

The Arctic Environment and the Law of Armed Conflict

Christopher Waters and Ashley Barnes

The potential role of the law of armed conflict (LOAC), or international humanitarian law, in the Arctic has largely been ignored. This paper aims to help remedy that situation, arguing that the unique Arctic environment places distinct restraints on the means of any future armed conflict in that region.

The UN Convention on the Law of the Sea (UNCLOS) is regarded as the most appropriate and comprehensive regime for the management of Arctic waters. Regional powers (including Canada, Denmark, Norway, Russia and the United States) have committed to using the law of the sea as a basis for resolving competing territorial claims. This is also evident in current Canadian foreign policy on the Arctic. While national sovereignty remains vital, Canada is willing to work towards settling boundary disputes on the basis of international law. Moreover, the country is committed to its role within the Arctic Council, a multinational forum dedicated to regional concerns.¹ All Arctic states have stressed cooperation and their willingness to address disputes within the existing legal framework.

Simultaneously, however, these states continue to expand their military activities in an increasingly accessible and resource-rich region. The economic and security implications of a warming Arctic have been noted by regional

powers, and they have all taken steps to develop their capabilities in Arctic operations. Russia conducts reconnaissance flights and has deployed naval vessels near Norwegian offshore oil assets. The US Navy recognizes the importance of the Arctic to national security and possesses submarines capable of operating in the region. Having developed a northern-oriented defence strategy, Canada is no exception to this general trend. Under the auspices of *Operation Nanook*, for example, Canadian Forces and other government departments participate in military exercises and patrols. With so much emphasis on military operations, some degree of tension and uncertainty is inevitable.

Although the prospects for outright armed conflict seem remote, it would be irresponsible not to give consideration to constraints that LOAC imposes on military activities in the Arctic. The role of the Canadian Navy in the region will likely be confined to supporting law enforcement and ensuring sovereignty in Arctic waters in accordance with UNCLOS. Should fighting ever occur, however, LOAC would be the pertinent legal regime. The application of such law to the Arctic environment would prohibit a good deal of military action which in other regions might be permissible. Ultimately, militaries fighting in the Arctic would be challenged to comply with the basic requirements of LOAC.



Credit: Cpl Rick Ayer, MARLANT

HDMS *Vaedderen* (F 359), HMCS *Montréal* (FFH 336) and USS *Porter* (DDG 78) en route to the Arctic to participate in *Operation Nanook*, 12 August 2010.



Soldiers from the 48th Highlanders of Canada on patrol in Resolute Bay during *Operation Nanook*, 11 August 2010.

Potential for Environmental Damage

Relevant to the Arctic is the explicit protection against environmental damage provided by LOAC. This is entrenched in Additional Protocol I (API) of the Geneva Conventions. Under Article 35(3), the use of “methods or means of warfare which are intended, or may be expected to cause widespread, long-term and severe damage to the natural environment” is prohibited.² This is supplemented by Article 55 which dictates that “[c]are shall be taken in warfare to protect the natural environment against widespread, long-term and severe damage.”³ Central to both of these provisions is the requirement that environmental damage be ‘widespread, long-term and severe.’ This recognizes that all conflicts will invariably have some impact on the environment – it is only once that impact passes a certain threshold that it becomes legally unacceptable.

The ‘widespread, long-term and severe’ threshold for environmental damage appears to give significant leeway to military operations. Low-level or incidental environmental effects are permissible. This means that restrictions on environmental damage will only apply in the most extreme circumstances. Unfortunately, API provides no guidance on the exact content of the threshold. For example, how much territory would have to be directly affected by military activities to constitute ‘widespread’ environmental damage? Some commentators have attempted to infer the intent from discussions surrounding the development of API. They suggest that damage is expected to be persistent, lasting for a few decades, and represent a significant and large-scale disruption to natural resources.⁴ The prohibition against environmental damage in API is also seen by some people as forming the basis of a rule under customary international law distinct from the treaty provisions themselves.⁵ Appropriately, the Canadian Forces’ manual on the law of armed conflict reflects this standard.⁶

Recognition of the need to limit environmental damage during armed conflict is not exclusive to API. The 1994 *San Remo Manual on International Law Applicable to*

Armed Conflict at Sea indicates that there should be “due regard for the natural environment” in naval warfare. This includes a prohibition on “[d]amage to or destruction of the natural environment not justified by military necessity and carried out wantonly.”⁷ Formulated slightly different than API, it focuses on the justifications for and carelessness towards the impact on the environment. This approach is also recognized under other formulations of customary international law where “due regard for the natural environment” necessitates that all feasible precautions be taken to avoid incidental environmental damage whether or not there is scientific certainty that it will occur.⁸ It can be argued that this provides leeway for states in that as long as the damage caused has a legitimate military purposes, it may be acceptable. Where there is a high level of awareness of environmental risks or sensitivities, however, the need for ‘due regard’ would be relatively onerous. As a consequence, the different terminology used in the *San Remo Manual* sends the same message, this time directed specifically at navies.

