{73.} Available at https://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/other-autre/csr-strat-rse.aspx?lang=eng

^{74.} Available at https://www.parl.ca/DocumentViewer/en/43-1/bill/S-211/first-reading#ID0EWAA

^{75.} Emily Dwyer, 'Modern Slavery Bill Misses the Mark', *iPolitics*, 25 February 2020 [emphasis added], available at https://ipolitics.ca/2020/02/25/modern-slavery-bill-misses-the-mark

^{76.} CORE was established by virtue of Order in Council 2019-1323, 6 September 2019.

^{77.} Karyn Keenan, 'Canada's New Corporate Responsibility Ombudsperson Falls Far Short of its Promise', 5(1) Business and Human Rights Journal 2020, 137, 138.

Turning to the relevant judicial practice, Canadian courts are faring little better. As has been eloquently put, 'Canadian courts have historically refused, or have been reluctant, to hold Canadian companies accountable for human rights abuses alleged to have occurred in different jurisdictions, citing the lack of a duty of care for Canadian companies, the argument of *forum non conveniens*, or a lack of jurisdiction.'78

Nevertheless, the tide might be slowly turning, following the recent *Nevsun Resources Ltd. v Araya* case. ⁷⁹ In this case, the plaintiffs claimed that Nevsun Resources Ltd, a Canadian company, committed human rights violations through its Eritrean subsidiary, and in complicity with the Eritrean government and army. These alleged violations consisted of slavery, forced labour, torture and crimes against humanity in the context of its mining operations in Eritrea.

In February 2020, the Canadian Supreme Court, rejected Nevsun's appeal and allowed the plaintiffs' claims to move forward. More specifically and quite importantly for our purposes, the Supreme Court opined 'that customary international law, including the peremptory norms of customary international law, is automatically adopted and incorporated as a part of Canadian law except if there is legislation to the contrary. Such customary international law also applies to corporations and not only to states, the court held.'80 In November 2020, the two parties eventually reached a settlement, whose terms remain confidential.81

All things considered, Canada has recently been involved in various ways to ensure that Canadian corporations operate within Canada, abroad and in their supply chains in a human rights compliant, and

environmentally sound manner. Nonetheless, Canada is underperforming on this front. Consequently, we urge Canada to endorse both DPs under examination and implement them by means of establishing mandatory due diligence and corporate liability processes and schemes.

^{78.} Miriam Cohen, 'Doing Business Abroad: A Review of Selected Recent Canadian Case-studies on Corporate Accountability for Foreign Human Rights Violations' (n 72) 1505.

^{79.} Nevsun Resources Ltd. v Araya, 2020 SCC 5. The following account of the case under consideration is drawn from Canadian Lawyer, 'Nevsun settles with Eritrean plaintiffs in relation to landmark Supreme Court of Canada case', 5 November 2020, available at https://www.canadianlawyermag.com/practice-areas/litigation/nevsun-settles-with-eritrean-plaintiffs-in-relation-to-landmark-supreme-court-of-canada-case/334916

3. Principles applicable during armed conflict

Before delving into the analysis of Canada's policy and practice in relation to the draft principles applicable during armed conflict, it is crucial to expose its relevant views on the use of nuclear weapons.

At the time of its ratification of Additional Protocol I, Canada attached a statement of understanding, pursuant to which: 'It is the understanding of the Government of Canada that the rules introduced by Protocol I were intended to apply exclusively to conventional weapons. In particular, the rules so introduced do not have any effect on and do not regulate or prohibit the use of nuclear weapons.'82

Consequently, it comes as no surprise that Canada has not signed nor ratified the Treaty on the Prohibition of Nuclear Weapons, which will enter into force in January 2021. Sanada further stated at the time of its ratification of Additional Protocol II that '[t] he understandings expressed by the Government of Canada with respect to Additional Protocol I shall, as far as relevant, be applicable to the comparable terms and provisions contained in Additional Protocol II.'84,85

Principle 12 Martens Clause with respect to the protection of the environment in relation to armed conflict.

With respect to **draft principle 12** on the **Martens clause as applied to the environment**, Canada has invoked the relevance of the Martens clause in identifying a 'requirement to avoid unjustifiable damage to the environment' since the 1992 Conference on Environmental Protection and the Law of War held in London.⁸⁷ Drawing on this statement, it is reasonably expected that Canada will support DP 12.

Principle 13 General protection of the natural environment during armed conflict⁸

In the context of international armed conflicts, the Canadian LOAC Manual reproduces almost verbatim the wording of draft principle 13(2), which is inspired from the first sentence of article 55(1) of Additional Protocol I,⁸⁹ stipulating that '[c]are shall be taken in an armed conflict to protect the natural environment

^{82.} Canada, 'Statements of understanding at the time of ratification of Protocol I: Conventional weapons', 20 November 1990, available at https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=172FFEC04ADC80F2C1256402003FB314

^{83.} Treaty on the Prohibition of Nuclear Weapons (adopted 7 July 2017, enters into force 22 January 2021) available at https://treaties.un.org/doc/Treaties/2017/07/20170707%2003-42%20PM/Ch_XXVI_9.pdf

^{84.} Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts (adopted 8 June 1977, entered into force 7 December 1978) 1125 UNTS 609 (Additional Protocol II).

^{85.} Canada, 'Reservations made at the time of ratification of Protocol II', 20 November 1990, available at https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/ Notification.xsp?action=openDocument&documentId=980372FABB4354B9C125 6402003FB810

^{86.} In cases not covered by international agreements, the environment remains under the protection and authority of the principles of international law derived from established custom, from the principles of humanity and from the dictates of public conscience.

^{87.} Canada, Statement at the Conference on Environmental Protection and the Law of War, London, 3 June 1992, cited in ICRC, IHL Database on Customary IHL, Practice Relating to Rule 43. Application of General Principles on the Conduct of Hostilities to the Natural Environment, VI. Other National Practice, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule43

^{88. 1.} The natural environment shall be respected and protected in accordance with applicable international law and, in particular, the law of armed conflict. 2. Care shall be taken to protect the natural environment against widespread, long-term and severe damage. 3. No part of the natural environment may be attacked, unless it has become a military objective.

