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Neil McCormick

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A MEAN AND GREEN FIGHTING MACHINE: WARTIME ENVIRONMENTAL ASSESSMENTS AND THE CANADIAN FORCES

NEIL MCCORMICK[†]

In the absence of comprehensive international conventions addressing environmental harms caused by war, existing Canadian law may provide the appropriate framework to reduce the environmental impact caused by the activities of Canada's military. In particular, the Canadian Environmental Assessment Act and the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals are two existing mechanisms that can be used to help minimize the environmental harms that may result from Canadian Forces operations.

"If trees could speak they would cry out, that since they are not the cause of war, it is wrong for them to bear its penalties."

—Hugo Grotius, *De Jure Belle Ac Pacis*, 1646¹

INTRODUCTION

In war, the environment is often both a casualty and an instrument of combat. Military history is littered with examples, which to name a few, include: Roman legions salting the fields of the Carthaginians in the Third Punic War; the flooding of Dutch fields during the Thirty Years War; the decimation of the American buffalo in the defeat of the Sioux²; the "scorched earth" tactics of Germany and the Soviet Union in World War II; the use of defoliants in the Vietnam War³; and the lighting of Kuwaiti oil fields in the First Gulf War. The extensive environmental damage of the First Gulf War is largely credited with spurring the modern debate on the subject of minimizing the environmental impact of wars.⁴ Yet, the subject is by no means new to discussions surrounding the prosecution of wars. In the Bible, Deuteronomy's instructions for laying siege to a city include provisions against destroying fruit trees.⁵ "Similarly, the Qu'ran enjoins Muslims from harming trees in a Jihad...in fact, Muslim armies included an officer who had the specific duty to ensure that

[†] Neil McCormick is a 3rd year LL.B. candidate at Dalhousie Law School. He would like to thank Professor Meinhard Doelle for his insights into this paper.

¹ Hugo Grotius, *De Jure Belle Ac Pacis* (1646), cited in Meredith DuBarry Huston, "Wartime Environmental Damages: Financing the Cleanup" (2002) 23 U. Pa. Int'l Econ. L. 899.

² Jeffery A. McNeely, "War and Biodiversity: An Assessment of Impacts" in Jay Austin et al., ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 353 at 359.

³ Jay Austin & Carl E. Bruch, "Introduction" in Jay Austin et al., ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 1 at 1.

⁴ *Ibid.* at 3.

⁵ Carl E. Bruch, "Introduction: General Principles" in Jay Austin et al., ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 13 at 13.

'trees are not burnt nor unjustifiably pulled out'.⁶ These ideas survive in part today, subsumed in the international law principle of military necessity.⁷

Modern concerns and realities, however, have given the discussion a new life and urgency. First, there is the increasingly distressed state of the global biosphere, already strained from peacetime trends, such as economic development and population growth. Second, it is clear from the recent conflicts in Kosovo, Afghanistan, and Iraq that "society has by no means rejected the use of force with deadly, destructive, and disruptive intent for the ultimate resolution of conflicts."⁸ Third, "some military activities have the potential for being environmentally disruptive at levels disproportionately high in relation to their contribution to overall human activities, thus requiring particular attention."⁹ Fourth, environmental degradation caused by armed conflict can precipitate further armed conflict, creating a feedback loop.¹⁰ Therefore, it is now clear that "...efforts to protect the environment cannot be restricted to the civil sector of society, but must as well embrace the military sector, during both peacetime and wartime."¹¹

International law on the subject has moved beyond military necessity but remains limited.¹² To address the current shortcomings, some commentators have called for the creation of a Fifth Geneva Convention, a so-called "Ecocide Convention".¹³ Such an effort, however, appears as impractical as it is unlikely "and may even cut against the grain of humanitarian concerns...if environmental protection results in exposing people" to injury or death.¹⁴

Rather than focusing on achieving a new international consensus, some commentators are calling for domestic action. The application of domestic environmental legislation to military activities in combat could provide an effective way forward.¹⁵ The relatively recent advisory opinion of the International Court of Justice on the *Legality of the Threat or Use of Nuclear Weapons* urges the assessment of environmental factors in the making of strategic targeting decisions. Applying existing environmental assessment legislation to the activities and battle plans of the Canadian Forces could provide an effective Canadian response in this regard. Recent advances in military technologies and fighting doctrine do not make the suggestion as far out or impractical as it may appear.¹⁶

To consider the question in depth, a framework for evaluation is required. Part I of

6 *Ibid.*

7 Tara Weinstein, "Prosecuting Attacks that Destroy the Environment: Environmental Crimes or Humanitarian Atrocities?" (2005) 17 *Geo. Int'l Envtl L. Rev.* 708.

8 Arthur H. Westing, "In Furtherance of Environmental Guidelines for Armed Forces During Peace and War" in Jay Austin et al., ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 171 at 181.

9 *Ibid.* at 171.

10 McNeeley, *supra* note 2 at 373.

11 Westing, *supra* note 8 at 181.

12 Richard Falk, "The Inadequacy of the Existing Legal Approach to Environmental Protection in Wartime" in Jay Austin et al., ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 137 at 150.

13 *Ibid.*

14 *Ibid.* at 140.

15 Browne C. Lewis, "It's a Small World After All: making the case for the extraterritorial application of the National Environmental Policy Act" (2003) 25 *Cardozo Law Review* 2143.

16 Michael Ignatieff, *The Virtual War: Kosovo and Beyond* (Toronto: Viking, 2000) at 197.

the discussion will begin with an exploration of the destructiveness of war to illustrate the need for change. Part II will consider the inadequacy of the existing international legal instruments. The inadequacies suggest domestic legislative action as a way forward. In Part III, Canadian environmental assessment legislation and legal instruments will be assessed with a view to their purposes and application. In particular, the application of the legislation to the Canadian Forces will be examined. It will become apparent that the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* ("Cabinet Directive") provides greatest potential utility with respect to conducting environmental assessments of wartime activities. Part IV will address policy considerations to determine whether it would be possible to extend the application of the Cabinet Directive to cover wartime activities. Lastly, Part V will offer the conclusion that the Cabinet Directive should be extended to wartime activities. The argument that follows generally avoids the issue of costs and instead assumes Canadians and the Canadian Forces are determined to mitigate and prevent, where possible, military-related environmental damages.

I. THE DESTRUCTIVENESS OF WAR ON THE ENVIRONMENT

Introduction

An examination of the destructiveness of modern warfare will begin by examining warfare in a general sense. The discussion will continue to consider the relatively recent conflicts in the First Gulf War and Kosovo, where the Canadian Forces were belligerents. The devastating impacts of modern war on the environment inflicted by Canada and its allies will become apparent.