Whatever the specific requirements, it is clear that the potential for environmental damage in the Arctic is acute. The region is exceptionally fragile. It is home to unique and diverse plant and animal life which is susceptible to environmental changes. With the impact of global climate change being felt and ice-cover diminishing, this unspoiled territory is already under severe strain. Small disturbances in Arctic ecosystems can lead to long-lasting and even permanent damage.⁹ Low temperatures and limited sunlight also pose challenges for the Arctic in regenerating itself following these disturbances.

Special considerations therefore come into play for militaries fighting on sea or land in this region. Any increased military activity, even in peace-time, has the potential to disrupt the environment. Something as simple as additional naval traffic moving through the area could have an impact on vulnerable marine ecosystems. As well, the use of military vehicles contributes to the erosion of Arctic tundra, and the use of munitions poses further challenges.



Photo: US Department of Defense

Mushroom cloud from the first underwater nuclear test conducted by the United States at Bikini Atoll, 25 July 1946, to investigate the effects of nuclear weapons on naval ships. The test resulted in the radioactive contamination of the target ships in the vicinity of the explosion.

In times of armed conflict the potential for damage is multiplied. Explosions or the sinking of ships could leave chemicals and oil seeping into the ocean floor or carried away by currents, and pose a threat to aquatic life and mammals across a large area. It is recognized that pollutants tend to gather and persist in Arctic waters.¹⁰ Given their obligation to exercise ‘care’ in warfare to protect the environment as stipulated by API and the *San Remo Manual*, states will have difficulty avoiding environment disruptions in the Arctic where they can so easily occur.

More specifically, oil entering the environment as a result of military activities would be the most probable cause of ‘widespread, long-term and severe’ environmental damage. Not only would sunken ships lead to oil seepage but so would attacks on oil infrastructure that is being built up in the region with the discovery of untapped reserves. As previous oil spills in the region have shown, oil can disperse widely and linger in the environment for a long time.¹¹ It also poses significant harm to marine and coastal wildlife. The biggest concern, however, is the challenge of cleaning up these spills in remote and inhospitable areas. The nature of the area lengthens the time needed to respond to a spill allowing the damage to spread even further before it can be cleaned up. Interestingly, as part of *Operation Nanook 2010*, the Canadian Forces assisted with a simulated emergency response to a petrochemical leak. Thus, there is already clear recognition of the potential environmental effects of oil-related infrastructure in the region during peace-time. Such threats would be more significant in the context of armed conflict when the ability to respond would be impaired.

Some Arctic states are capable of deploying nuclear submarines to the region. Militaries would have to be aware when engaging in warfare with submarines of the potential for radioactive fallout in the Arctic seas. In any part of the world the environmental damage resulting from this would be significant, but in the unique context of the Arctic the potential for damage is even greater. States are aware of the risks – this is evident in their efforts to address Arctic-specific environmental issues outside of the context of armed conflict, such as their environmental assessment and research programs under the Arctic Council. If they were to utilize the traditional war-fighting actions, they would almost inevitably risk crossing the legally acceptable threshold for environmental damage despite how high it has been set.

Based on API, states must refrain from using methods of warfare that are either intended or expected to cause damage past a certain threshold. While the intention of a particular state will have to be addressed in each specific instance, the expectation of significant environmental effects in the Arctic is well known and should be anticipated. To put it another way, the obligation to exercise ‘due regard’ would pose serious restrictions on naval combat operations and would be difficult to reconcile with military necessity. It would be easy to characterize almost any action as wanton given the fragility of Arctic waters and related ecosystems. The nature of the environment itself and a high likelihood of damage therefore severely constrain the ability of militaries to conduct certain robust war-time operations in the Arctic.



Photo: US Navy

USS *Annapolis* (SSN 760) on the surface of the Arctic Ocean after breaking through three feet of ice during Ice Exercise 2009, 21 March 2009.

Also important to consider is that the protection of the natural environment during warfare is generally understood in relation to the civilian population. It is not just that the environment itself is harmed, but that the ability of human beings to inhabit or make use of it has been affected in some way. This interpretation is reinforced by Article 55 of API which states that damage to the natural environment is prohibited where it would “prejudice the health or survival of the population.” This in no way undermines the restrictions that would be placed on the methods of warfare in the Arctic where certain areas are completely isolated from human settlement. The region is inhabited by Inuit peoples, and although they may not be directly adjacent to a particular attack or environmental disaster, they can still be affected given the potential for widespread pollution or disruption. The lifestyle of the Inuit people is integrated with the surrounding environment, and any disruptions could jeopardise their livelihood and traditions. Contamination of fishing grounds, for example, would have a significant impact.