^{89. &#}x27;Care shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage.'

against widespread, longterm and severe damage. In fact, the Canadian LOAC Manual reiterates article 55(1) in its entirety in its chapter 6, which deals with the law relating to the conduct of hostilities on land, and chapter 7, which covers the law relating to the conduct of hostilities in air. In air.

With respect to armed conflict at sea, the Canadian LOAC Manual contains provisions relating to the protection of the marine environment. More specifically, the manual provides for the following:

'If hostile actions are conducted within the EEZ [exclusive economic zone] or over the continental shelf of a neutral state, belligerent states shall have due regard for the rights and duties of that state including: ... b. the protection and preservation of the marine environment.'92 Moreover, with respect to the laying of mines in the exclusive economic zone or the continental shelf of a neutral state '[d]ue regard shall also be given to the protection and preservation of the marine environment.'93

Interestingly, paragraph 446(2) of the Canadian LOAC Manual seems to drop any threshold of impermissible environmental damage by providing that '[a]ttacks, which are intended or may be expected to cause damage to the natural environment, which prejudices the health or survival of the population, are prohibited', moving beyond the stipulation of the second sentence of article 55(1), Additional Protocol I.94 On the other hand, both paragraphs 620(1) and 709(1) reflect the tripartite, cumulative threshold of widespread, long-term and severe damage, in line with the relevant

provision of Additional Protocol I. Moreover, the two environment-specific provisions of Additional Protocol I, namely articles 35(3) and 55, have been incorporated in the Canadian legal order by virtue of the 1985 Geneva Conventions Act (as last amended on 18 July 2008), 95 which domesticates all four 1949 Geneva Conventions and their three Additional Protocols.

Similarly, the Canadian LOAC Manual has adopted language identical to article 2, paragraph 4, of Protocol III (Prohibitions or Restrictions on the Use of Incendiary Weapons) 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 (Conventional Weapons Convention), 96.97 which Canada has ratified (see Annex below).

Principle 14 Application of the law of armed conflict to the natural environment.

Draft principle 14 on the **Application of the law of armed conflict to the natural environment** and **draft principle 15** on **Environmental considerations**should be read in concert. Canada has recognised from
the early 1990s before the Sixth Committee of the
UN General Assembly that the 'environment as such
should not form the object of direct attack, affirming
in other words the application of the principle of
distinction to the environment.⁹⁹ By virtue of this
statement, it could be reasonably inferred that Canada
accepts the civilian nature of the natural environment
and parts thereof. During the same period, Canada

^{90.} Chief of the General Staff (Canada), Joint Doctrine Manual B-Gj-005-104/ Fp-021, Law of Armed Conflict at the Operational and Tactical Levels, 13 August 2001, (Canadian LOAC Manual), para 446(1). With respect to its normative value, the Canadian LOAC Manual clarifies that [th]e obligations binding on Canada in accordance with Customary International Law and Treaties to which Canada is a party are binding not only upon the Government and the CF but also upon every individual. Members of the CF are obliged to comply and ensure compliance with all International Treaties and Customary International Law binding on Canada. This manual assists CF members in meeting those obligations. Ibid, i.

^{91.} Ibid, paras 620(1) and 709(1), respectively.

^{92.} Canadian LOAC Manual, para 821(1)(b).

^{93.} Ibid, para 822(2)

^{94. &#}x27;This protection includes a prohibition of the use of methods or means of warfare which are intended or may be expected to cause such [widespread, long-term and severe] damage to the natural environment and thereby to prejudice the health or survival of the population.'

^{95.} See Schedule V, Canada Geneva Conventions Act 1985 (last amended 18 July 2008).

^{96.} Canadian LOAC Manual, 446(4).

^{97.} Art 2(4), Protocol (III) on Prohibitions or Restrictions on the Use of Incendiary Weapons (adopted 10 October 1980, entered into force 2 December 1983) 1342 UNTS 171 ('It is prohibited to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives').

^{98.} The law of armed conflict, including the principles and rules on distinction, proportionality, military necessity and precautions in attack, shall be applied to the natural environment, with a view to its protection.

^{99.} Canada, Statement before the Sixth Committee of the UNGA, UN Doc. A/C.6/47/SR.8, 1 October 1992, para 20, as cited in ICRC, IHL Database on Customary IHL, Practice Relating to Rule 43. Application of General Principles on the Conduct of Hostilities to the Natural Environment, VI. Other National Practice, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule43

further acknowledged that 'the practice of States, generally accepted environmental principles and public consciousness about the environment had combined with the traditional armed conflict rules on the protection of civilians and their property to produce a customary rule of armed conflict prohibiting the infliction of unnecessary damage on the environment in wartime.'

The application of the law of armed conflict to the natural environment, and especially of the rules on proportionality and precautions in attack may be influenced by the information available at the relevant time. Therefore, the following understanding that Canada made at the time of its ratification of Additional Protocol I should be taken into account:

'It is the understanding of the Government of Canada that, in relation to Articles 48, 51 to 60 inclusive, 62 and 67, military commanders and others responsible for planning, deciding upon or executing attacks have to reach decisions on the basis of their assessment of the information reasonably available to them at the relevant time and that such decisions cannot be judged on the basis of information which has subsequently come to light.'101

In the same vein, Canada further explained that: 'It is the understanding of the Government of Canada that in relation to Article 41, 56, 57, 58, 78 and 86 the word "feasible" means that which is practicable or practically possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations.'102

Principle 15 Environmental considerations...

As the ICRC online database on IHL provides, '[i]n 1992, ... Canada reiterated the conclusions of the Ottawa conference and referred to the rule of proportionality as "the need to strike a balance between the protection of the environment and the needs of war" and further concluded that, under the principle of distinction, "the environment as such should not form the object of direct attack".'104 The Canadian Army Environmental Policy is also quite pertinent to DP 15, as it provides that the Canadian army will '[i]ntegrate environmental considerations in decision-making processes'.105

Principle 16 Prohibition of reprisals...