Modern Warfare

Armed combat is an inherently destructive activity. Stephen Dycus, an American authority on the relationship between modern warfare and the environment, describes the nature of war as follows:

[In war,] [e]ach belligerent uses bullets, rockets, bombs, and perhaps chemical weapons in an effort to alter the environment of its enemy. Its purpose is to kill, disable, and terrorize the enemy's troops and to deprive them of hospitable places to hide, rest, eat, move, or launch an attack.¹⁷

Furthermore, developments in modern weaponry have increased the destructiveness of its antecedents from the first half of the twentieth century. Adding to the destructiveness, "[o]ver the years, the amount of ordnance expended for each enemy casualty has steadily increased from one conflict to the next."¹⁸ Moreover, unexploded ordnance – a legacy of all armed conflict – also poses a severe environmental hazard, as "a recent [United States] State Department report says that an estimated 85 to 90 million uncleared landmines worldwide may be 'the most toxic and widespread pollution facing mankind'."¹⁹ In addition, there is the damage that the construction of

17 Stephen Dycus, *National Defense and the Environment* (Hanover, NH: University Press of New England, 1996) at 136.

18 *Ibid.* at 137.

19 *Ibid.*

fortifications and the establishment of bivouacs entail.²⁰

Iraq & Kosovo Considered

Enumerating the possibilities of how the environment could come to harm in an armed conflict would be an exhaustive task. Instead, it is more useful to examine the environmental damage wrought by the Canadian Forces and their Coalition allies during the First Gulf War (1991) as well as the NATO campaign in Kosovo (1998). Excluding the damage caused by Iraqi forces, which was substantial, the Coalition forces in Iraq created an ecological nightmare. In the air, “[i]t is known that aircraft used in each of the 110,000 coalition air sorties purged their fuel tanks with halon, a fire retardant gas that destroys stratospheric ozone.”²¹ On the ground, the heavy traffic of armoured vehicles “severely damaged vegetation and the surface of the desert itself.”²² Adding to the damage, the desert in Iraq and Kuwait remains littered with unexploded ordnance and radioactive fallout from the use of depleted uranium munitions.²³ Moreover, behind the battle lines: military forces made large withdrawals from groundwater sources that some say are near exhaustion, and they left behind tons of solid waste – everything from used motor oil to packaging for ready-to-eat meals.²⁴ These damaging actions may have continuing consequences:

[p]roblems such as desertification...soil erosion, and water scarcity reduce food-growing potential, worsen health effects, decrease biodiversity, and diminish life-support capacity.²⁵

Any of these factors can increase the likelihood of further conflicts.

The conflict in Kosovo provides another example of the destructiveness of modern armed conflict. “NATO’s 78-day bombing campaign caused severe damage to certain areas particularly...the oil refinery, petrochemical, and fertilizer complex at Pancevo and the industrial facilities of Novi Sad.”²⁶ NATO forces also targeted civilian infrastructure, such as sewage treatment plants, “which has reportedly caused environmental damage not only in Yugoslavia, but also downstream in Romania and Bulgaria.”²⁷ As a result, the aftermath of the bombing campaign poses a threat to the “entire natural and human habitat of the entire Balkan region.”²⁸ The conduct of the war was not without its critics. Falk writes:

These tactics avoided more than unavoidable environmental side-effects of heavy bombing directed against an industrialized country. Instead, it is clear that NATO deliberately attacked environmentally sensitive targets despite the obvious prospect of serious pollution of regionally important interna-

20 Arthur Westing, “Protecting Natural Areas and the Military” (1992) 19 *Envtl. Conservation* 232.

21 Dycus, *supra* note 17 at 140.

22 Dycus, *supra* note 17 at 140.

23 The Canadian Forces did not use depleted uranium ordnance in the First Gulf War or in Kosovo. The Canadian Forces, “Depleted Uranium” (May 2000), online: Depleted Uranium - Background Information http://www.dnd.ca/health/information/med_vaccs/engraph/DU_Background_e.asp.

24 Dycus, *supra* note 17 at 140.

25 McNeely, *supra* note 2 at 355.

26 Bruch & Austin, *supra* note 3 at 4.

27 Bruch & Austin, *supra* note 3 at 4.

28 Falk, *supra* note 12 at 149.

tional waterways and other forms of environmental harm.²⁹

The Canadian Forces played an active role in the bombing campaign, flying eighteen CF-18 Hornet fighter planes at the height of NATO operations.³⁰

Comments

It is, therefore, clear that recent Canadian military operations have adversely affected the environment abroad. It is also clear that environmental considerations could be given more weight in decisions governing the prosecution of armed conflicts. With the potential to inflict so much damage, one question comes to the fore: what legal controls exist to protect or limit the damage to the environment at war?

II. INTERNATIONAL LEGAL INSTRUMENTS AND DOMESTIC SOLUTIONS

Introduction

International humanitarian law recognizes some protections for the environment during wartime, although the word "environment" was not mentioned in a law of war treaty until 1976. As it stands, the current wartime protections for the environment can be characterized as "[a] disparate body of principles, treaties, customary rules, and practices..."³¹ Upon a brief examination of related customary law, soft law, treaty law, and case law and enforcement mechanisms, it will become apparent that the current regime is inadequate to protect the environment during conflicts. Enforcement of the law will be addressed only in passing, since there are few laws to enforce as well as few institutions to enforce them. It will also become clear that any reforms are unlikely in the near future. The discussion will then focus on a central theme in the current international law regime, taking environmental considerations into account before commencing operations.

Customary Law

The customary law of war has a long and rich history. With respect to the protection of the environment, the principle of military necessity has the most relevance as it is the "fundamental idea underlying all humanitarian rules on methods and means of warfare."³² Military necessity can be defined as the principle:

...under which belligerents may only use that degree and kind of force not otherwise prohibited by the law of armed conflict, which is required for the partial or complete submission of the enemy with a minimum expenditure of time, life and physical resources.³³

29 *Ibid.* at 150.

30 Operation Echo (2005), online: Canadian Forces http://www.forces.gc.ca/site/operations/echo_e.asp.

31 Adam Roberts, "The Law of War and Environmental Damage" in Jay Austin *et al.*, ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 47 at 49.

32 Stefan Oeter, "Methods and Means of Combat" in Dieter Fleck *et al.*, ed., *The Handbook of Humanitarian Law in Armed Conflicts* (Oxford: Oxford University Press, 1995) 105 at 106.

