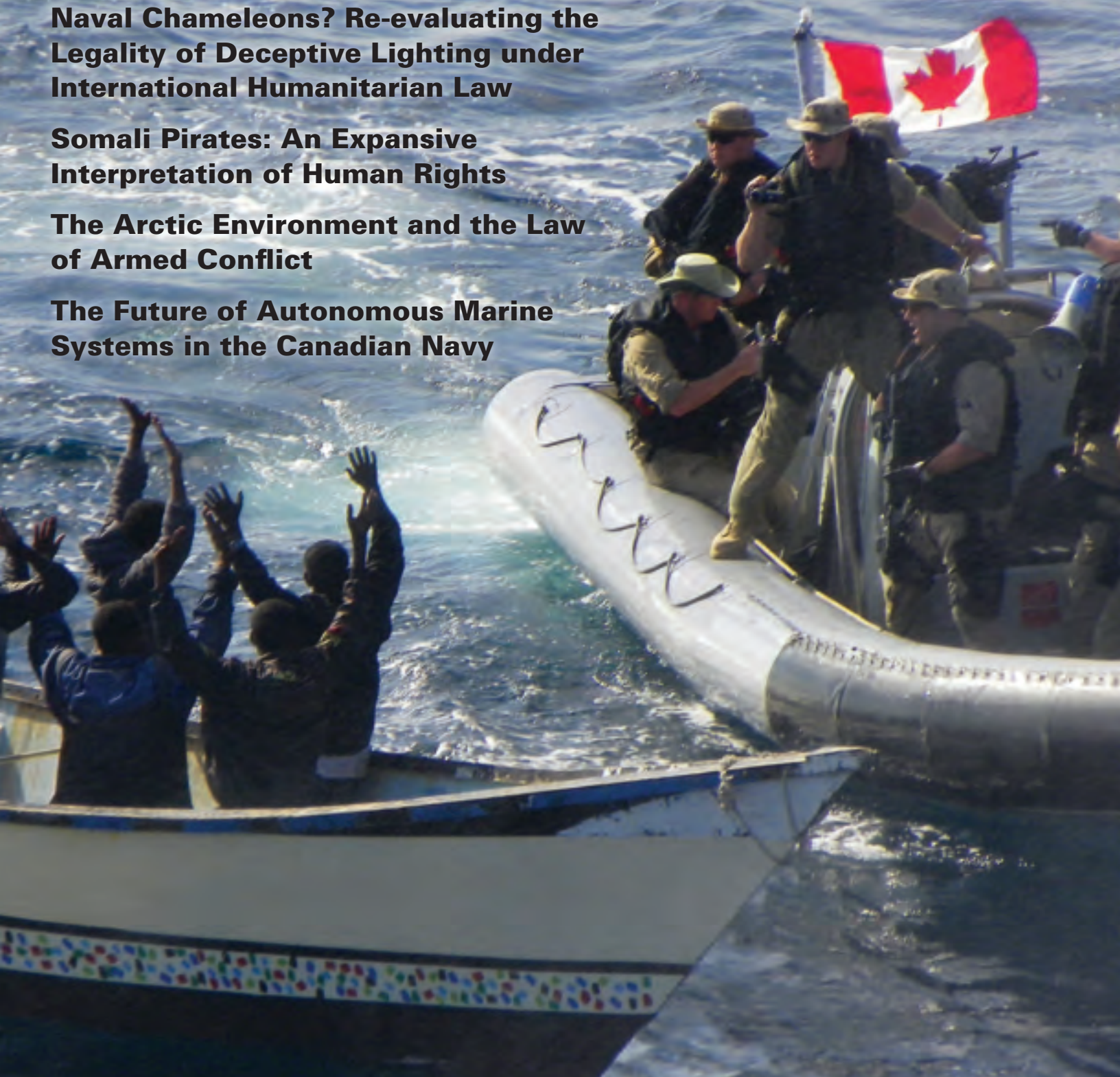# CANADIAN NAVAL REVIEW

International Humanitarian Law and Navies

Naval Chameleons? Re-evaluating the Legality of Deceptive Lighting under International Humanitarian Law

Somali Pirates: An Expansive Interpretation of Human Rights

The Arctic Environment and the Law of Armed Conflict

The Future of Autonomous Marine Systems in the Canadian Navy

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The *Canadian Naval Review* is published quarterly by the Centre for Foreign Policy Studies (CFPS) at Dalhousie University. It is a professional journal examining a wide range of maritime security issues from a Canadian perspective. In particular it focuses on strategic concepts, policies, operations, history and procurement of the Canadian Navy, plus national security in general and marine/ocean affairs. This initiative brings together members of the Canadian defence and academic communities and is a component of the CFPS's Maritime Security Program.

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*à e boarding party from HMCS **Fredericton** approaches a suspicious skiff in the Gulf of Aden during **Operation Saiph**, 28 January 2010.*

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Editorial:

The Light Blue Funnel Line: The 'Keeping the Peace' Role of Navies

".. Preserve us from the dangers of the sea, and from the violence of the enemy, that we may be a safeguard ... and a security for such as pass on the seas upon their lawful occasions...." Anyone of a certain age from a Commonwealth navy will recognize this line from the Naval Prayer, an almost daily recitation mumbled by generations of sailors, standing bareheaded on the deck of a warship under rain, sun or snow. Few of us gave much thought to its meaning, no matter that we could, and usually did, repeat it in our sleep. Our job, as naval personnel, on board warships was to 'keep the peace' at sea, and it may well be the oldest job of navies, even older that war fighting.

I am very pleased to write the Editorial for *CNR*'s first theme issue – international humanitarian law and naves. I will argue that 'keeping the peace' at sea (or 'peace-maintenance,' if you like consistency) is different from 'peace-making,' 'peace-building' or 'peacekeeping,' the type of activities which our land-based army equivalents undertake under United Nations (UN) and other banners. Peace-making or peace-enforcement, as UN Chapter VII operations are often called, are military operations to separate warring factions. Peacekeeping, or UN Chapter VI

Photo: US Navy/Released

*Boarding team from the French frigate **Guepratte** (F714) prepares to search a vessel in the Arabian Sea, 19 February 2008.*

operations, essentially involve the supervision of the factions, often maintaining a neutral or buffer zone between them; Gaza, Golan Heights and Cyprus readily come to mind. The important distinction is that war or hostilities are a triggering mechanism of the operation. First you have a fight, then you break it up.

Warships, and by implication the navies to which they belong, are quite different. While they do fight, and often take an active role in peacekeeping and peace-making, they have a more important, continuous and much older role: that of keeping the peace on the seas.