Draft principle 16 on the **Prohibition of reprisals** draws on article 55(2) of Additional Protocol I and is mirrored in paragraphs 446(3) and 1507(4)(i) of the Canadian LOAC Manual. Nevertheless, it should be borne in mind that, pursuant to Canada's statement when ratifying Additional Protocol I,107 the use of nuclear weapons is excluded from the scope of this prohibition. Quite importantly, at the time of drafting Additional Protocol II, which applies to non-international armed conflicts, Canada seems to have supported the view that 'reprisals of any kind are prohibited under all circumstances in noninternational armed conflicts'. 108 Despite the heated debate that ensued within the ILC when DP 16 was discussed, it is quite telling that the commentaries devote three paragraphs exposing the opposing views

^{100.} Canada, Statement before the Sixth Committee of the UNGA, UN Doc. A/C.6/46/SR.18, 22 October 1991, paras 13-14, as cited in ICRC, IHL Database on Customary IHL, Practice Relating to Rule 43. Application of General Principles on the Conduct of Hostilities to the Natural Environment, VI. Other National Practice, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule43

^{101.} Canada, 'Statements of understanding at the time of ratification of Protocol I: Part IV, Section I - General protection against effects of hostilities (Standard for decision-making)', 20 November 1990, available at https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=172FFEC 04ADC80F2C1256402003FR314

^{102.} Canada, 'Statements of understanding at the time of ratification of Protocol I: Article 41, 56, 57, 58, 78 and 86 (Meaning of "feasible")', 20 November 1990, available at https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=172FFEC04ADC80F2C1256402003FB314

^{103.} Environmental considerations shall be taken into account when applying the principle of proportionality and the rules on military necessity.

^{104.} ICRC, IHL Database on Customary IHL, Practice Relating to Rule 43. Application of General Principles on the Conduct of Hostilities to the Natural Environment, VI. Other National Practice, available at https://ihl-databases.icrc.org/customary-ihl/eng/docs/v2_rul_rule43

^{105.} Commander of the Canadian Army, 'Canadian Army Environmental Policy' (n 23).

^{106.} Attacks against the natural environment by way of reprisals are prohibited.
107. See Canada, 'Statements of understanding at the time of ratification of Protocol I: Conventional weapons' (n 85).

^{108.} Statement of Canada, Official Records of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts (Geneva, 1974-1977) vol. IX, available from www.loc.gov/rr/frd/Military_Law/RC-dipl-conference-records.html, 428, cited in ILC, 'Report of the International Law Commission of its 71st session' (29 April–7 June and 8 July–9 August 2019), A/74/10, Chapter VI 'Protection of the environment in relation to armed conflicts', fn 1228, 259, para 7, commentary to draft principle 16.

on whether reprisals are altogether prohibited or not in a non-international armed conflict, without taking sides.¹⁰⁹

Principle 17 Protected zones ...

Draft principle 17 on Protected zones, which should be read with draft principle 4, could enhance environmental protection during armed conflict, and even bring into play the continued application of international environmental treaties and the concomitant place-based protection afforded to ecologically sensitive areas. After all, area-based protection does not form uncharted territory within the corpus of IHL, as indicated, for example, by the concept of demilitarised zones. As noted above, in the absence of statements addressing these principles in the Sixth Committee of the UN General Assembly, Canada's position on DPs 4 and 17 is currently unclear.

Principle 18 Prohibition of pillage...

Draft principle 18 on the Prohibition of pillage reflects a well-established rule of IHL and it is one that could equally apply to parts of the environment, to the extent that natural resources could be categorised as 'property'. The ILC Commentary clarifies that this prohibition applies equally in situations of occupation, 112 and the Canadian LOAC Manual also acknowledges this. 113

Principle 19 Environmental modification techniques¹¹⁴

Draft Principle 19 on **Environmental modification techniques** draws on the relevant prohibitions
enshrined in the ENMOD Convention, ¹¹⁵ which Canada
ratified on 11 June 1981. Given that the Canadian LOAC
Manual has already incorporated the content of this
prohibition, ¹¹⁶ Canada should not be expected to take
any further measures in implementing DP 19. Lastly,
the Canadian LOAC Manual defines environmental
modification techniques pursuant to article 2 of the
ENMOD Convention. ¹¹⁷

^{109.} ILC, 'Report of the International Law Commission of its 71st session' (n 26) 259, paras 7-9, commentary to draft principle 16. For a more detailed account on the ILC's approach to the prohibition of attacks against the natural environment by way of reprisals, see Stavros-Evdokimos Pantazopoulos, 'Reflections on the Legality of Attacks Against the Natural Environment by Way of Reprisals' 10(1) Goettingen Journal of International Law 2020, 47.

^{110.} An area of major environmental and cultural importance designated by agreement as a protected zone shall be protected against any attack, as long as it does not contain a military objective.

^{111.} Pillage of natural resources is prohibited.

^{112.} ILC, 'Report of the International Law Commission of its 71st session' (n 26) 264, para 8, commentary to draft principle 18.

^{113.} Canadian LOAC Manual, paras 1211 and 1236.

^{114.} In accordance with their international obligations, States shall not engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State.

^{115.} Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (adopted 10 December 1976, entered into force 5 October 1978) 1108 UNTS 152 (ENMOD Convention), art 1.

^{116.} Canadian LOAC Manual, paras 514(1), 620(2) [law relating to the conduct of hostilities on land], 709(2) [law relating to the conduct of hostilities in air].

^{117.} Canadian LOAC Manual, paras 620(3) and 709(3). It should be noted, however, that the glossary of the Canadian LOAC Manual articulates the threshold of impermissible effects cumulatively ('An environmental modification technique is any technique for changing, through the deliberate manipulation of natural processes, the dynamics, composition or structure of the earth, which would have widespread, long-term and severe effects'), whereas the same instrument is using the correct, disjunctive articulation in its main text, in line with the ENMOD Convention and DP 19. Consequently, it is suggested that Canada amend the wording of the glossary, so as to align it with the established terminology, to which it has subscribed to.

4. Principles applicable in situations of occupation

The legal institution of belligerent occupation, and its related legal provisions, developed in an era when environmental protection was almost non-existent, and definitely under-prioritised, under IHL. On this account, the ILC draft principles applicable in situations of occupation rightly and correctly attempted to adjust the protective scope and operation of the law of occupation to the well-recognised need of environmental protection by engaging in evolutive interpretation of the relevant rules.