While in the domain of human rights rather than LOAC, states have also agreed to restrictions on military activities as part of the UN Declaration on the Rights of Indigenous Peoples.¹² (Canada recently reversed its initial opposition to the principles espoused in this document.) The declaration does not permit military activities on lands of indigenous peoples without a public interest justification, prior agreement or request, and states are required to consult with indigenous peoples prior to engaging in any military activities on their lands. This complements existing LOAC limitations on environmental destruction as it relates to Arctic inhabitants by placing further restrictions on the military activity of states, although it is unclear to what extent this provision applies in times of armed conflict (and indeed Canada has made its concerns about applicability known despite its recent endorsement of the declaration).

No doubt critics of this interpretation will suggest that the high threshold for environmental damage under API (and

slightly different formulation in the *San Remo Manual*) still provides flexibility for militaries, even in the Arctic region. The environmental effects of an isolated combat mission, they would argue, might be relevant but not necessarily ‘widespread, long-term and severe’ or ‘wanton’ in relation to the population not in the immediate vicinity. It should be borne in mind, however, that there are other aspects of LOAC that do not expressly refer to the environment but would provide indirect protection of it.

Targeting Considerations

LOAC delineates specific requirements for the selection of military targets. In doing so, it is expected that various factors will be taken into consideration primarily in relation to the harm caused to the civilian population. The environment is another factor relevant to target selection that is recognized, at least from a legal perspective, although it probably does not receive the attention that it should in practice. Environmental considerations in LOAC have been criticized for the difficulties inherent in practical application by commanders in the field. The law requires commanders to have significant knowledge of the potential environmental effects of their actions,¹³ and this indicates that environmental factors are important. The International Court of Justice confirmed this when it stated unequivocally in a 1996 decision that “[s]tates must take environmental considerations into account when assessing what is necessary and proportionate in the pursuit of legitimate military objectives.”¹⁴

This principle would have a significant bearing on how targets are assessed in the Arctic environment. Proportionality is recognized under API in relation to precautionary



Photo: Sgt Marco Comisso, Army News

Paul Atagoota of 1 Canadian Ranger Patrol Group demonstrates survival training to 32 Brigade soldiers in Resolute Bay during *Operation Nanook*, 12 August 2010.



the USCG cutter *Mississippi Responder* cleans up in the Gulf of Mexico after the Deepwater Horizon wellhead blowout 28 April 2010. Retired Coast Guard Admiral *Ad Allen*, the US incident commander for the oil spill, said “[t]raditional oil-spill containment equipment used elsewhere could fail in the Arctic.... You can’t boom an oil spill when the water’s frozen.”

measures that must be taken to minimize incidental loss of civilian life during an attack. Militaries must refrain from attacks where the harm to the civilian population of an attack, and indirectly the environment, exceeds the anticipated military advantage.¹⁵ Applying this in the Arctic leads to various complications. For example, attacking an oil installation would pose serious risks to an already fragile environment and could have long-term implications for civilian life. While disrupting oil supplies may be of military significance, is it likely to outweigh the harm caused?

Consider the potential environmental effects of the destruction of an average size vessel. There will be some adverse environmental consequences of pollutants entering the sea but, depending on the interpretation adopted, it may not reach the threshold of ‘widespread’ damage in API. That would not preclude the attack from being disproportionate in relation to the military objective. If the military utility of the vessel is minimal, the environmental effects on Arctic inhabitants resulting from its destruction could have greater weight. In this instance, Arctic-specific environmental considerations factored into standard targeting assessments may supersede other military factors. Of course, where the vessel is critical to an enemy’s war-fighting capabilities, the opposite would be true.

The point is that environmental factors are always present and in the Arctic will play a prominent role in targeting decisions. This places an additional burden on military commanders and their legal advisors. The assessment of what is proportionate is not easy, especially when scientific knowledge to make exact predictions may not be available. In a precarious Arctic environment, this is yet another important obligation imposed on militaries by LOAC. The challenges associated with meeting this obligation are not to be underestimated. A good deal of military action in the Arctic would be restricted in some way by factoring in serious environmental concerns.

Apart from proportionality, there are other relevant restrictions on targeting that have been linked to the environment, and these could also be important in the Arctic context. Civilian objects cannot be destroyed without justification on the basis of military necessity. It is recognized that this rule also protects the natural environment. More specifically, protections are in place for cultural property that constitutes “the cultural or spiritual heritage of peoples.”¹⁶ Environment can be one aspect of this protection; it is not hard to make the link between the heritage of Inuit peoples and certain aspects of the Arctic environment. Taken together, these rules and the way they have been interpreted to include environmental considerations reinforce limitations on environmental destruction in war-time.