33 Roberts, *supra* note 31 at 51.

At first blush, the principle appears solely concerned with limiting the potential excesses of armed conflict, which is a valid interpretation. This past century, however, the principle was also used successfully as a defence for war crimes with an environmental dimension at the Nuremberg Military Tribunal.³⁴ Today, there is speculation that the principle could be used to justify attacks against environmentally sensitive targets so long as the target is contributing to the enemy's war effort. One author describes the principle as "anything goes" since "almost any environmentally harmful initiative can be given a subjectively acceptable legal rationale, and this includes the massive oil spills and disastrous well fires caused by Iraq during the Gulf War."³⁵ Adding to the ineffectiveness of the control, it is also undecided whether the question of necessity should be scrutinized from an *ex-ante* or *ex-post* perspective. It is, therefore, clear that the principle of military necessity, taken on its own, has limited value in protecting the environment. Furthermore, there is also an absence of any kind of enforcement mechanism or standing body charged with its enforcement.

Soft Law

Unlike military necessity, soft law protections of the environment during armed conflicts are a relatively recent creation. Soft law is not legally binding, though it can be very influential in judicial decision-making. In addition, it can also lead to the development of new laws. Two relevant soft law conventions include the Declaration of the United Nations Conference on the Human Environment 1972 ("Stockholm Declaration") and the United Nations Conference on Environment and Development 1992 ("Rio Declaration"). The signatories of the conventions include the majority of the world's countries, such as Canada.

The Stockholm Declaration contains one principle which is expressly concerned with warfare. Principle 26 holds that, "Man and his environment must be spared the effects of nuclear weapons and all other means of mass destruction."³⁶ Principle 1 of the Stockholm Declaration also arguably limits the conduct of warfare. It holds that, "[humans] bear a solemn responsibility to protect the environment for future and present generations"³⁷ Therefore, principles of the Stockholm Declaration seek to limit the destructiveness of warfare. Yet, at present, the instrument appears to inform decision-making as opposed to forming the basis of it.

The Rio Declaration of 1992 also has a provision concerned with warfare. Principle 24 holds that, "warfare is inherently destructive of sustainable development. States shall therefore respect international law providing protection for the environment in times of armed conflict..."³⁸ Other relevant principles include the undertaking of environmental impact statements "for proposed activities that are likely to have a significant adverse effect on the environment"³⁹ as well as the "polluter pays" princi-

34 Weinstein, *supra* note 7 at 704. (The defence was successfully used during the Nuremberg Military Tribunal to absolve Colonel-General Lothar Rendulic, who was tried for scorched-earth tactics in Norway).

35 Falk, *supra* note 12 at 144.

36 *Stockholm Declaration of the UN Conference on the Human Environment*, prin. 26 UN Doc. A/CONF.48/14 (1972).

37 *Stockholm Declaration of the UN Conference on the Human Environment*, prin. 1 UN Doc. A/CONF.48/14 (1972).

38 *Rio Declaration on Environment and Development*, prin. 24, UN Doc. A/CONF.151/Rev.1 (1992).

39 *Ibid.* at prin. 17.

ple.⁴⁰ Again, these principles work to limit the destructiveness of warfare. Although they currently only inform decisions, they may one day become customary law.

Treaty Law

Treaty law on the subject of limiting the environmental damage of warfare is also a comparatively recent creation. Unlike soft law, however, it is legally binding on nations that have ratified the treaty. The environmental law of warfare was not specifically addressed until the 1976 UN Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification ("ENMOD")⁴¹. Prior to the Convention, some treaties were capable of offering protections to the environment during wartime, but only obliquely.⁴² To find an environmental meaning in the pre-1976 treaties, such as the 1868 St. Petersburg Declaration on explosive projectiles or the 1949 Geneva Convention IV, involves actively interpreting the texts. For example, taking the word "property" in article 147 of the 1949 Geneva Convention IV, which proscribes "the extensive destruction and appropriation of property", to encompass the atmosphere.⁴³ It is highly doubtful that such an interpretation would be adopted by most belligerents. As a result, treaty law prior to the 1976 ENMOD convention is of limited value in protecting the environment during wartime.

The ENMOD Convention was a reaction against the United States' use of defoliants and rain-making in the Vietnam War. "[The] accord deals essentially, not with damage to the environment, but with the uses of the forces of the environment as weapons."⁴⁴ The prohibited weapons include: "earthquakes, tsunamis...changes in weather patterns, ocean currents...melting the polar icecaps...activating a quiescent volcano."⁴⁵ One commentator believes these prohibitions would be more useful in an "adventure movie"⁴⁶ and another argues they "are probably beyond the capabilities of modern military science."⁴⁷ An additional shortcoming of the ENMOD Convention concerns the interpretation of Article I, which prohibits environmental damage which has "widespread, long-lasting or severe effects."⁴⁸ The meaning of the phrase was canvassed by the Committee on Disarmament at Geneva, which determined that "widespread", among the other terms, meant "several hundred square kilometres".⁴⁹ As a result, the treaty has an even more narrow application than a belligerent might envision at first. Therefore, the ENMOD Convention, while a milestone in its explicit protection of the environment, has limited relevance to more conventional combat operations. It should be noted that Canada has ratified the Convention, although a number of countries such as the United States and France, have not.

40 *Ibid.* at prin. 16.

41 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, G.A.Res. 72, UN GAOR, 31st Sess., Supp. No. 39, at 36, U.N.Doc. A/31/39 (1977) (entered into force, Oct 5, 1978).

42 Roberts, *supra* note 31 at 50.

43 Roberts, *supra* note 31 at 57.

44 Roberts, *supra* note 31 at 58.

45 Bruch, *supra* note 5 at 23.

46 Bruch, *supra* note 5 at 23.

47 Dycus, *supra* note 17 at 141.

48 Roberts, *supra* note 31 at 58.

49 Oeter, *supra* note 32 at 118.

The 1977 Additional Protocol I to the 1949 Geneva Convention ("Protocol")⁵⁰ was signed soon after the ENMOD Convention. Article 35(3) of the Protocol prohibits using "methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment." Unlike the ENMOD Convention, however, the similarly worded provision extends to conventional weapons. Yet, there was no conference to clarify the meanings of the terms in the Article. Consequently, the vagueness of the terms makes the "import of this article unclear."⁵¹ Moreover, Article 56 of the Protocol, which protects "works and installations containing dangerous forces", is qualified by a second paragraph paraphrased by Roberts: "Where hydro-electric generating stations or nuclear power plants are contributing to a grid in regular, significant, and direct support of military operations, militarily necessary attacks against them are not prohibited."⁵² The second paragraph, in effect, undermines the effectiveness of the provision significantly by codifying the principle of military necessity. Dycus cites a critic who "dismisses the protocol as a 'vague, impractical, and unworkable...effort to prevent all collateral ecological damage."⁵³ It would be difficult to refute the critic's position.