Ken Booth described the 'triangle' of roles of navies as military, diplomatic and constabulary. The constabulary role recognizes the fact that navies are on patrol throughout the world's oceans. Unlike soldiers who cannot be 'peacefully' present in another country without a specific mandate, warships may traverse the high seas, and even the territorial seas of other states in innocent passage without permission, and they do on a daily basis. The mere public presence of warship, visible and armed, like a uniformed police officer walking a beat, is an obvious deterrent to breaches of the peace, public or private.

The UN Convention on the Law of the Sea (UNCLOS) specifically recognizes the role of warships on the high seas in the suppression of piracy, slavery, unregistered status of ships and unauthorized radio broadcasting. There is also a right under customary international law to ascertain the identity and legitimacy of any non-warship that they encounter (*droit de visit*). Warships also have a general duty to render assistance to those in peril, both on the high seas and, somewhat contentiously, within the territorial seas of other states under the 'right of assistance entry.' Warships regularly respond to search and rescue, marine casualties and other safety of life at sea situations. To a land-based force, this would be peacekeeping or humanitarian assistance operations. To the navy, this is just business as usual. It is perhaps unexpected, but definitely not unanticipated.

This brings us to the current situation off the Horn of Africa, and the more widespread problem of failed or failing states. The lack of an effective government is a major factor in the current marine security crisis in the Gulf of Aden and Red Sea. The attacks on commercial shipping whether for terrorist or commercial reasons, and the taking of the ships and crews for ransom has led to a piracy crisis in the region.

Piracy is the only recognized situation which gives foreign navies a right to respond. Currently, individual warships as well as three multinational task forces – CTF 150, CTF 151 and EU NAVFOR Somalia – are patrolling the waters of the region and providing protection to commercial shipping, mostly in transit to the Gulf or Suez Canal. I will argue that they are there to protect their commercial shipping interests, not to provide any peace and security to the local population. Indeed, it has been argued that these forces are present, and especially EU NAVFOR, to provide protection for their own national ships, often engaged in illegal, unreported and unregulated fishing, dumping of toxic waste and other illegal activities within the Exclusive Economic Zones (EEZ) and territorial seas of the failed or failing states. True or not, this is what many believe in the region.

Photo: Corporal Peter Reed, Formation Imaging Services, MARLANT

HMCS *Fredericton* stands off a vessel in the Gulf of Aden after an inspection determined the vessel was not a threat to local merchant shipping, 8 December 2009.

There are ample examples around the world where the waters around failed or failing states, or even those states with minimal maritime surveillance and enforcement capabilities, have been subject to illegal fishing, dumping of toxic waste, drug, weapons and people smuggling, attacks on shipping, and other illegal activities. The solution is better surveillance and enforcement, but how is this to be achieved?

At this point, may I make a bold suggestion? If 'peacekeeping' was the greatest invention of Canadian diplomacy in the 20th century, perhaps 'keeping the peace at sea' could be the one for the 21st century. This is where the 'light blue funnel line' comes in.[1]

While peacekeeping or peace-making operations require a major international initiative in terms of UN Security

Photo: Internet - Alixandra Fazzina

Somalian migrants and refugees board a vessel to cross the Gulf of Aden in search of a better life.

Council resolutions, and the deployment of blue-helmet soldiers, warships may be, and often are, present adjacent to or in the coastal waters of the failed or failing states. It would be quite feasible for the UN Security Council to establish a maritime zone as being a potential security threat area, and to authorize UN member naval forces in the region to hoist the blue/UN flag and to undertake a robust role in identifying potentially illegal activity, both directed at international shipping and at the national interests of the coastal state. This would be especially critical where the coastal state is not capable of doing it for itself.

A typical blue funnel operation would involve the identification of the crisis area, and a request that any UN member warships in, or entering, the area undertake a more intensive surveillance, identify the presence of ships and activities and report these to a UN operational headquarters (UNHQ). Under the UN mandate, warships would be permitted a more intrusive right of visit than normal, including in the territorial sea. Warships might also be specifically assigned to the UNHQ for directed taskings, such as fisheries enforcement, or anti-smuggling. As the situation warrants, forceful enforcement powers could be authorized and implemented.

Unlike peacekeeping operations which occur after a situation has degenerated into a violent confrontation, 'keeping the peace at sea' operations would be intended to prevent the degeneration in the first place. This is what effective policing is all about. It is the constabulary role, and it is one which navies have been doing almost continuously for millennia. Giving navies a more precise set of tools, specific UN tools, can bring "a security for such as pass on the seas upon their lawful occasion" into the 21st century. ♨

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Notes
1. If you don't get the allusion to the light blue funnel line, speak to your nearest serving or retired naval officer for clarification.

Naval Chameleons? Re-evaluating the Legality of Deceptive Lighting under International Humanitarian Law

Lieutenant (N) Mike Madden

Introduction

In armed conflicts, there can be a temptation for commanders to seize upon any tactic that might yield positive results. Thus, combatants can and will often seek to gain tactical and strategic advantages through means of deception. However, international humanitarian law (IHL) only permits certain forms of trickery in armed conflicts – 'ruses' that fall short of being perfidy – while prohibiting treacherous perfidy. How, then, should combatants conduct themselves so as to avoid running afoul of the perfidy prohibitions in IHL?

This question will serve as the focus of the ensuing discussion on perfidy in IHL, particularly as the concept is applied to deceptive lighting of warships at sea. An analysis of conventional and customary IHL will demonstrate that many ambiguities and grey areas exist in the laws that purport to distinguish between permissible ruses of war and illegal acts of perfidy. An investigation into the practice of deceptively lighting naval vessels during armed conflicts will reveal that some more careful analysis of this practice might be necessary for Canadian (and other allied) naval commanders if they wish to avoid violating perfidy prohibitions. Any failure to appreciate the nuances and subtleties of the laws relating to perfidy as they apply at sea could lead to negative operational, strategic and public relations consequences for the offending forces and their parent states. In other words, the naval 'chameleons' that engage illegally in deceptive lighting practices could bring unfortunate and adverse operational repercussions upon themselves.

Conventional and Customary Law Relating to Perfidy

The contemporary prohibition against perfidy can be found in Additional Protocol I to the Geneva Conventions, which in Article 37(1) stipulates that "it is prohibited to kill, injure or capture an adversary by resort to perfidy." It defines perfidy as any "acts inviting the confidence of an adversary to lead him to believe that he is entitled to, or is obliged to accord, protection under the rules of international law applicable in armed conflict, with intent to betray that confidence."[1] More recently, Article 8(2)(b)(xi) of the Rome Statute of the International Criminal Court lists "killing or wounding treacherously individuals belonging to the hostile nation or army" as a "war crime."[2] Scholars seem to agree that, independent of any treaties, a prohibition against perfidy exists in customary international law. For instance, the San Remo Manual on International Law Applicable to Armed Conflicts at Sea, which purports to be a "contemporary restatement"[3] of the naval IHL based on state practice since the Second World War, stipulates that perfidy is prohibited.