It is worth bringing up what at first appears to be an anodyne provision of the *San Remo Manual*. The manual “encourages” conflicting parties “to agree that no hostile actions will be conducted in marine areas containing: (a) rare or fragile ecosystems; or (b) the habitat of depleted, threatened or endangered species or other forms of marine life.”¹⁷ Although this provision is not mandatory, such a preventative measure could clearly be in everyone’s best interest, particularly because criminal sanctions for individuals causing excessive environmental damage are now possible under the statute of the International Criminal Court (ICC).¹⁸

Conclusion

The Arctic is a unique region. States should continue their cooperative approach to addressing the challenges it poses, and UNCLOS provides a suitable legal framework for doing so. The military build-up in the region cannot be ignored, even if its stated purpose is patrols and constabulary operations. Arctic states are becoming more assertive in an area with potential that is only just beginning to be understood. Given the uncertainty about security in the region, greater proactive understanding of the implications of the law of armed conflict is needed.

The distinctive environment of the Arctic, including its extreme vulnerability to intrusion and pollution, is a critical factor in the application of LOAC and leads to restrictions on many war-fighting actions that might be contemplated elsewhere. There is great potential for ‘wide-

spread, long-term and severe’ environmental damage from the use of various methods of warfare in violation of API. Any environmental damage will have significant effects on Arctic inhabitants.

Clearly, LOAC imposes tremendous legal constraints for the Arctic that need to be considered. This article is intended to provide a starting point. While the Canadian Navy is well trained and experienced in the application of LOAC generally, there needs to be greater awareness of Arctic-specific concerns. 🍷

Notes

1. Government of Canada, “Statement on Canada’s Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada’s Northern Strategy Abroad,” no date given, available at www.international.gc.ca/polar-polaire/assets/pdfs/CAFP_booklet-PECA_livret-eng.pdf.
2. Protocol I Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflict, 12 December 1977, 1125 U.N.T.S. 3, 16 I.L.M. 1391, Article 35(3) (Henceforth API).
3. *Ibid.*, Article 55.
4. Karen Hulme, *War Torn Environment: Interpreting the Legal & Reshould* (Leiden: Martinus Nijhoff, 2004), pp. 89-95.
5. Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law*, Vol. 1 (Cambridge: Cambridge University Press, 2005), Rule 45 (Henceforth ICRC Study); and Yoram Dinstein, *Conduct of Hostilities under the Law of International Armed Conflict* (Cambridge: Cambridge University Press, 2010), p. 205.
6. Office of the Judge Advocate General, Department of National Defence, “Law of Armed Conflict at the Operational and Tactical Levels,” Ottawa, 2001, p. 53.
7. *San Remo Manual on International Law Applicable to Armed Conflict at Sea*, 12 June 1994, Article 44, available at www.icrc.org/eng/resources/documents/misc/57jmst.htm.
8. ICRC Study, Rule 44.
9. For a discussion of this see, “Arctic Ecosystems Being Nibbled Away,” ScienceDaily, 25 July 2001, available at www.sciencedaily.com/releases/2001/07/010723101549.htm.
10. Arctic Council, “Arctic Marine Strategic Plan,” 24 November 2004, p. 5, available at www.pame.is/images/stories/AMSP_files/AMSP-Nov-2004.pdf.
11. See for example “Eco-risks Loom as Arctic Oil Activity Grows,” Reuters online, 21 January 2008, available at www.reuters.com/article/idUSL2131253920080122.
12. United Nations, “Declaration on the Rights of Indigenous Peoples,” 13 September 2007, UN Doc. A/RES/61/295, Article 30.
13. William H. Wright, “Naval Warfare and the Environment,” in Richard Grunawalt, John E. King and Ronald S. McClain (eds), *Protection of the Environment During Armed Conflict*, International Law Studies Series, Vol. 69, Naval War College, 1996.
14. “Legality of the Threat or Use of Nuclear Weapons,” Advisory Opinion, [1996] I.C.J. Rep. 226 at 242.
15. API, Article 57.
16. International Committee of the Red Cross, Resource Centre, “Guidelines for Military Manuals and Instructions on the Protection of the Environment in Times of Armed Conflict,” 1996, available at www.icrc.org/eng/resources/documents/misc/57jn38.htm.
17. *San Remo Manual*, Article 11.
18. Rome Statute of the International Criminal Court, 17 July 1998, 2187 U.N.T.S. 3, Article 8(2)(b)(iv). The prohibition is against “[i]ntentionally launching an attack in the knowledge that such an attack will cause ... widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.”

Photo: Cpl Shilo Adamson, Combat Camera



An Inuit Inukshuk overlooks a bivouac on Oopik Island, near Canadian Forces Station Alert during *Operation Nunaliivut 10*, 24 April 2010.

Dr. Christopher Waters is Associate Dean of the Faculty of Law, University of Windsor. Ashley Barnes is a third year J.D. student at the Faculty of Law, University of Windsor.