The 1980 UN Convention on Certain Conventional Weapons in 1980, which resulted in Protocol III to the UN Weapons Convention, is not directly concerned with the protection of the environment during war. Rather, the Convention prohibits the use of incendiary weapons in a number of contexts, such as densely populated areas. One of the contexts, however, concerns the environment. Article 2, paragraph 4 of the Protocol III asserts:

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.⁵⁴

Therefore, if the destruction of a forest is the military objective, it appears as though an incendiary attack on the forest would not be prohibited. As a result, one commentator refers to the article as "a notably weak formulation."⁵⁵ Therefore, the Convention is not particularly useful for protecting the environment in wartime. Moreover, it is unclear how it would be enforced.

The Rome Statute of the International Criminal Court ("ICC") in 1998, which created the ICC, contains the most enforceable provisions with respect to protecting the environment at war. For instance, article 8(2)(b)(iv) criminalizes:

...intentionally 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

50 *Protocol Additional to the Geneva Conventions of August 12, 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol 1)*, June 8, 1977, 16 I.L.M 1391 (entered into force 7 December 1978).

51 Bruch, *supra* note 5 at 21.

52 Roberts, *supra* note 31 at 61.

53 Dycus, *supra* note 17 at 141.

54 *Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III)*, 10 October 1980, 1342 U.N.T.S. 171, Art. 2., reprinted in 19 I.L.M. 1534.

55 Roberts, *supra* note 31 at 64.

overall military advantage anticipated.⁵⁶

Article 75 on reparations to victims is also relevant. The Article grants the Court the authority to “establish principles relating to reparations to, or in respect of, victims, including restitution, compensation and rehabilitation.”⁵⁷ The Statute, therefore, covers both the crime and punishment of war-related international environmental crimes. Interestingly, the text of article 8(2)(b)(iv) seems to suggest that some kind of forecasting of an operational decision’s outcome on the environment could be required. Moreover, it is unclear whether the defence of military necessity would be available to a party accused under this provision. Article 75 is also interesting since the Court could compel a belligerent to remediate some environmental damages from a conflict. Like article 8(2)(b)(iv), article 75 seems to suggest that bringing environmental considerations into the planning stage of an operation could be beneficial from a liability standpoint. The ICC has not heard any case regarding environmental crimes to-date. The institution, nevertheless, has the greatest potential to enforce the terms of the Rome Statute as most countries, save the United States, are within its jurisdiction.

Other treaties with a link to environmental protection during war include: the 1959 Antarctic Treaty, which prohibits military activities in the region; the 1963 Partial Nuclear Test Ban Treaty; the 1972 Biological Weapons Convention; 1993 Chemical Weapons Convention; and the 1997 Ottawa Anti-Personnel Mine Convention.⁵⁸ The treaties were not explored in the discussion since their terms do not explicitly relate to the protection of the environment. Moreover, their effect on the Canadian Forces’ prosecution of a war is not especially significant, with the exception of anti-personnel mines, which the Canadian Forces stockpiled for use until 1997.

Case Law

With respect to case law, International Court of Justice (ICJ) has not made any decisions based on the environmental crime provisions. The ICJ’s 1996 advisory opinion on the *Legality of the Threat or Use of Nuclear Weapons* is, however, worth examining. In the decision, the Court held that, “States must take environmental considerations into account when assessing what is necessary...in the pursuit of legitimate military objectives.”⁵⁹ The decision explicitly brings environmental considerations into the customary law of military necessity, though whether states choose to abide by this interpretation is another matter. The decision also points towards some kind of assessment of objectives before commencing operations. With such an ostensibly progressive outlook, it is a shame that the Court did not hear the former Yugoslavia’s 1998 claim against ten NATO countries for breaches of the Additional Protocol and other environmental damages. “The Court held that it lacked *prima facie* jurisdiction against the...countries” since the NATO countries did not consent to the proceedings.⁶⁰

56 1998 *Statute of the International Criminal Court*, UN Doc. A/CONF.183/9 (July 17, 1998), Art. 8, para. 2(b)(iv).

57 *Ibid.* at Art. 75.

58 Roberts, *supra* note 31 at 72.

59 *Advisory Opinion on Legality of the Threat of Use of Nuclear Weapons*, Advisory Opinion, [1996] I.C.J. Rep. 226 at para. 30.

60 Bruch, *supra* note 5 at 42.

Comments

It is clear from the examination of the existing international legal framework on the subject that it is ineffective in protecting the environment during wartime. For the most part, treaty law is not directed at the prevailing military practices that generate most of the environmental harm. Furthermore, of the few relevant treaty law provisions relating to the protection of the environment, many are qualified with exemptions. The customary law of necessity is still overly broad and its application remains undefined. Even if the law were more encompassing, enforcement mechanisms are lacking. Case law is still in its infancy and limited by consent-based jurisdiction with respect to the ICJ. Richard Falk claims the proof of the inadequacy of war-related environmental protections lies in NATO's bombing tactics in Kosovo. He writes:

the inadequacy...is evident in two ways: either the tactics relied upon were not prohibited, and existing legal standards are woefully insufficient to protect the environment; or the tactics were violations of international law, but the political atmosphere is such that no effort is likely to be made to impose legal accountability in some meaningful form.⁶¹

Either of Falk's explanations make a strong argument in favour of legal reform.

Reform, however, does not appear to be a pressing objective in the international community. Falk finds that, "any further weighting of this legal balance in favor of environmental protection would be politically futile and legally demoralizing, as it would not elicit necessary support from important governments, especially that of the United States."⁶² An international consensus would be elusive and could require a change in public opinion on a global scale, which is no small impediment as well. Falk also suggests that, realistically, the process could take decades to complete.⁶³ As such, the prospects for reform or Falk's proposed "ecocide convention" seem unlikely at present. Another alternative might be to reach an agreement with a more limited number of states, yet the prospects for reaching such an agreement is not canvassed by any of the literature. Therefore, the option will not be explored.

Consequently, to improve upon the existing international regime, some states may have to take unilateral steps forward through domestic legislative solutions. The question then becomes which direction to take. That is, what shortfalls of the international regime could be addressed domestically?

One central feature of the discussion surrounding the inadequacy of international legal instruments is the need to integrate environmental considerations into strategic decisions. This was seen in the examination of military necessity, which as a justification, could be reviewed from an *ex-ante* perspective. Namely, it asks what options were available to the commander before the particular decision was made. Furthermore, soft law from the Stockholm and Rio Declarations contain principles to bring environmental factors into decisions. This is also in line with the ICJ's advisory opinion in the *Legality of the Threat or Use of Nuclear Weapons*, which held

61 Falk, *supra* note 12 at 150.

62 *Ibid.* at 137.