Looking at how rules of customary and treaty-based international laws of armed conflict operate together with one another, it is important to recall two things: first, customary international law applies concurrently with treaty law (at least to the extent that they do not contradict one another); and second, customary international law is binding upon all states, "except for such states as have dissented from the start of that custom."[4] Thus, the content of Article 37 of the Additional Protocol would apply to all states as part of customary IHL regardless of whether states have ratified that treaty.

A distinction must be made, however, between forms of perfidy that are apparently *permissible*, forms that are merely *illegal* under IHL, and perfidy that constitutes *criminal conduct* amounting to a war crime. For instance, as noted, the Rome Statute recognizes that only "killing or wounding treacherously" constitutes a war crime. In other words, the perfidious *capturing* of an enemy is noncriminal, in spite of the fact that it is illegal under Article 37 of Additional Protocol I. A corollary to this proposition is that any perfidy that does not lead to the killing, wounding, or capture of an enemy is neither illegal nor criminal under IHL. The key phrase in any analysis of perfidious conduct ("by resort to perfidy") suggests that there must also be a causative link between an act of

*Q-ships such as USS **Atik** were used by the Royal Navy (RN) during the First World War and the RN and the US Navy during the Second World War, as a countermeasure against German U-boats and Japanese submarines. Heavily armed, the ships masqueraded as merchant ships, luring unsuspecting U-boats into striking distance. The success of the attack depended on surprise, and once the U-boats were aware of the ruse, further submarine kills diminished and the practice was abandoned.*

*Crew members of the Q-ship USS **Anacapa** dressed as merchant sailors.*

perfidy and any subsequent harm to the enemy in order for the perfidy to be criminal. If the perfidy and the harm are not linked (i.e., if the harm could have taken place even in the absence of perfidy), then one cannot say that the perfidy was impermissible.

As an example of how the above rules operate together in a naval environment, "there could be a use of deceptive lighting that is perfidious but not prohibited. For example, a ship that attempts to pass itself off as a merchant in order to break out of a blockaded port might not rise to the level of treachery that is banned."[5] This assessment of such a deceptive practice seems to be correct in law, and it highlights the fact that, while there may be very good reasons and some state support for the idea of outlawing all perfidious conduct in armed conflicts, only perfidious acts leading to capture, injury, or death are presently illegal, and only the latter two constitute war crimes.

Potentially Prohibited Practices in Naval Warfare

The practice of deceptive lighting merits further scrutiny in order to ascertain whether it complies with perfidy prohibitions. Deceptive lighting has been described as the practice of "changing the configuration of lights aboard a warship so that – to a casual or distant viewer – the ship appears to be something other than it really is."[6] Since different classes and sizes of ships carry different lights while at sea, and are identifiable at night based on the characteristics of these lights, a warship that changes normal lighting configuration may be able to deceive an

enemy regarding location, identity, status and intentions. The practice is apparently accepted as a legitimate ruse of war by the US Navy, and the practice is equally encouraged within Canada's naval training scheme. For instance, the Canadian Forces Maritime Command Combat Readiness/Training Requirements publication requires ships to implement a deceptive lighting plan in order to accomplish Combat Readiness Requirement 6R03 (Advanced Anti-Surface Warfare Exercise) and Combat Training Requirement 7T11 (Under Water Warfare Signature Reduction).[7] Anecdotally, this author also recalls numerous occasions onboard Canadian warships during which deceptive lighting measures were discussed, endorsed, or implemented.

In his article specifically assessing the legality of deceptive lighting practices, Matthew Morris concludes that "under even the most minimalist reading of Additional Protocol I the use of deceptive lighting to engage in an attack is a prohibited act of perfidy."[8] This is so, he says, because the practice "instead of simply confusing or misleading the enemy, invites the enemy to think that the combatant enjoys some sort of protected status with regards to international humanitarian law."[9] With respect, I am of the opinion that Morris' conclusion is incorrect in many circumstances as it fails to distinguish between different kinds of deceptive lighting practices – some of which do not amount to perfidy.

The legal requirements for lighting of vessels are set forth in the Convention on the International Regulations for Preventing Collisions at Sea 1972 (COLREGs), which, as of December 2010, had been ratified by 153 states (and applied to 98.36% of world shipping tonnage).[10] The rules are applicable to various classes of vessels, but warships are generally exempt from compliance with COLREGs.[11] Consequently, it is not uncommon for frigates or destroyers of greater than 50 metres in length only to display one

*Somali pirates surrender after attempting to storm the 160-metre 18,000-tonne French command vessel **La Somme** in the Indian Ocean. The pirates mistook the warship for a commercial vessel in the dark, 7 October 2009.*

*American **Arleigh Burke**-class destroyer, starboard aspect, with masthead light and starboard running light locations emphasized.*

*Possible deceptive lighting configuration shown on **Arleigh Burke**-class destroyer. The ways in which a warship can be deceptively lit are limited only by the crew's imagination, and the resourcefulness of the shipwrights and riggers who implement the deceptive lighting plan.*

masthead light, when COLREGs would otherwise require such power-driven vessels to display two masthead lights. The American *Arleigh Burke*-class destroyer, for instance, is 155 metres in length, but it is evident from the physical appearance of the vessel that it could not properly display two masthead lights, since it only has one mast. The author's recollection of the actual lighting configuration of such a destroyer can be seen superimposed onto a photograph of an *Arleigh Burke*.

Understanding When Deceptive Lighting Constitutes Perfidy

Does deceptive lighting always constitute perfidy? If you recall the definition given earlier, it can be seen that a deceptive lighting measure will amount to perfidy only if it causes the enemy to believe that the deceiving vessel is not a targetable combatant – i.e., that the vessel is protected under IHL.

The interesting feature of a vessel's lights at sea, however, is that they only reveal certain limited pieces of information about the vessel. They can give some indication of size (in the case of power-driven vessels of more than 50 metres length), aspect (port/starboard side, bow/stern), rate of turn (based on the speed at which a red light disappears and a green one appears, for instance), and nature of the vessel (engaged in fishing, sailing, etc.). None of these pieces of information, alone, can clearly distinguish a vessel as a combatant, and thus as a non-protected target for a belligerent force.