Having the above in mind, the following section assesses Canada's practice on environmental protection in situations of occupation. In this respect, we face two important challenges: on the one hand, Canada has not been an occupying power in the sense of IHL, so it has not generated practice to this end. In addition, Canada has not yet shared its legal views on the PERAC draft principles. Starting from these premises, the subsequent analysis is informed by analogous Canadian positions and policies, but, nevertheless, it remains to a certain extent speculative.

The analysis undertaken with respect to the conduct of an impact assessment, pursuant to the 2019 Impact Assessment Act, under draft principles 6 and 7 above might also be pertinent here, should Canada ever find itself to be qualified as an occupying power. The obligation to conduct an environmental impact assessment enshrined therein could serve as one of the means to meet the obligations stipulated in the three DPs applicable in situations of occupation. Moreover, given Canada's strong commitment to multilateral operations, especially UN and NATO-led operations, this provision could also be applicable if peacekeeping forces under the auspices of an international organisation, acting as international territorial administrators, are classified as an occupying power.

This latter issue warrants further scrutiny because Canada regularly engages in multilateral operations abroad.118 The topic preoccupied the Sixth Committee in the context of the ILC's work on PERAC.¹¹⁹ The Nordic countries opined that 'many of the responsibilities of an occupying power are also relevant when a territorial area is temporarily administered by an international organisation' inviting further elaboration in the commentaries, notwithstanding that 'such administration is not "occupation" in the ordinary meaning of the term'. 120 Iran also sided with this view, based on the understanding that 'in some circumstances the international organizations perform similar functions such as control and administration of a territory',121 whereas the Netherlands objected to it.122

Even if international organisations are not occupying powers in the sense of the law of occupation under existing international law, the law of occupation may be applicable to them when they meet the criteria under article 42 of the Hague Convention IV.¹²³
Furthermore, UN forces remain bound by certain IHL norms, pursuant to the UN Secretary General's Bulletin on the 'Observance by United Nations forces of international humanitarian law'.¹²⁴ Given the increasing

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^{118.} For a detailed list, see https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/list.html

^{119.} For a comprehensive account of States' views before the UNGA Sixth Committee, see Doug Weir, 'States Welcome Principles on Environmental Protection in Occupation During UN Debate', 14 November 2018, available at https://ceobs.org/states-welcome-principles-on-environmental-protection-in-occupation-during-un-debate

^{120.} Sweden on behalf of the Nordic countries (Denmark, Finland, Iceland, Norway and Sweden), UNGA Sixth Committee, 30 October 2018, available at www.papersmart.unmeetings.org (last accessed 31 March 2020). The full texts of all states' statements at the UNGA Sixth Committee are available at www.papersmart.unmeetings.org

^{121.} Iran, UNGA Sixth Committee (UN Doc. A/C.6/73/SR.30), 31 October 2018, para 54.

^{122.} Netherlands, UNGA Sixth Committee (UN Doc. A/C.6/73/SR.29), 31 October 2018, para 47.

^{123.} Tristan Ferraro, Expert Meeting: Occupation and Other Forms of Administration of Foreign Territory (ICRC 2012) 33-4.

^{124.} UN Secretary General's Bulletin, 'Observance by United Nations forces of international humanitarian law', ST/SGB/1999/13, 6 August 1999.

convergence between the law of occupation and the legal framework governing UN-led international territorial administration, 125 further evolution of the law to this end should not be categorically ruled out, and the ILC rightly acknowledged that '[t]he law of occupation may also be applicable to territorial administration by an international organization, provided that the situation meets the criteria of article 42 of the Hague Regulations.'126 All in all, extending the application of the law of occupation to UN-led territorial administration is a necessary corollary of the functions the latter assumes so that the exercise of international executive authority remains within the constraints of the law and accountability is ensured.127 In any event, the law of occupation continues to bind the forces of states that are contributing to the implementation of the UN mission's mandate.128

Principle 20 General obligations of an Occupying Power¹²⁹
Principle 21 Sustainable use of natural resources¹³⁰
Principle 22 Due diligence¹³¹

Some level of support for **draft principle 21** on the **Sustainable use of natural resources** could be deduced from paragraph 1243 of the Canadian LOAC Manual, which provides that in occupied territories '[r]

125. Steven R Ratner, 'Foreign Occupation and International Territorial Administration: The Challenges of Convergence' (2005) 16 European Journal of International Law 695, 702.

126. ILC, 'Report of the International Law Commission of its 71st session' (n 26) 267, para 5, commentary to Part Four [citation omitted].

127. See Eyal Benvenisti, *The Applicability of the Law of Occupation to UN Administration of Foreign Territory* (University of Cambridge 2019) Research Paper Series 36/2019, available at http://www.law.cam.ac.uk/ssrn

129. 1. An Occupying Power shall respect and protect the environment of the occupied territory in accordance with applicable international law and take environmental considerations into account in the administration of such territory. 2. An Occupying Power shall take appropriate measures to prevent significant harm to the environment of the occupied territory that is likely to prejudice the health and well-being of the population of the occupied territory. 3. An Occupying Power shall respect the law and institutions of the occupied territory concerning the protection of the environment and may only introduce changes within the limits provided by the law of armed conflict.

130. To the extent that an Occupying Power is permitted to administer and use the natural resources in an occupied territory, for the benefit of the population of the occupied territory and for other lawful purposes under the law of armed conflict, it shall do so in a way that ensures their sustainable use and minimizes environmental harm.

131. An Occupying Power shall exercise due diligence to ensure that activities in the occupied territory do not cause significant harm to the environment of areas beyond the occupied territory.

eal property belonging to the State which is essentially of a civil or non-military character, such as public buildings and offices, land, forests, parks, farms, and mines, may not be damaged unless their destruction is imperatively demanded by the exigencies of war. The occupant becomes the administrator of the property and is able to use the property, but must not exercise its rights in such a wasteful or negligent way as will decrease its value. The occupant has no right of disposal or sale.'132

Turning to other relevant provisions, guidance could be sought regarding **draft principle 22** on **Due diligence** from the Defence Directive on Environmental Protection and Stewardship, which explains that:

'[a]s a minimum, due diligence requires individuals to:

- a. know and obey federal environmental laws and regulations;
- b. exercise caution;
- c. prepare for risks that a thoughtful and reasonable person would foresee; and
- d. respond to risks and incidents as soon as practicable.'133

All in all, support from the CAF for draft principles 20-22 should be forthcoming, since it has committed 'to conduct its activities in a sustainable way [and] exercise due diligence ...', 134 but it is recommended that Canada explicitly endorse all these DPs in its written comments to the ILC.