63 *Ibid.* note 12 at 137.

that environmental assessments should factor into targeting decisions. Similarly, compliance with international conventions, such as the Additional Protocol and the Rome Statute, requires some element of foreseeability of harm. For example, would a choice to bombard an area or establish a bivouac create widespread, severe and long-lasting harm? The Rome Statute also suggests that belligerents may one day be liable to remediate environmental damage they create while prosecuting a war. Again, to prevent or minimize liability, environmental considerations should be taken into account. This is fundamentally the realm of environmental assessments. The patchwork of international environmental law of war, however, does not establish a procedure for conducting environmental assessments. To address this shortcoming, the Canadian Forces should apply Canadian environmental assessment law to their wartime activities.

III. CANADIAN ENVIRONMENTAL ASSESSMENT LEGISLATION

Introduction

The 2004 DND Environmental Assessment Manual, a directive binding on the Canadian Forces, lists three environmental assessment regimes applicable to the Canadian Forces.⁶⁴ First, the Canadian Forces have committed to meet and surpass the spirit and letter of the Canadian *Environmental Assessment Act* ("CEAA").⁶⁵ Second, the Canadian Forces are required to conform to the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* ("Cabinet Directive"). Third, the Canadian Forces have bound themselves to commit an environmental assessment as a means to show due diligence where the other two assessment regimes do not apply.

The discussion will begin by considering the environmental assessment regimes with a view to their purposes and applications. Their application to the Canadian Forces will also be examined. A hypothetical exercise of how these regimes might be applicable to the Canadian Forces will inform the discussion as well. It will become apparent that the Cabinet Directive, as a mechanism, is the best suited to performing environmental assessments of combat activities.

The Canadian *Environmental Assessment Act*

The purposes of the CEAA are listed in section 4 of the CEAA. Some of the purposes of the CEAA include: ensuring that environmental impacts are considered before actions are taken; encouraging actions that promote sustainable development, and providing opportunities for public input.⁶⁶ The preamble of the CEAA also provides that "the Government of Canada is committed to exercising leadership within Canada and internationally in anticipating and preventing the degradation

64 Canadian Forces: Finance and Corporate Services, "DND Environmental Assessment Manual DAOD 4003-2" (2004), online: Canadian Forces: Finance and Corporate Services http://www.admfincs.forces.gc.ca/admfincs/subjects/daod/4003/2_e.asp ["DND Environmental Assessment Manual"].

65 Canada, Auditor General, "Report of the Auditor General of Canada" (Ottawa: the Office of the Auditor General, April 2003) at 7.28.

66 *Canadian Environmental Assessment Act*, R.S.C. 1992, c.37, s. 4.

of environmental quality.”⁶⁷ Rather than mandating a particular result, therefore, the purposes of the CEAA identify the elements of a process, which is implemented with a view to exercising leadership in protecting the environment in Canada and abroad.

To examine the application of the CEAA to the Canadian Forces, the operation of the CEAA must first be canvassed. The operation of the CEAA is subject to a number of prerequisites. The prerequisites will be discussed in turn.⁶⁸

First, the proposed undertaking must satisfy one of the two prongs of the definition of “project” in section 2(1) of the CEAA. The first prong, section 2(1)(a), refers to undertakings in relation to a physical work, such as construction. There is no definition or case law defining physical works; however the CEAA states that physical works must be fixed and created by humans. Section 2(1)(a) therefore applies to activities surrounding the lifecycle of fixed things, such as the construction and decommissioning of buildings. The second prong, section 2(1)(b), refers to physical activities not in relation to a physical work. These activities, however, must be outlined in the *Inclusion List Regulations* of the CEAA to meet the definition in 2(1)(b). The *Governor in Council makes the Inclusion List Regulations*, pursuant to section 59(b) of the CEAA.

Second, if the proposed physical work or activity meets the definition of a project, then it must be determined whether the project is excluded from an environmental assessment on the basis that it is listed in the *Exclusion List Regulations*. Projects can also be excluded if they are carried out in response to a national emergency.⁶⁹

Third, a “federal authority” is needed to trigger the Act, pursuant to section 5(1) of the CEAA. A “federal authority” can be a federal Minister or any department of the federal government established by an Act of Parliament, such as the Department of National Defence. The federal authority triggers section 5 of the Act by acting as the proponent of the project in whole or in part, among other routes.⁷⁰ It should also be noted that project could be outside of Canada and still be subject to the provisions of the CEAA.⁷¹

Once an assessment is triggered, the federal authority who triggered the Act, known as the responsible authority, determines the scope of the assessment. Projects listed in the *Comprehensive Study List Regulations* are subject to a comprehensive study. Other projects, which are not listed in the *Comprehensive Study List Regulations*, are commonly subject to a screening. Screenings and comprehensive studies must take into account: the environmental impacts of the project; the significance of the effects; comments from the public; “measures that are technically and economically feasible that would mitigate any significant adverse environmental effects”; and any other relevant issues, such as the need for the project as well as alternatives to the project.⁷² Comprehensive studies go further and must consider: the purpose

67 *Ibid.* Preamble

68 Note: the *Law List* regulations will not be examined as they relating to issuing permits and licences and there is no permit or licensing scheme applicable to armed conflicts at present.

69 *Canadian Environmental Assessment Act*, *supra* note 66, s. 7(1)(c).

70 *Ibid.* note 66, s. 5(1)(a).

71 *Projects Outside of Canada Environmental Assessment Regulations*, S.O.R./96-491.

72 *Canadian Environmental Assessment Act*, R.S.C. 1992, c.37 ss. 16(1)(a)-(d).

of the project; technically and economically feasible alternatives ways of carrying out the project and their environmental effects; “the need for, and requirements of a follow-up program”; and “the capacity of natural resources that are likely to be significantly affected by the project to meet the needs of the present and future generations.”⁷³ Decisions are then made about how the project should proceed.