Under almost all contemporary circumstances, however, certain lighting configurations should signify that a vessel is a non-combatant. For instance, a vessel engaged in fishing will, for all practical purposes, always be a non-combatant vessel, since no warship operating under any kind of normal circumstances would engage in fishing since it would hamper manoeuvrability. Similarly, a sail-

ing vessel could equally be thought of as always having non-combatant status, since naval forces no longer employ sailing vessels for combat purposes. (Some navies, including the Canadian Navy, use sailing ships as navigation and seamanship training vessels for their officer cadres but it would be difficult to imagine these vessels having any useful combat functions.) Consequently, any vessels displaying the lights of a sailing vessel or a vessel engaged in fishing should be thought of as being protected non-combatants under IHL. One could imagine a scenario in which a navy's supply chain has been destroyed to the extent that its warships are forced to engage in fishing for sustenance, or in which a coastal state acquires (and arms) sailing vessels for the purposes of defending its littoral waters, but I think that these scenarios fall well outside of reasonably foreseeable courses of action for any navy now in existence. Therefore, naval commanders would probably be prudent to recognize at least an initial presumption regarding the protected status of sailing vessels and vessels engaged in fishing.

Given that some lighting configurations obviously signal that a vessel is a non-combatant (and is therefore protected under IHL), it becomes possible to discern between perfidious and non-perfidious deceptive lighting. For instance, a warship that rigs and displays lights indicating that it is a vessel engaged in fishing would satisfy the definition of perfidy: the deceiving vessel would invite the confidence of the enemy by leading it to believe it is obliged to accord the deceiving vessel (as a purported 'vessel engaged in fishing') protection under IHL, with the intent to betray that confidence (by not actually being engaged in fishing). However, a warship, such as an *Arleigh Burke*, that rigs a temporary, makeshift second masthead light aft of and higher than the forward masthead light (see the photo illustrating this), while perhaps deceiving the enemy as to its identity, would not be engaged in perfidy, since it

would not be suggesting to the enemy that it is entitled to protection under IHL. Rather, such a warship would simply be complying, possibly in spite of an exemption for warships, with the requirements of COLREGs regarding lights for power-driven vessels of its size.

In other words, a warship that alters its lighting configuration to deceive the enemy regarding its *identity*, but not its *status* as a power-driven vessel (that may or may not be a combatant), does not engage in perfidy. Such ruses do not cause the enemy to believe that the deceiving vessel is protected under IHL – they merely make the enemy's task of identifying combatants *from within the class of power-driven vessels* more difficult.

A similar example of non-perfidious deceptive lighting could include lighting two warships in a manner that suggests the lead vessel is towing the follow-on vessel. This lighting arrangement would typically be seen where tugs are found towing other ships into port or to shipyards. It is not uncommon, however, for warships to train for and to engage in towing other disabled warships. Thus, it might confuse the enemy to rig warship lights in a

Photo: Corporal Shilo Adamson, CF Combat Camera

HMCS **Fredericton**'s Naval Boarding Party returns alongside the ship after inspecting a dhow transiting the Gulf of Aden, 28 November 2009.

tug-and-tow configuration, but regardless of whether the warships are actually connected in that relationship, such a lighting arrangement would not suggest to the enemy that the vessels are *necessarily* non-combatants entitled to protection under IHL.

Likewise, a warship could deceptively light itself to indicate that it is "restricted in ... ability to maneuver" (RAM) (Rule 27(b)). Such a lighting arrangement could indicate that the warship is a vessel servicing a navigation mark (Rule 3(g)(i)) (which would suggest a civilian, non-combatant vessel), but it could equally indicate that the warship is launching or recovering an aircraft (Rule 3(g)(iv)). Since many warships frequently land or launch helicopters, a warship would not be engaging in perfidy if it displayed RAM lights. Again, regardless of whether such a warship were RAM or not, it would not *necessarily* be taking itself out of the class of possible combatants by displaying RAM lights.

As the preceding discussion demonstrates, it would be inaccurate simply to state, as Morris has stated, that "the use of deceptive lighting to engage in an attack is a prohibited act of perfidy."[12] Some forms of deceptive lighting – for example, when they cause an enemy to refrain from attacking due to a belief that the deceiving warship is protected under IHL – are perfidious. Other forms of deceptive lighting – for example, when they do not make the ostensible claim that the deceiving warship is a non-combatant vessel – are simply ruses that do not rise to a level of perfidy. Thus, if a warship lights itself in a way that suggests that it is, by its very nature or by its conduct, something that could *never* reasonably be a combatant, then the warship has engaged in perfidy. However, if a warship lights itself in a manner that is deceptive, but that nonetheless admits of a reasonable possibility that the vessel is a combatant, then the deception amounts merely to a ruse, rather than perfidy.

As the earlier paragraphs argue, it would be perfidious for a warship deceptively to light itself as a vessel engaged in fishing. If, however, a warship rigged such a lighting arrangement in order to pass through a hostile chokepoint while attempting to disengage permanently from armed conflict, then clearly the perfidy would be permissible since, as a purely defensive act, the perfidious deceptive lighting would not result in the death, injury or capture of enemy forces.

A more complicated situation would arise if a warship transited through a hostile chokepoint whilst deceptively lit as a vessel engaged in fishing, only to attack enemy forces once clear of the chokepoint and after having ceased deceptive measures. In this scenario, it is likely

that the deceiving warship would have committed criminal perfidy since the warship would only have arrived in its attack position by virtue of its perfidious conduct. In other words, if the warship were only able to launch the attack by repositioning itself on the other side of a hostile chokepoint, then the deceptive lighting that facilitated transit through the chokepoint would constitute criminal perfidy.

If, however, a warship perfidiously transited a hostile chokepoint merely as a matter of convenience or expediency, and later engaged in an attack on enemy forces, then the legal result of its conduct may be entirely different. Essentially, one must ask whether the harm could reasonably have been inflicted on the enemy by some means other than by resort to perfidy. If this question is answered in the affirmative, then clearly the alleged perfidy did not *cause* the subsequent harm to enemy forces, and it is therefore permissible. Alternately, if the harm could only reasonably have been inflicted by resort to perfidy, then a sufficient causative link between the perfidy and the harm exists so as to render the perfidy illegal.

As the above hypothetical scenarios suggest, any assessment of perfidious conduct must carefully consider the facts surrounding the conduct in order to determine whether a causative link between perfidy and harm is present in a particular instance. Even a purposive interpretation of IHL's perfidy prohibitions cannot eliminate the need for careful factual analysis of military actions in order to ensure their compliance with the law, since subtle differences in facts regarding the timing or methods of an attack can drastically alter its legality. However, the purposive, causative approach to interpreting perfidy prohibitions that is proposed here at least offers naval commanders, military legal advisors and IHL jurists a starting point for judging belligerent conduct in armed conflicts. It imbues the phrase 'by resort to perfidy' with a meaning that has some substance, and that can be applied to factual scenarios such as those discussed within this article.