^{132.} Canadian LOAC Manual, para 1243. This paragraph draws on article 55 of the 1907 Hague Regulations.

^{133.} Department of National Defence, DAOD 4003-0, Environmental Protection and Stewardship (n 14) para 3(3). Due diligence is defined as 'the reasonable standard of care for the environment and for the health and safety of others that individuals shall exercise in the course of their actions and duties.' Ibid, para 2

^{134.} Commander of the Canadian Army, 'Canadian Army Environmental Policy' (n 23) available at http://www.army-armee.forces.gc.ca/en/environment/index.page

5. Principles applicable after armed conflict

Canada's post-conflict environmental practice is not as clearly developed as that of many states active in this space. However, there are instances of conduct that point to a positive approach to many of the draft principles applicable during this phase.

While primarily focused on weapon legacies, the activities of the Canadian Weapons Threat Reduction Program conceptually cross-cut many of the draft principles applicable after armed conflict, given that its successful accomplishment relies significantly on cooperative efforts. ¹³⁵ Canada cooperates with other states, international organisations and actors to achieve the objectives of the humanitarian disarmament treaties that provide the framework for activities under the programme. ¹³⁶ In this respect, these activities of the Canadian government could be construed as falling within the scope of draft principles 24-28.

Principle 23 Peace processes¹⁵⁷

Draft principle 23 on **Peace processes** 'aims to reflect that environmental considerations are, to a greater extent than before, being taken into consideration in the context of peace processes.' As the textual interpretation suggests, paragraph 1 is addressed to

135. Since the Program's establishment in 2002, Canada has contributed more than \$1.5bn to projects to address chemical, biological, radiological and nuclear proliferation and terrorism threats. More specifically, 'the program funds and supports concrete threat reduction projects with, and in support of, international partners'. See: https://www.international.gc.ca/world-monde/issues_development-enjeux_development/peace_security-paix_securite/non_proliferation.aspx?lang=eng (date last modified 29 July 2020).

136. See indicatively, Canada, Mine Ban Treaty Article 7 Report (for the period 1 January 2019 to 31 December 2019), 11 June 2020, available at https://www.unog.ch/80256EDD006B8954/(httpAssets)/CEF12E33DEDA8E43C12585BA0039A06C/\$file/Canada+2019.pdf

137. 1. Parties to an armed conflict should, as part of the peace process, including where appropriate in peace agreements, address matters relating to the restoration and protection of the environment damaged by the conflict. 2. Relevant international organizations should, where appropriate, play a facilitating role in this regard.

138. ILC, 'Report of the International Law Commission of its 71st session' (n 26) 281, para 1, commentary to draft principle 23.

parties to an armed conflict, whereas paragraph 2 to international organisations.

Even though the CAF have been implicated in many armed conflicts in recent decades, in the vast majority of these occasions they have done so as part of multinational operations within the mandate of international organisations, such as the UN and NATO. Accordingly, such practice falls beyond the scope of this DP. Through its Operation IMPACT, 139 Canada has also been involved in the fight against Daesh, but in this respect no peace process is in sight. All things considered, Canada's practice on draft principle 23 is understandably scarce and to the extent it exists, it is badly-documented.

Principle 24 Sharing and granting access to information.

The CAF routinely gathers information on environmental health risks during military deployments through its Deployable Health Hazard Assessment Teams (DHHATs). As with other advanced militaries, attention to military health surveillance has grown in response to concerns from military personnel over environmental exposures. In Canada's case the triggers have been incidents in Croatia and Kuwait, ¹⁴¹ and in Afghanistan, where there were persistent

139. See DND, 'Operation IMPACT', last modified 26 November 2020, available at https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-impact.html

140. 1. To facilitate remedial measures after an armed conflict, States and relevant international organizations shall share and grant access to relevant information in accordance with their obligations under international law. 2. Nothing in the present draft principle obliges a State or international organization to share or grant access to information vital to its national defence or security. Nevertheless, that State or international organization shall cooperate in good faith with a view to providing as much information as possible under the circumstances.

141. National Defence and Canadian Forces Ombudsman, 'Heroism Exposed: An Investigation into the Treatment of 1 Combat Engineer Regiment Kuwait Veterans (1991)', October 2006, available at http://www.ombudsman.forces.gc.ca/en/ombudsman-reports-stats-investigations-heroism-exposed/heroism-exposed.

fears over the health consequences of poor air quality from burn pits and dust storms. ¹⁴² The CAF share environmental information with allied militaries, for example on depleted uranium contamination, through memoranda of understanding. ¹⁴³ Canada also provided environmental information on relevant environmental activities it was funding in the context of UNEP's Desk Study on the environment in the Occupied Palestinian Territories. ¹⁴⁴

While data from DHHAT assessments has found its way into the public domain, through publications in the scientific literature, or after being released through freedom of information legislation in allied states, ¹⁴⁵ the extent to which it is accessible to individuals or non-governmental stakeholders is unclear. Canada's freedom of information system has permitted the release of data on CAF ammunition use in Afghanistan, ¹⁴⁶ and airstrikes in Iraq, ¹⁴⁷ and in fulfilling its transparency obligations under the Mine Ban Treaty it provides grid coordinates for the mined areas it retains domestically for training and research purposes. ¹⁴⁸

Nevertheless, the extent to which Canada is willing to share the data it gathers on environmental risks in areas affected by armed conflicts appears largely untested, certainly as far as stakeholders from beyond the military are concerned. See also analysis under draft principles 27 and 28 below.

Principle 25 Post-armed conflict environmental assessments and remedial measures¹⁴⁹ Principle 26 Relief and assistance¹⁵⁰

Canada made a modest contribution to UNEP's work in Afghanistan, financially supporting its post-conflict environmental assessment. ¹⁵¹ Moreover, Canada was one of a number of countries that provided equipment and financial support to the Lebanese Ministry of Environment to facilitate the clean-up of the oil spill off the coastline of Lebanon, which occurred as a result of the Israeli bombing of the Lebanese Jiyeh power plant in the context of the 2006 Lebanon-Israel armed conflict. ¹⁵² While it has not played a leading role in this space, Canada's technical and material support falls squarely within DP 25's notion of 'cooperation among relevant actors ... with respect to post-armed conflict ... remedial measures.'