The Application of the CEAA to the Canadian Forces

The application of the CEAA to the Canadian Forces can now be considered. First, the Canadian Forces are exempt from prosecutions under the CEAA, although they have committed to exceed both the spirit and the letter of the CEAA. Second, the Canadian Forces qualify as a federal authority under the Department of National Defence for the purposes of triggering an assessment.⁷⁴ Third, no wartime activities are included on the *Inclusion List Regulations*, the *Exclusion List Regulations* or the *Comprehensive Study List Regulations*. Fourth, the Act applies to projects outside of Canada. Therefore, how the CEAA currently applies to the Canadian Forces during armed conflicts is determined by the definition of ‘project’.⁷⁵

In the defence context, the physical works or related undertakings caught by the CEAA generally relate to buildings. The Canadian Environmental Assessment Registry (“Registry”) is filled with screening reports relating to construction and demolition activities by the Canadian Forces. For example, the most recent environmental assessment conducted by the Canadian Forces in Afghanistan concerns the construction of new barracks near the Kandahar International Airport.⁷⁶

Interestingly, the Registry does not contain any environmental assessments for buildings destroyed by the Canadian Forces in the course of wartime operations. That is to say, before bombs are dropped or munitions fired, the Canadian Forces do not examine the environmental impacts of their actions according to the provisions of the CEAA. As a hypothetical example, a literal reading of the CEAA suggests the destruction of an Enemy building would be subject to an assessment under the CEAA. First, the Act undoubtedly applies abroad. Second, the demolition of buildings is clearly an undertaking relating to a physical work, so the undertaking would meet the definition of project. Third, the Canadian Forces would qualify as the proponent of the project as they would undertake the demolition. Considerations of who owns or controls the building need not affect the Forces’ status as proponent. Fourth, the *Exclusion List Regulations* bar environmental assessments for some demolitions. Yet assessments must still be carried out if the building is within thirty metres of another building or a watercourse.⁷⁷ Although this is a hypothetical example, it appears as though there would be situations where environmental assessments should be conducted before buildings are destroyed. NATO’s bombing

⁷³ *Ibid.*

⁷⁴ *Financial Administration Act*, R.S.C. 1985, c. F-11, Sch. 1, s. 2.

⁷⁵ The national emergency exemption is not relevant to the discussion since a national emergency was not declared in response to Canada’s entry into the First Gulf War, the campaign in Kosovo and more recently, the conflict in Afghanistan.

⁷⁶ Task Force Engineer Office Kandahar Airfield, “Assessment on the Construction of Accommodation Buildings for Canadian Contingent and General Camp Set-up at the Kandahar Airfield (KAF), Afghanistan” (Kandahar: Task Force Engineer Office Kandahar Airfield, 2006), online: CEAR - Environmental Assessment Home Page http://www.ceaa.gc.ca/050/Viewer_e.cfm?SrchPg=1&CEAR_ID=17361.

⁷⁷ *Exclusion List Regulations*, SOR/94-639, s. 16.

of sewage treatment plants in the former Yugoslavia is a relevant example.

The most reasonable explanation for the discrepancy lies in the fact that the demolition occurred in combat. Yet combat is not an excluded ground under the CEAA or its regulations. Whatever the explanation, it would be difficult to maintain that the Canadian Forces have been surpassing the spirit and letter of the CEAA in this respect.

The Cabinet Directive

The Cabinet Directive is concerned with environmental assessments of policies, plans, and programs, which are not covered by the CEAA. The Privy Council Office updated and implemented the Cabinet Directive in 2004. The primary purpose of the Cabinet Directive is to integrate:

...sustainable development in [the Government of Canada's] plans, policies and programs...which requires that decision-makers have good information and advice on the potential environmental, social, and economic impacts of proposed initiatives.⁷⁸

The environmental assessment of policies, plans, and programs is called a Strategic Environmental Assessment (SEA). Therefore, in some respects, the Cabinet Directive is complimentary to the CEAA.

The application of the Cabinet Directive is confined to the departments and agencies of the federal government, including the Department of National Defence. The Directive applies to a policy, plan or program when two criteria are met: "the proposal is submitted to an individual minister or Cabinet for approval; and [second, when the] implementation of the proposal may result in important environmental effects, either positive or negative."⁷⁹ The department or agency responsible for the proposed policies, plans, and programs conducts the SEA.

Yet the manner in which each department or agency conducts the SEA is not necessarily uniform. Each department and agency has discretion in determining the methodology of their assessments, as the directive states: "the guidelines presented in this document are advisory, not prescriptive."⁸⁰ The Cabinet Directive recommends conducting a preliminary scan to identify potential important environmental effects. The environmental effects should then be analyzed with a view to determining: "the scope and nature of the potential effects"; "the environmental effects of alternatives"; "the need for mitigation"; "scope and nature of residual effects"; "follow-up"; and "public and stakeholder concerns"⁸¹ although every consideration is optional. The environmental effects of the proposal can then be used to determine the level of effort that should be employed in carrying-out the SEA.

Rather than establishing a registry like the CEAA, the Cabinet Directive mandates the reporting of the SEA. "departments and agencies shall prepare a public state-

78 Canada, Privy Council Office, "Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals" (Ottawa: Privy Council Office, 2004) at 1. ["Cabinet Directive"].

79 *Ibid.* at 1.

80 *Ibid.* at 3.

81 *Ibid.* at 6.

ment of environmental effects when a detailed assessment of environmental effects has been conducted through a strategic environmental assessment."⁸² The departments and agencies are free, however, to determine the content and extent of the public statement.

The Application of the Cabinet Directive to the Canadian Forces

The 2004 DND Environmental Assessment Manual makes the Department's position clear on how the Directive applies. It states: "The Cabinet Directive does not provide for a methodology for conducting an environmental assessment of a policy, plan or program proposal."⁸³ The document goes on to state that the environmental assessments should be integrated with existing mechanisms that apply to such proposals.⁸⁴ The procedure for implementing the Cabinet Directive, therefore, could be more specific since it is unclear what the 'existing mechanisms' entail.

Part of the uncertainty surrounding the application of the Cabinet Directive to the Canadian Forces is the absence of definitions. For instance, the Cabinet Directive does not define the terms 'policy', 'plan' or 'program'.⁸⁵ In this light, battle plans could very well be subject to an environmental assessment under the Directive from a plain meaning of the term 'plan'. First, the decision to send troops into combat is made by Prime Minister and Cabinet by parliamentary convention.⁸⁶ Presumably, the decision would also encompass a determination as to how to deploy the Canadian Forces, which could reasonably take the form of a battle plan. A battle plan, therefore, appears to meet the first prerequisite to trigger the Cabinet Directive: that the plan be submitted to a minister or the Cabinet for approval. Second, battle plans also appear to meet the second prerequisite to trigger the SEA: that the implementation of the proposal may result in important environmental effects. It has already been demonstrated that wars have many significant environmental effects.

Yet the Canadian Forces do not conduct SEAs of battle plans.⁸⁷ Potential explanations come-up short. The Canadian Forces are exempt from conducting an SEA if they are "responding to a clear and immediate emergency and time is insufficient to undertake an EA."⁸⁸ Similarly, the Forces would also be exempt if the "matter is of such urgency that the normal process of Cabinet consideration is shortened."⁸⁹ Nevertheless, battle plans are often "drawn-up well in advance of the need to execute them, leaving ample time to assess local conditions and avoid unnecessary environmental destruction."⁹⁰ Therefore, the reasons surrounding the absence of SEAs for battle plans is uncertain.