Conclusion

The deceptive lighting of warships should not be categorized generally as either legal or illegal under IHL; rather, individual scenarios contemplating the use of deceptive lighting must be evaluated on a case-by-case basis in order to determine their conformity with IHL's perfidy laws. Sometimes, when deceptive lighting merely confuses the enemy by obscuring the identity of a combat vessel from within a larger class of power-driven vessels, these measures are a permissible ruse of war under IHL. At other times, when deceptive lighting suggests that a warship is a non-combatant vessel, the schemes will amount to perfidy. In such cases, naval commanders need not necessarily abandon the deceptive lighting plans – but they must ensure that they do not kill, injure, or capture any enemy forces while engaged in perfidious deceptive conduct if they wish to avoid criminal liability and/or illegal acts.

Photo: Courtesy of the USN

*The underway replenishment oiler USNS **Yukon** (T-AO 202) and the **Arleigh Burke**-class guided missile destroyer USS **Russell** (DDG 59) sail alongside the **Nimitz**-class aircraft carrier USS **Abraham Lincoln** (CVN 72), during an underway replenishment, 11 May 2006.*

*A CH-53E Super Stallion conducts night flight operations near the amphibious dock landing ship USS **Carter Hall** (LSD 50) during the Iwo Jima Expeditionary Strike Group Composite Unit Training Exercise (COMPTUEX), 14 July 2008.*

Unfortunately, acceptance of the practice of deceptive lighting may be so deeply entrenched within the collective consciousness of Canadian, American and other naval command elements that warships may routinely (but unknowingly) find themselves breaking aspects of IHL in both training and operational situations. Ideally, this article represents the beginning of a dialogue between naval commanders and their legal advisors regarding the practice of deceptive lighting – a dialogue that will ultimately result in greater awareness of the subtleties of perfidy laws for those involved in naval operations. This knowledge must be acquired quickly, however, in order to avoid any erosion of the protections that IHL seeks to offer to various groups during armed conflicts. The rules and obligations of international humanitarian law must be absolutely respected, lest they become irreparably weakened.

Notes

1. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I) – 1977, available at www.icrc.org/eng/war-and-law/treaties-customary-law/geneva-conventions/index.jsp.
2. International Criminal Court, Rome Statute, UN Doc. A/CONF 183/9, 17 July 1998, available at www.icc-cpi.int/Menus/ICC/Legal+Texts+and+Tools.
3. Ambassador Hector Gros Espiell, "Foreword," in Lousie Doswald-Beck (ed.), International Institute of Humanitarian Law, *San Remo Manual on International Law Applicable to Armed Conflicts at Sea 5* (New York: Cambridge University Press, 1995).
4. Malcom N. Shaw, *International Law 96-97* (6th ed.; New York: Cambridge University Press, 2008), p. 91.
5. Matthew G. Morris, "'Hiding Amongst a Crowd' and the Illegality of Deceptive Lighting," *Naval Law Review*, Vol. 54 (2007), p. 251.
6. *Ibid.*, p. 236.
7. Chief of the Maritime Staff, Maritime Command Combat Readiness/Training Requirements, CFCD 102(K), 2009, pp. 246 and 272.
8. Morris, "'Hiding Amongst a Crowd,'" p. 257.
9. *Ibid.*
10. International Maritime Organization, Convention on the International Regulations for Preventing Collisions at Sea 1972, 1050 UNTS 16 (COLREGs), "Summary of Status of Conventions," December 2010, available at www.imo.org.
11. See, for instance, *Canada Shipping Act, 2001* (2001, c. 26) at s. 7(1) which states: "Notwithstanding any other provision of this Act, this Act does not apply in respect of a vessel, facility or aircraft that belongs to the Canadian Forces or a foreign military force or in respect of any other vessel, facility or aircraft that is under the command, control or direction of the Canadian Forces." Since COLREGs are implemented in Canada by virtue of the Collision Regulations, C.R.C. c. 1416 (enacted pursuant to the *Canada Shipping Act*), COLREGs do not apply to Canadian warships.
12. Morris, "'Hiding Amongst a Crowd,'" p. 257.

Lieutenant (N) Madden has served in the Canadian Forces since 1995 as an artillery officer and a naval officer, and is currently employed with the Office of the Judge Advocate General in Halifax, Nova Scotia.

World Ship Trust Maritime Heritage Award

On 29 June 2010, His Royal Highness Prince Philip presented the World Ship Trust Maritime Heritage Award to HMCS *Haida* in recognition of her outstanding preservation and maintenance. CEO Alan Latourelle accepted the award on behalf of Parks Canada.

*HMCS **Haida** shown here in its WWII configuration.*

Somali Pirates:
An Expansive Interpretation of Human Rights*

Amitai Etzioni

*Royal Marines from the British warship HMS **Montrose** come to the aid of a German-owned ship, MV **Beluga Fortune**, after it was attacked by pirates in the Indian Ocean, 26 October 2010.*

Sometimes a complex issue can be captured in a few simple words. Thus, to quote a *Wall Street Journal* reporter, "[p]rosecuting suspected pirates detained in international waters has proved difficult."[1] Indeed, despite the fact that there has been an increase in piracy in the Gulf of Aden and Indian Ocean – pirates have taken hostages, terrorized shipping and imposed a considerable economic burden on seafaring – pirates have been paid off, and even when caught, they have not been detained or prosecuted. And very few pirates have been confronted and killed.

This is puzzling given that piracy has for centuries been considered a serious offence by most if not all states, and pirates were regularly killed or executed after, at most, a perfunctory hearing, by the captain of the ship that captured them. The change can be explained by many factors, but this article focuses on one – the effects of the interpretation of the human rights extended to pirates in recent decades.

The main argument here is that the human rights extended to these pirates were at least initially interpreted in such an expansive way that they prevented proper attention to two basic common goods: the safety and livelihood of civilians; and the right to freedom of navigation in international waters. In this way, the expansive interpretation of human rights violates a legitimate balance between rights and public safety.

One can see a parallel between the expansive interpretation of human rights regarding piracy and the expansive interpretations of individual rights that happened 20-30 years ago. In the 1980s, following vastly overdue extension of *de jure* and *de facto* rights to minorities, women, handicapped persons and others, came some trivial extensions of rights that undermined their standing. Examples from lawsuits include the right to play Santa Claus at a department store and the right of women to use male restroom facilities, even when there is no line in front of the

ladies room. I argue that damage is caused by excessively expanding the otherwise cardinal and valuable precept of rights.