Canada has also financed research and assessments into environmental risks during active conflicts, most recently in the context of the conflict in eastern Ukraine, and undertaken through financing civil society actors to undertake risk assessments. ¹⁵³ As Canada has specific geopolitical interests in the conflict in Ukraine this should not necessarily be interpreted as a policy of wider application.

Canada's response to the Jiyeh spill is also relevant to draft principle 26 on Relief and assistance, which

^{142.} See Janick D. Lalonde and Capt Monica Bradley, '11 Years of Air Quality Monitoring in Afghanistan', 3 Medical Corps International Forum (2015), 50-55, available at https://medicinaveterinariamilitar.files.wordpress.com/2015/10/mcif-3-15.pdf

^{143.} Statement by Janick Lalonde, Senior Advisor, Toxicology, Forces Health Protection, Canadian Forces Health Services, Department of National Defence before the Veterans Affairs Committee, 21 March 2013, available at https://openparliament.ca/committees/veterans-affairs/41-1/64/dr-janick-lalonde-1/only

^{144.} UNEP, Desk Study on the Environment in Occupied Palestinian Territories, 2003, 123, para 10.6, available at https://postconflict.unep.ch/publications/INF-31-WebOPT.pdf

^{145.} Government of the Netherlands, decision on a request for information about burn pits, 2019, https://www.rijksoverheid.nl/documenten/wobverzoeken/2019/02/11/besluit-op-wob-verzoek-over-burnpits

^{146.} Fol request A-2018-01433: All the ammunitions expended during the Afghanistan mission between January 2001 and December 2011, July 2019 (disclosed in part), available at https://open.canada.ca/en/search/ati/reference/e04d1389a1d016acacd39307e9c139f8

^{147.} Fol request A-2019-00941: Documents and geographic coordinates for all air strikes and the effects of the strikes on Mosul, Iraq, and vicinity as part of Operation IMPACT, September 2020 (disclosed in part), available at https://open.capada.ca/en/search/ati/reference/51566a45516443d8a21250achd84cff

^{148.} Canada, Mine Ban Treaty Article 7 Report (for the period 1 January 2019 to 31 December 2019), 11 June 2020, available at https://www.unog.ch/80256EDD006B8954/(httpAssets)/CEF12E33DEDA8E43C12585BA0039A06C/\$file/Canada+2019.pdf

^{149.} Cooperation among relevant actors, including international organizations, is encouraged with respect to post-armed conflict environmental assessments and remedial measures.

^{150.} When, in relation to an armed conflict, the source of environmental damage is unidentified, or reparation is unavailable, States are encouraged to take appropriate measures so that the damage does not remain unrepaired or uncompensated, and may consider establishing special compensation funds or providing other forms of relief or assistance.

^{151.} UNEP, Post-Conflict Environmental Assessment: Afghanistan, 2003, 4 and 9, available at https://wedocs.unep.org/bitstream/handle/20.500.11822/7656/-Afghanistan_Post-conflict_environmental_assessment-2003afghanistan_post_conflict_environmental_assessment.pdf?sequence=3&isAllowed=y

^{152.} UNEP, Lebanon: Post-Conflict Environmental Assessment, 2007, 10.

^{153.} See for example: The Centre for Humanitarian Dialogue, Ecological Threats in Donbas Ukraine, 2017, https://ceobs.org/wp-content/uploads/2020/04/ Ecological-Threats-in-Donbas.pdf; Ukrainian Helsinki Human Rights Union, On the brink of survival: damage to the environment during armed conflict in east of Ukraine, 2017, https://helsinki.org.ua/wp-content/uploads/2017/11/Summary-Report-on-Environment_eng.pdf

encourages states to take appropriate measures aimed at repairing and compensating environmental damage caused during armed conflict, where the source of environmental damage is unidentified or reparation is not available. Indeed the ILC commentary to DP26 refers to the incident, which resulted in approximately 10,000 – 15,000 tons of heavy fuel oil spilling into the Mediterranean Sea, affecting approximately 150km of Lebanese coastline, as well as part of Syria's coast.154 The ILC observed that the incident provides '[a]n example of environmental remediation in a situation in which the establishment or implementation of State responsibility is not possible'. 155 But again, further evidence of practice in post-conflict environmental assistance is required to fully determine Canadian policy in this area.

Principle 27 Remnants of war Principle 28 Remnants of war at seas

Draft principle 27 on **Remnants of war**, and **draft principle 28** on **Remnants of war at sea** reconnect to earlier holistic framings around war legacies that captured the "material remnants of war" and which existed prior to more recent humanitarian-oriented framings, which focus primarily on explosive remnants of war.¹⁵⁸

As a handful of states in the UN General Assembly's Sixth Committee objected to the ILC's holistic approach to the toxic and hazardous remnants of war, it is worth reviewing how Canada's military currently views substances of this type. The 1998 DAOD on Hazardous Materials Management demonstrates the range of materials that are considered as hazardous and toxic and thus necessary to manage appropriately. For the purposes of this DAOD, a hazardous material (HAZMAT) is defined as 'any material that, if handled improperly, can endanger human health and well-being or the environment or equipment. Some examples of HAZMAT are poisons, corrosive agents, flammable substances, ammunition and explosives. It is noteworthy that the prescribed standard of care is defined as 'due diligence', which echoes the respective principle of international environmental law.

In the context of hazardous war remnants and the Anti-Personnel Mine Ban Convention, 'Canada was the first government to sign and ratify the Mine Ban Treaty on 3 December 1997, becoming a State Party on 1 March 1999.'162 Canada had already completed the destruction of its stockpile of 90,000 antipersonnel mines between October 1996 and November 1997, before the Mine Ban Treaty was opened for signature. 163 Lastly, Canada has not imported nor used antipersonnel mines, while as of December 2019 Canada retained 1,649 antipersonnel mines for training purposes. 164 The following analysis is also relevant for Canada's practice in relation to draft principle 24 on Sharing and granting access to information.