82 *Ibid.* at 7.

83 DND Environmental Assessment Manual, *supra* note 65 at 1.

84 *Ibid.*

85 Cabinet Directive, *supra* note 81 at 10.

86 John Ibbitson, "Harper should allow a vote on deployment" *The Globe and Mail* (March 15 2006) A7. ("Back in 1939, Prime Minister Mackenzie King sought and obtained the consent of the House of Commons before Canada declared war on Germany. Unless the future...takes a horribly wrong turn...Canada will never again go to war against another country. Canadian governments have placed troops in harm's way... but none of these commitments involved a formal declaration of war.")

87 R H. Burnford, *D Env S 3(c) to Neil McCormick* (March 15 2006), Ottawa, Department of National Defence (Document available from author and editors upon request).

88 Cabinet Directive, *supra* note 81 at 4.

89 Cabinet Directive, *supra* note 81 at 4.

90 Dycus, *supra* note 17 at 146.

Due Diligence

Lastly, the Canadian Forces are subject to an internal directive which compels them to perform their actions with due diligence if the action is not caught by a legal requirement to perform an assessment.⁹¹ The 2004 DND Environmental Assessment Manual states: "The format of an EA in the exercise of due diligence is more flexible than that required by the CEAA, however, the EA should be appropriately documented."⁹² The Manual then references another manual, (A-EN-007-000/FP-001, *DND Environmental Assessment Manual*), for instructions on how to conduct a due diligence-related environmental assessment. A copy of this manual could not be obtained.

Comments

Evaluating the strengths and weaknesses of the Cabinet Directive and the CEAA reveals that the Cabinet Directive has the greatest potential to be used as an assessment regime in combat. There is no doubt that the CEAA would apply more frequently over the course of a conflict. That is to say, several environmental assessments could be required for a single bombing sortie as the destruction of physical works could trigger the CEAA. The scoping provisions of the CEAA, however, have been interpreted narrowly by the courts.⁹³ If the Canadian forces were to abide by these interpretations, the series of environmental assessments might make for a myopic view of the conflict. In contrast, the Cabinet Directive would apply less frequently since ministerial or cabinet approval would not be required for every air sortie, for example. Yet, the assessment of the broader objectives contained in a battle plan would entail a wider scope. This would facilitate the search for alternatives and less environmentally adverse courses of action. Similarly, planners would be better able to determine the cumulative effects of the conflict as whole under the Cabinet Directive. Practically, it could also be more difficult to conduct a series of environmental assessments under the CEAA and incorporate the decisions into a battle plan than to conduct an assessment of the battle plan itself.

These findings do not settle the debate, however. Both regimes have provisions to involve the public in the assessment process. In the context of an armed conflict, this is problematic. It seems unreasonable to involve the 'local' public in a conflict as they could be hostile and in any case, a consultation behind enemy lines would be difficult. Similarly, it makes little sense to involve the Canadian public in a far away conflict.

In this light, the flexibility of the Cabinet Directive would be beneficial as the Canadian Forces could simply opt out of consulting the public. In contrast, public consultations go to the core of the CEAA: not only are they mandated under the CEAA for all levels of environmental assessment but they also form one of the Act's primary purposes. The Governor in Council could make a regulation, pursuant to section 59(i) of the CEAA that would exempt the Canadian Forces from involving the public on the grounds of national security. Yet, this would involve active legisla-

91 *DND Environmental Assessment Manual*, *supra* note 65 at 1.

92 *DND Environmental Assessment Manual*, *supra* note 65 at 1.

93 *Prairie Acid Rain Coalition v. Canada (Minister of Fisheries & Oceans)* [2004] CarswellNat 3310 (F.C.) (eC).

tive intervention and it would go against the core of the CEAA.

Moreover, the same is true for the disclosure requirements of both regimes. Under the Cabinet Directive, disclosure to the public is required only 'after' an environmental assessment is conducted. In a conflict, this could mean the environmental assessment is disclosed after the termination of hostilities. In contrast, the CEAA's disclosure requirements could compromise the security of a particular operation, since aspects of the operation would be available for download on the Registry before the operation. Again, the disclosure requirements of the CEAA could be changed by the Governor in Council, pursuant to section 59(i), yet this would require active intervention.

All things being equal, the two regimes have a place in assessing the environmental consequences of armed combat since in some respects they are complimentary. As it stands, however, the Cabinet Directive appears more suited to the task. The broader and more practical approach of the Cabinet Directive seems more appropriate for combat. In addition, the Cabinet Directive would not have to be altered.

IV. WOULD IT BE POSSIBLE TO EXTEND THE REGIME?

The discussion now turns to whether it would be possible to extend the Cabinet Directive to cover military activities during wartime. That is, are there any policy considerations that would militate against applying the Cabinet Directive more fully? An examination of policy issues surrounding the compatibility of environmental assessments and the functioning of modern armed forces will reveal that the two are largely compatible. Lessons from the conflict in Kosovo will show what compliance with the legislation might resemble.

Policy Considerations

Are legal limits on environmental destruction tolerable in the context of war since the fate of the nation could be hanging in the balance? In this light, it appears as though a commander should be more concerned with vanquishing an enemy than conducting an environmental assessment. This may very well be true, but the issue is often more complicated than a choice between seemingly mutually exclusive courses of action. For example, some advocates believe "that the natural environment is itself a national interest we would fight to protect."⁹⁴ From that perspective, an environmental assessment could be valuable in determining how to win a battle and not lose the country.

Moreover, there is often time to conduct an environmental assessment of a proposed wartime activity. Dycus writes, "fortunately, much that happens during a war is determined far in advance, from planning...for combat, to the design of weapons."⁹⁵ For example, "the general operation plan for Operation Desert Shield was based on a draft prepared a month before Iraq invaded Kuwait."⁹⁶ As a result, there could be ample time to assess the impact of a particular course of action on the

94 Dycus, *supra* note 17 at 5.

95 Dycus, *supra* note 17 at 138.

96 Dycus, *supra* note 17 at 146.

local environment under the provisions of the Cabinet Directive. Therefore, choosing between an environmental assessment and the prosecution of a war is often a false choice. There are, no doubt, situations where this would not hold true and the existing legislation waives the requirements for environmental assessments in emergencies. Fully implementing the Cabinet Directive, therefore, would not unnecessarily delay wartime operations, since the instrument already has a 'safety valve' for emergencies.