The argument here is not that pirates should not have rights, but that the interpretation of these rights has been expanded to the point that it undermines the rights of all other persons and corrodes the rights themselves. The rights enjoyed by pirates must be balanced against concerns for the common good.

Modern pirates have not been confronted aggressively and even when caught, many have simply been released. As Douglas Burnett, an expert in maritime law, refers to it, pirates are treated with a "catch and release philosophy that's usually reserved for trout."[2] For example, in May 2009, Portuguese forces found dynamite, automatic rifles and rocket-propelled grenades on the mother ship of pirates they had chased away from a German tanker. They disarmed the pirates and set them free. Canadian forces boarded a pirate vessel in April 2009, confiscated weapons and let the pirates go. In April 2009, Dutch forces set pirates free who had been holding hostages onboard a ship. In April 2010, US naval forces captured 11 pirates, ensured that they did not have the ability to attack any ships, destroyed their mother ship and then released them. *The Sunday Times* reports that between August 2008 and September 2009, 343 suspected pirates were captured, disarmed and released, compared to the 212 who were held for prosecution.[3] In other cases, pirates were simply paid to let their hostages go.

Since 2007 pirates have acted with considerable impunity. In 2007, 433 seafarers were taken hostage, assaulted,

*Crew of the French destroyer **De Grasse** (D 612) detain suspected pirates in the Gulf of Aden, November 2010.*

injured or killed by Somali pirates.[4] In 2008, the incidence of piracy off the Horn of Africa doubled, and pirates attacked 135 ships, seized 44 and took more than 600 seafarers hostage.[5] In 2009, pirates attacked 200 ships, successfully seizing 42 and taking at least 679 seafarers hostage.[6] In exchange for the release of ships and hostages, pirates took in as much as $120 million in 2008 and an estimated $100 million in 2009.[7] The figures for 2010 indicate a similar amount. According to US naval sources, more than 200 other attacks a year have not been reported because such reporting is 'bad for business.'

Thousands of employees on commercial ships peacefully navigating the high seas now must fear that they may be kidnapped, injured, killed, or held hostage for months, if not years. Given that security is the first duty of every state, the obvious question is why haven't states responded more forcefully to this threat? And, more importantly for this article, what role has an expansive interpretation of the human rights of pirates played in preventing effective solutions to this problem?

Piracy: A Major Crime

For centuries, maritime piracy has been considered a universal crime of great severity. As far back as 1615, British courts had determined that pirates were *hostis humani generic* – enemies of all mankind – and judges in US courts have made similar statements in past centuries.[8] As noted in one 18th century law book, pirates captured on the high seas where it was not possible to obtain a legal judgement were subject to summary execution.[9]

Piracy is a crime subject to universal jurisdiction: any state, regardless of whether or not it has any claim or connection to the property, perpetrators, or victims, may detain and prosecute suspected pirates. The United Nations Convention on the Law of the Sea (UNCLOS) – where the modern view of piracy in international law is found – proclaims that all states have a "duty to cooperate in the repression of piracy," and grants permission for every state to seize pirates and their ships, and use their domestic courts to determine what penalties to impose.

With regard to Somalia, the UN Security Council (UNSC) has adopted five resolutions under Chapter VII of the UN Charter to aid in the capture of pirates off the Horn of Africa. In June 2008, with the consent of the Somali government, the UNSC passed Resolution 1816, which permits states to conduct anti-piracy operations within Somali territorial waters. In October 2008, it passed Resolution 1838, which called upon states with ships or airplanes in the area "to use on the high seas and airspace off the coast of Somalia the necessary means … for the repression of acts of piracy."[10] On 2 December 2008, it

*USS **Ashland** (LSD 48) sailors rescue suspected pirates from the sea approximately 330 nautical miles off the coast of Djibouti after their skiff was destroyed, 10 April 2010.*

adopted Resolution 1846, which encouraged states to cooperate in determining jurisdiction, and in the investigation and prosecution of persons responsible for acts of piracy and armed robbery off the coast of Somalia, consistent with applicable international law including human rights law. Lastly, when Resolution 1816 expired in December 2008, the UNSC passed Resolution 1851, which called upon states to deploy military aircraft and naval vessels to the area and authorized states to "take all necessary measures that are appropriate *in Somalia*" (emphasis added) to suppress "acts of piracy and armed robbery at sea."[11] The resolution was adopted for the period of a year and explicitly approved military raids on Somali land "to interdict those using Somali territory to plan, facilitate or undertake"[12] maritime piracy.

Thus, unlike in more controversial international interventions, including humanitarian interventions in Kosovo and Sudan, the international law pertaining to the capture and trial of pirates enjoys a broad consensus and a clear framework, and both the crime itself and the perpetrators of the crime are relatively easily identified. Given the danger posed by pirates and given the extensive normative and legal background regarding the ways they ought to be treated, one would expect that there would be few if any legal and normative obstacles to establishing secure passage for all (although there may be operational and logistical problems).

Pirates, Civilian Status and Civilian Rights

Much like the debate concerning the rights of suspected terrorists and insurgents – which focuses on whether they should be treated like criminals or prisoners of war – there has been debate about whether pirates should be treated as if they were civilians, with all the rights thereof, as unlawful combatants, or in some other way.

There is no international court with the jurisdiction to try pirates, and according to the framework set forth in UNCLOS, pirates are to be prosecuted in the courts of

whatever state seizes them. Thus, pirates are currently treated as if they are entitled to trial in a civilian criminal court, and they are granted the full panoply of criminal procedural rights of the particular country in which they are tried.

Given that piracy occurs on the high seas, the nature of the confrontations often involved, and the absence of law enforcement agents, adhering to this approach is highly problematic. For example, collecting evidence on the high seas that will hold up in a criminal court is often impractical. Suspects often throw incriminating items overboard and without evidence, they cannot be prosecuted. And the evidence that is collected is difficult to segregate and sequester in order to meet the standards of non-contamination and the evidentiary chain of custody required by law. One cannot expect that those under attack will read pirates their rights – and ask them if they understood them – before the pirates blurt out any information that might be used against them in a court. Providing merchant ships with the personnel or training required to collect fingerprints, DNA and other evidence adds a burden for ships that are often staffed with low-paid sailors from developing states. As well, it is not clear that training merchant ship personnel in such matters would be useful – they are civilians, not law enforcement personnel.