Canada is a State Party to the Convention on
Conventional Weapons and its Protocols (see
Annex below). As The Monitor informs, 'Canada
has participated in all of the Cluster Munitions
Convention's meetings and has elaborated its views
on important issues relating to the convention's
implementation and interpretation. It has condemned

291, para 3, commentary to draft principle 26.

^{154.} UNEP, Lebanon: Post-Conflict Environmental Assessment, 2007, 10.
155. ILC, 'Report of the International Law Commission of its 71st session' (n 26)

^{156. 1.} After an armed conflict, parties to the conflict shall seek to remove or render harmless toxic and hazardous remnants of war under their jurisdiction or control that are causing or risk causing damage to the environment. Such measures shall be taken subject to the applicable rules of international law. 2. The parties shall also endeavour to reach agreement, among themselves and, where appropriate, with other States and with international organizations, on technical and material assistance, including, in appropriate circumstances, the undertaking of joint operations to remove or render harmless such toxic and hazardous remnants of war. 3. Paragraphs 1 and 2 are without prejudice to any rights or obligations under international law to clear, remove, destroy or maintain minefields, mined areas, mines, booby-traps, explosive ordnance and other

^{157.} States and relevant international organizations should cooperate to ensure that remnants of war at sea do not constitute a danger to the environment.

^{158.} For the civil-society-led process that has helped to reverse the historical decoupling of explosive remnants of war from other physical and toxic war remnants, see Doug Weir, 'Reframing the Remnants of War: The Role of the International Law Commission, Governments, and Civil Society' in Carsten Stahn, Jennifer S Easterday and Jens Iverson (eds), *Environmental Protection and Transitions from Conflict to Peace* (OUP 2017) 438.

^{159.} Canada, Defence Aministrative Order and Directive (DAOD) 4003-1,
Hazardous Materials Management, 30 January 1998, available at https://www.canada.ca/en/department-national-defence/corporate/policies-standards/defence-administrative-orders-directives/4000-series/4003/4003-1-hazardous-materials-management.html

^{160.} Ibid, para 2 'Definitions'.

^{161.} Ibid, para 3.4.

^{162.} Ibid.

^{163.} Canada, Mine Ban Treaty Article 7 Report (for the period 1 January 2019 to 31 December 2019) (n 148).

^{164.} Ibid.

the use of cluster munitions in Syria and has provided five voluntary transparency reports for the same Convention in 2011–2015, confirming it has not produced cluster munitions. Canada imported cluster munitions, but has never used or exported them.'165 In addition, Canada has 'advocated for strong provisions on victim assistance and on international cooperation and assistance',166 and given that both victim assistance and international cooperation are envisaged in the PERAC's post-armed conflict phase, Canada is expected to endorse the draft principles that are intended to apply during it. Having said that, Canada's interpretation and practice in relation to the Convention on Cluster Munitions can be further improved, in line with the recommendations submitted by The Monitor. 167

Two examples of relevant Canadian practice on terrestrial and marine war remnants are of interest. The CAF takes part in Operation OPEN SPIRIT every year, with an aim of clearing explosive remnants of war in the Baltic Sea, which experienced heavy fighting during World War I and World War II. This included air bombardment, naval gunfire support, mine-laying, and submarine warfare, and CAF personnel have contributed to this operation each year since 2014.¹⁶⁸

Operation RENDER SAFE aims to clear explosive remnants of war from the Solomon Islands, which saw heavy fighting during World War II at sea, on land, and from the air. The islands were also used as a support and ammunition base. The CAF normally participate every two years. During the operation, CAF members work with international partners to search for, locate, and destroy explosive remnants of war on land, and underwater. The CAF has contributed to this mission three times:

- In 2013, international partners successfully cleared 12,164 pieces of ordnance. Canadians were responsible for the disposal of more than 2,800 items;
- In 2014, Canadians cleared 18 explosiveremnants sites out of 110 that were cleared overall;
- In 2016, international partners cleared 2,584 explosives weighing more than 18 tonnes.
 Of those, Canadians cleared 747 explosives weighing more than three tonnes.

Canada is believed to have extensive conventional weapon dumpsites off its Atlantic coast, particularly around Nova Scotia and Newfoundland.¹⁷⁰ These contain sea dumped weapons dating from the end of World War II. Little progress has been made by the DND in characterising or addressing the environmental risks that the sites pose. Dumpsites containing chemical weapons from World War I are also present.¹⁷¹

^{165.} Country profile: Canada, Cluster Munition Ban Policy, 31 July 2015, available at http://www.the-monitor.org/en-gb/reports/2020/canada/view-all.aspx#txt4 166. lbid.

^{167.} Ibid.

^{168.} See https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-open-spirit.html

^{169.} See https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-render-safe.html

^{170.} Alex Souchen, "'Under Fathoms of Salt Water": Canada's Ammunition Dumping Program, 1944-1947' 26(2) Canadian Military History 2017, 1.

^{171.} Chemical Weapon Munitions Dumped at Sea: An Interactive Map, James Martin Center for Non-proliferation studies, http://nonproliferation.org/chemical-weapon-munitions-dumped-at-sea

6. Conclusion and recommendations

On the basis of our analysis, it is evident that the standard of Canada's PERAC practice varies widely across the temporal phases of conflicts. Nevertheless, with the ILC's work due to be completed in 2022, it is our hope that Canada will welcome its adoption at the UN General Assembly and that this paper will contribute towards Canada's implementation of the PERAC principles.

In preparing this paper, one key observation has been the question of metrics by which to interpret and judge Canada's practice, and this too will be of relevance for the Canadian government if, as hoped, it chooses to endorse the work of the ILC on PERAC and align its practice with PERAC's normative framework. While a broad suite of measures will be required to bring Canada's policy into alignment with the draft principles, the recommendations below identify priority areas that should be reviewed by the Canadian federal government.

The following observations summarise our findings over the four conflict phases, and recommendations are provided for measures that Canada should take to align itself with the ILC's PERAC principles.

General and pre-conflict measures

At the time of writing, Canada has not taken a clear public position on any of the principles of general application. Canada's practice in relation to corporate conduct has attracted much criticism, despite the relevant recent efforts of different branches of the federal government to improve the environmental conduct of corporations. Nevertheless, DP 9 on State responsibility is expected to be met with approval by Canada, as it merely adjusts the well-established international law of state responsibility to wartime environmental damage.