A related argument holds that following the recommendations of an environmental assessment would undermine the effectiveness of the wartime operation. Again, the circumstances are important, since inefficiency is not an inherent part of environmental protection. Following an alternative course of action, determined by an environmental assessment, could very well undermine the effectiveness of an operation as critics may suggest. In one study, however, the US Army found the opposite.

A recent Army-financed study concluded that successful introduction of pollution prevention initiatives into combat...planning would actually enhance fighting strength by increasing each unit's self-sufficiency, reducing disease and non-battle injury, and reducing the unit's visibility to the enemy.⁹⁷

Therefore, the effectiveness of the armed forces may not be adversely affected by following a course of action that mitigates adverse effects. In fact, the results could be positive.

There is also a concern that assessments would result in a trade-off between people and the environment. Bruch writes: "how is he to trade off people - his own troops - for biodiversity?"⁹⁸ This is no small question. As it stands, war planners and commanders make valuation judgments on how many casualties they are prepared to accept and inflict when deciding to bomb a city or take a position, for example. "But in each of these areas, hard as they are, the issue is at least one of weighing the fate of human against human."⁹⁹ How is someone to equate a life with an ecosystem?

Environmental assessments under the Cabinet Directive, however, do not mandate a result. Rather, they mandate a process. One of history's foremost military thinkers, General Karl von Clausewitz, wrote: "We must face that war and its forms result from the ideas, emotions and conditions prevailing at the time."¹⁰⁰ As a mechanism, environmental assessments also reflect the values of society at the time. This is both a strength and weakness. There may well be a day in the future where the preservation of a particular ecosystem is valued more highly than human lives. Just as today, such a valuation would be highly unlikely. Nevertheless, by adhering to a framework for decision-making, which could encompass alternative courses of action, commanders would be in a better position to protect the environment than outside of the framework.

97 Dycus, *supra* note 17 at 149.

98 Bruch, *supra* note 5 at 19.

99 *Ibid.*

100 Michael Schmitt, "War and the Environment: Fault Lines in the Prescriptive Landscape" in Jay Austin et al., ed., *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: The Cambridge University Press, 2000) 87 at 87.

This speaks to criticisms of the Cabinet Directive, since what good is a framework for decision-making if the framework is ineffective. While proponents are afforded some flexibility in the conduct of assessments under the Cabinet Directive, this flexibility could be beneficial in the context of a war where decisions are subject to change. Moreover, by disclosing the assessment to the public for scrutiny, members of the public or non-governmental organizations could highlight deficiencies and press for a more stringent assessment if one were found lacking. It is also important to bear in mind that any extension of the environmental assessment regime would be an improvement over the current international regime. In this light, "every bit of ameliorative action is valuable in the increasingly dire environmental circumstances prevailing today."¹⁰¹

Lessons from Kosovo

The 1998 bombing campaign in Kosovo provides an example of how NATO countries effectively complied with their obligations under the Geneva Conventions. Throughout the campaign, military lawyers performed remote assessments of targets using computers and satellite imagery. The lawyers "would rule whether it was a justifiable military objective in legal terms and whether its value outweighed the potential costs in collateral damage."¹⁰² The decisions were also informed by advances in ballistics and precision-guided weaponry, which meant that the results of air strikes could be predicted quite accurately. Interestingly, military lawyers had no place in the targeting decisions of the Vietnam War. Yet, improvements in technology and concerns about the legitimacy of modern war efforts spurred their integration into "every phase of the air campaign [in Kosovo]."¹⁰³

It seems likely that an analogous scheme could be employed to conduct wartime environmental assessments. Militaries of the Western Hemisphere currently have the technology and expertise to discriminate between targets for humanitarian concerns. Therefore, with respect to environmental protection, the missing ingredient appears to be an appropriate framework for assessing decisions. The Cabinet Directive could fill this void. Lawyers need not be necessary.

Comments

An examination of several policy considerations reveals that environmental assessments could be extended to cover wartime operations. A survey of the potential criticisms of extending the Cabinet Directive reveals they are not strong enough to justify a wartime exemption. In fact, there are grounds to believe that the fully implementing the Cabinet Directive could result in operational efficiencies. Moreover, as the discussion on Kosovo makes clear, modern technology might enable environmental assessment to be conducted quickly and effectively by trained experts far removed from the conflict.

101 Falk, *supra* note 12 at 155.

102 Ignatieff, *supra* note 16 at 100.

103 Ignatieff, *supra* note 16 at 197.

CONCLUSION

In conclusion, extending the Cabinet Directive would provide a step forward in the protection of the environment in armed conflicts. Even with an assessment procedure in place, however, environmental destruction will continue to take place. Armed conflict is an inherently destructive activity. The only definitive means to stop the environmental havoc of combat is to put an end to combat altogether. At present, this is not a realistic solution. It then becomes clear that the wartime protection of the environment is a case where “the journey not the arrival matters”.¹⁰⁴

International law on the subject remains a porous patchwork of custom, treaties, and institutions, which offer only a limited effectiveness. At present, the custom of military necessity appears to be more useful as a defence than a limit. Furthermore, treaty law on the subject seems, for the most part, to occupy the periphery; failing to address prevailing combat activities and too ineffective to enforce change. Moreover, the current regime is unlikely to improve in the near future.

The way forward, therefore, appears to be domestic action. International law on the subject points towards the direction to take: incorporating environmental factors into operational decisions. Canada already has such a mechanism in the Cabinet Directive.

Extending the reach of the Cabinet Directive to cover the wartime activities of the Canadian Forces would not be problematic. In fact, a reasonable interpretation of the instrument reveals it probably applies already. In addition, an examination of various policy considerations shows it would be possible to extend the regime without making significant sacrifices. Indeed, improvements in operational efficiency may even result. The example of NATO's apparatus to improve compliance with the Geneva Protocols during the campaign in Kosovo also lends support to the argument.

Certainly, considering environmental factors before irrevocable decisions are made increases the possibility that adverse environmental effects will be mitigated. This step might in itself prevent future wars. Conducting assessments will also improve compliance with the existing regime. Regardless of the lack of effective enforcement mechanisms, Canada might wish to improve its compliance to increase the legitimacy of its war efforts. Citizens of the former Yugoslavia would likely be inclined to agree. Moreover, if future armed conflicts continue to entail *ex post* efforts to re-build the country, minimizing the ecological footprint of the conflict could also prove beneficial. While it is unlikely that the Enemy would play by the same rules, this is no reason not to abide by them. The Muslim armies of the past likely encountered the same issue and yet they made efforts to save trees. So too might the Canadian Forces of the future.