The evidentiary standards of domestic criminal courts are high and hence difficult to meet. All of this means that the majority of pirates who are detained and turned over to legal authorities are unlikely either to stand trial or to be convicted due to a lack of evidence and the huge legal hurdles that are involved. This is one reason pirates are released rather than detained and prosecuted – and continue to terrorize the high seas. As pirates are treated as civilians but function beyond any state's territory, it is difficult to deal with them. The legal ambiguities involved continue to hobble anti-piracy operations.

A new understanding of the legal status of pirates may be called for, as it is for terrorists. Currently, pirates are often treated as if they were entitled to all the rights of the citizens of whatever state captures or contends with them on the high seas, which in turn is one more reason they are rarely deterred and, in effect, prosper.

Rights Derived from International Law

For some, the best way to deal with pirates may be to shoot them on sight. Others have warned against such a response on pragmatic grounds – Somali pirates have usually been careful not to harm their hostages, as long as they were not confronted. Arming merchant ships might lead to an escalation of violence, and many ports do not allow firearms aboard civilian vessels in port. And while government-authorized vessels do have a right to defend themselves and others through the use of deadly force if attacked, military personnel are expected to detain and try pirates if possible, rather than to kill them. The US Army Field Manual stipulates that "[t]he law of war … requires that belligerents refrain from employing any kind or degree of violence which is not actually necessary for military purposes."[13] This is in line with the domestic policy in democratic society, whereby law enforcement officers are expected to arrest a criminal rather than shoot him. Thus, when pirates captured and held Captain Richard Philips hostage onboard *Maersk Alabama*, President Obama granted the authority for the US Navy to use force only if the captain was in "imminent danger."[14] Indeed, the three pirates were shot and killed only when one of them aimed an AK-47 at the hostage.

Such criteria maximize danger to the hostage and minimize risk for the hostage takers. The pirates could have easily killed the captain out of sight, or the snipers may not have been able to shoot the pirates in the split second it takes to kill a hostage. Moreover, the pirates were increasingly on edge after the captain tried to escape, USS *Bainbridge* closed in, and their supply of narcotic *khat* dwindled. To limit killing the pirates to visible 'imminent danger' is to set a high price on the human rights of pirates at the expense of the rights of the hostage.

One may argue that there is nothing expansive about the imminent danger standard. However, the balance between the security of the civilians on ships peacefully negotiating the high seas and the rights of pirates (and terrorists) is not cast in stone. Throughout legal history, this balance has been re-examined and revised. Given the ease with which pirates operate, it deserves another round of examination.

Another source of legal difficulties in confronting piracy results from asylum and extradition laws. If a European

state brings a Somali pirate to its shores for trial, the pirates may be able to remain in the country under asylum laws. At least by the laws of EU countries, a person need not show that he had been specifically targeted in his country of origin; it suffices to show that there is enough indiscriminate violence taking place in the applicant's place of origin that he would face a real risk of his life being in danger if he were returned.[15] It is a standard, authorities fear, pirates may meet and one reason they fear to bring pirates to their shores.

*Following a pirate attack on the tanker MV **Evita** northwest of the Seychelles on 31 March 2010, USS **Farragut** tracked down and briefly detained 11 suspected pirates who were released in two small skiffs while the mother skiff was sunk.*

That they may qualify for asylum is not an idle legal speculation. In the 1995 case *Chahal v. the United Kingdom*, the European Court of Human Rights ruled that Article 3 of the Council of Europe's Convention for the Protection of Human Rights and Fundamental Freedoms, adopted in 1950, provides that where there are substantial grounds for believing the deportee would be at risk of torture, "his conduct cannot be a material consideration."[16] Thus, pirates cannot be shipped back to Somalia if they can show that they may be tortured in that country. Given these rules concerning asylum and Somalia's current political situation, the British Foreign Office has decided that in order to prevent the possibility that captured pirates could claim asylum in the UK, the Royal Navy should refrain from bringing pirates to trial in the UK. There is, however, no other courts in which they can be tried.

States that capture pirates but that are either unwilling or unable to prosecute them domestically are effectively barred from extraditing the pirates to Somalia for trial by the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (CAT).

Article 3 of the CAT states "[n]o State Party shall expel, return ('refouler') or extradite a person to another State where there are substantial grounds for believing that he would be in danger of being subjected to torture."[17] Under sharia law, which is applied in varying degrees throughout Somalia, the pirates could face severe punishments, which would constitute torture under international law and domestic law in many of the patrolling countries. While the Transitional Government of Somalia could offer assurances that the captured pirates would not be subject to torture, these assurances depend on the government being in control of the country (which it isn't) and an independent judicial assessment of the crime (which is unlikely given the state of the judicial system).

A state reluctant to try pirates in its domestic courts and unable to extradite them to their country of origin, might seek to turn them over to another state for trial (and punishment if convicted). Indeed, the United States, Denmark, the EU and the United Kingdom have all signed agreements with Kenya to try captured pirates in its courts. This seemed to be a good solution for some people. Kenya will not, however, accept all cases, and it decides which cases it is willing to pursue. There are other problems too – for example Kenya has recently stated that it is seeking to cancel these agreements and cease acceptance of pirates for trial, citing the burden on its court and prison systems. This option also faces opposition on human rights grounds. Human Rights Watch (HRW) contends that the Kenyan justice system does not guarantee a fair trial. HRW states that the "[Kenyan] police have a terrible record of long periods of detention without trial," there

are "terrible conditions in the prisons," Kenya has a "very poor record of access to legal representation" and there are "interminable delays in the court process."[18]

The legal aid network Lawyers of the World, which is representing over 40 of the captured pirates in Kenya, says that the agreements between Kenya and other states violate the human rights of the suspects.[19] And German lawyers have filed a civil suit in Germany in support of the pirates held in Kenya, claiming that a fair trial is impossible in Kenya because there is no presumption of innocence. In another suit, German lawyers argue that the German government is responsible for ensuring that the pirates receive proper representation in Kenya, suggesting Germany should pay for it because most defendants in Kenya cannot afford counsel and there is no right to government-provided counsel, except in capital cases.[20]

In sum, there are no international courts to try pirates, the different roles of police and the military complicate the pursuit of pirates, procedural rights set standards for evidence against pirates that are difficult to meet on the high seas, and various rights – observed by democracies – prevent imprisonment, deportation, extradition, or delegation of trials to other states. These legal considerations seem to be one significant reason piracy thrives.