Recommendation

Canada should take appropriate measures aimed at ensuring the environmentally sound conduct of corporations and other business enterprises in areas affected by conflict, as provided for in draft principles 10 and 11, notwithstanding the fact that different branches of the Canadian federal state have already undertaken efforts to improve the conduct of corporations.

The designation of areas of major environmental and cultural importance as protected zones prior to conflicts holds great potential and Canada should adopt this progressive development of international law. Canada should also take appropriate measures, in line with DP 5 on the protection of the environment of Indigenous peoples and the UN Declaration on the Rights of Indigenous Peoples, to uphold the highest possible level of protection of Indigenous peoples' rights to the lands, territories and resources that they have traditionally owned, occupied or otherwise used or acquired. Canada should further explore the possibility of designating the sacred sites or, in general, the territories of Indigenous peoples as protected zones so as to afford enhanced protection to them.

Measures applicable during armed conflict

Canada's policy appears to be well-attuned to the requirements enshrined in Part Three of the ILC's draft principles, pertaining to the phase during armed conflict. Having said that, Canada's understanding that Additional Protocol I does not cover the use of

nuclear weapons significantly limits the potential of the relevant draft principles to enhance the protection of the environment during armed conflict.

Recommendation

Canada should reconsider its statement of understanding on the scope of Additional Protocol I in relation to the use of nuclear weapons. In addition, Canada should explicitly accept DP 17 on protected zones, given the Canadian government's, and especially the CAF's strong and repeatedly stated commitment to environmental stewardship and sustainable development. It is also recommended that Canada take a clear view on the co-applicability of human rights and environmental law with IHL during armed conflicts, because it holds the promise of enhancing the protection of civilians and the environment, and because coapplicability conceptually underpins the ILC's PERAC project.

Measures applicable in situations of occupation

Canada's statements and practice, or rather the lack thereof, do not enable a clear understanding of whether the draft principles applicable in situations of occupation are aligned with Canada's legal views. Canada's environmental objectives and aspirations may point to the direction of their acceptance, but more clarity is required.

Recommendation

Canada should clearly express its view on the three draft principles applicable in situations of occupation. More specifically, DP 22 should be met with approval by Canada as the concept of 'due diligence' already informs and guides the activities of the CAF.

Measures applicable postarmed conflict

Our survey identified some instances of Canada's conduct pertaining to environmental protection during the post-armed conflict phase. Nevertheless, such practice is under-reported and hardly systematised. On the other hand, Canada is complying with its obligations relating to humanitarian mine action and thus its practice is to a great extent aligned with the prescribed conduct under the draft principles on remnants of war.

Recommendation

Broadly speaking, Canada's statements and practice seem to be aligned with many of the recommendations found in the ILC's post-armed conflict draft principles. However, more clarity is required in this respect. Improving reporting on integrating the environment into post-conflict activities would encourage more effective mainstreaming and the refinement of policies. A clear commitment to improve the sharing of environmental information held by the CAF with a wide range of stakeholders would contribute to the protection of civilians. And, as an active participant in mine action, Canada should use its position to promote environmental mainstreaming in the sector.

Appendix

Significant IHL treaties to which Canada is a party

International Humanitarian Law treaties	Signed	Ratified/ Acceded	Implementing legislation
Hague Convention IV Respecting the Laws and Customs of War on Land 1907			Not signed or ratified by Canada but accepted by Canada as customary law
Hague Regulations Respecting the Laws and Customs of War on Land 1907			Not signed or ratified by Canada but accepted by Canada as customary law
Geneva Conventions I – IV 1949	08.12.1949	14.05.1965	Geneva Conventions Act 1985
Additional Protocol I 1977	12.12.1977	20.11.1990	Geneva Conventions Act 1985 (as later amended)
Additional Protocol II 1977	12.12.1977	20.11.1990	Geneva Conventions Act 1985 (as later amended)
Additional Protocol III 2005	19.06.2006	26.11.2007	Geneva Conventions Act 1985 (as later amended)
Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict 1954		11.12.1998	Cultural Property Export and Import Act 1985; Criminal Code 1985
Protocol for the Protection of Cultural Property in the Event of Armed Conflict 1954		29.11.2005	Cultural Property Export and Import Act 1985; Criminal Code 1985
Second Protocol for the Protection of Cultural Property in the Event of Armed Conflict 1999		29.11.2005	Cultural Property Export and Import Act 1985; Criminal Code 1985
Biological Weapons Convention 1972	10.04.1972	18.09.1972	
ENMOD Convention 1976	18.05.1977	11.06.1981	
Convention on Certain Conventional Weapons 1980 (CCW)	10.04.1981	24.06.1994 (Canada ratified the amended article 1 on 22.07.2002)	
Protocol I to CCW on NonDetectable Fragments 1980	10.04.1981	24.06.1994	
Protocol II to CCW on Prohibitions or Restrictions on the Use of Mines, Booby- Traps and Other Devices 1980 (and Protocol II as amended 1996)	10.04.1981	24.06.1994 (Canada ratified the amended Protocol on 05.01.1998)	Anti-Personnel Mines Convention Implementation Act 1997
Protocol III to CCW on Prohibitions or Restrictions on the Use of Incendiary Weapons 1980	10.04.1981	24.06.1994	
Protocol IV to CCW on Blinding Laser Weapons 1995		05.01.1998	Defense Production Act 1985 (as amended later); Export and Import Permits Act 1989 (as amended later)
Protocol V to CCW on Explosive Remnants of War 2003		19.05.2009	
Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and their Destruction 1993	13.01.1993	26.09.1995	Chemical Weapons Convention Implementation Act 1995
Anti-Personnel Landmines Convention 1997	03.12.1997	03.12.1997	Anti-Personnel Mines Convention Implementation Act 1997
Rome Statute of the International Criminal Court 1998	18.12.1998	07.07.2000	Crimes Against Humanity and War Crimes Act 2000; International Criminal Court Privileges and Immunities Order 2004
Cluster Munitions Convention 2008	03.12.2008	16.03.2015	Prohibiting Cluster Munitions Act 2014
Arms Trade Treaty 2013		19.06.2019	Bill C-47 and six related regulations (2019), amending the Export and Import Permits Act

Canada's practice on PERAC

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