Balancing Rights and the Common Good

Communitarians maintain that we face two strong normative claims: that of individual rights; and that of the common good, of which public safety is the prime category. We constantly work to find the proper balance between these claims. Moreover, although rights advo-

*A team from the amphibious assault ship USS **Boxer** (LHD 4) tows the lifeboat from **Maersk Alabama** after the rescue of Captain Richard Phillips, 13 April 2009. Phillips was held captive by suspected Somali pirates in the lifeboat for five days after a failed hijacking attempt off the Somali coast.*

cates tend to frame their arguments in strong terms, as if any concession or re-interpretation of what rights entail or the common good demands is a violation, historically, both claims have been modified and rebalanced as conditions change. After a wave of skyjacking in the early 1970s, governments began to allow screening in airports despite that fact that this constituted searches of millions of people without individualized suspicion and without a warrant. After 9/11, in many countries the balance between rights and security was modified. Courts and legislatures draw on the fact that the rights themselves are often formulated in ways that suggest limitations and balancing (e.g., both the 4th Amendment to the US Constitution and section 8 of the Canadian *Charter of Rights* secure people against *unreasonable* searches). All this applies to piracy.

This article suggests that it is time for a re-examination of the way pirates are treated. Few would disagree that they pose a serious threat to navigation of the high seas. The level of threat has been rising over time, the business is lucrative and the costs imposed by law enforcement authorities are small. Given that piracy has been considered a serious offence for centuries, given the relative ease with which pirates can be identified (compared, for instance, to terrorists), and given the growing harm pirates are inflicting, one would expect that this threat to the common good could be more readily addressed than many others. 🦭

Photo: Ministry of Defence, France

A French sailor hands over suspected pirates to the authorities of partner countries such as Kenya, the Seychelles, or Puntland (Somalia) for legal processing, November 2010.

Notes

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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.

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.

*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

*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 Thad 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

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Photo: Cpl Shilo Adamson, Combat Camera

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

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The Future of Autonomous Marine Systems in the Canadian Navy

J. Matthew Gillis

Introduction

The age of unmanned vehicles is upon the world's militaries. Pentagon spending on unmanned vehicle procurement and research has increased steadily over the last decade. In 2010 the US Department of Defense requested $6.1 billion towards unmanned aerial vehicles (UAVs) alone, up an astonishing 1,600% from 2001.[1] These vehicles – in the air, on the ground and in the sea – are performing a variety of missions ranging from strikes to reconnaissance, keeping military personnel away from tasks that are too 'dangerous, dirty, or dull' and leaving them available for duties elsewhere.

Although UAVs frequently dominate military spending on unmanned vehicles, autonomous marine systems – unmanned surface vehicles (USVs) and unmanned underwater vehicles (UUVs) – continue to develop and find places in many of the world's major navies. For a Canadian Navy struggling with recruitment and retention, the prospect of autonomous marine systems to ease it through personnel shortages should sound highly appealing. Tasks for which the navy currently dedicates ships and personnel, such as mine countermeasures (MCM) or anti-submarine warfare (ASW) might instead be effectively accomplished by robots.

However, autonomous marine systems are not a simple panacea for the Canadian Navy's personnel woes. These systems still require maintenance by personnel skilled in technical trades, something the navy currently finds in short supply. Additionally, while the procurement of UUVs and USVs may solve some problems, it raises new questions. What are the implications of employing robots in combat roles, particularly in the context of international humanitarian law? How well can unmanned vehicles replace human sailors in non-combat roles? Despite these challenges, autonomous marine systems are worth continued research and exploration within the Canadian Navy.

Autonomous Marine System Developments

Unmanned vehicles currently have a broad range of applications in the world's oceans. In commercial and research fields, underwater robots are used extensively for exploration, surveying and sample collection. For instance,

Photo: Corporal Rick Ayer, Formation Imaging Services, MARLANT
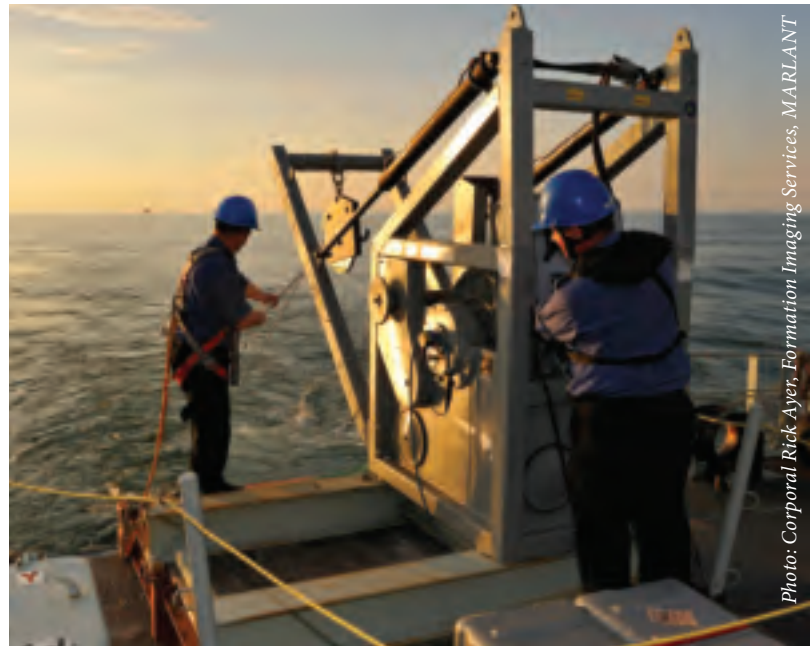
*Master Seaman Josh Davis (left) and Master Seaman Wayne Laughlin deploy the Kline Side Scan Sonar from HMCS **Goose Bay** to detect mines off the coast of Norfolk, Virginia, during Exercise Frontier Sentinel, 7 July 2010.*

remotely-operated submersibles have been used to explore shipwrecks such as the liner *Titanic* and the warships *Hood* and *Bismarck*. In the weeks following the Deepwater Horizon disaster, the public was able to view live feeds from BP submersibles working near the oil spill.

Military applications for UUVs and USVs have developed over the span of several decades, beginning with arguably the first unmanned and fully autonomous underwater vehicle – the guided torpedo and the naval mine. As 'fire and forget' systems, early guided torpedoes and naval mines were fully autonomous when launched and employed acoustic homing. UUVs and USVs are distinguished from torpedoes and similar weapons systems by being recoverable and reusable. Furthermore, while guided torpedoes of the Second World War and early Cold War were limited to attacking targets indiscriminately and without human interaction after their deployment, contemporary developments in UUVs and USVs have opened a range of possible functions for such platforms, as well as increased the sophistication with which those functions are performed.

*The starboard propeller of the RMS **Titanic**, broken when the stern hit bottom, is seen in the lights of Russian MIR I submersible, 1 September 1985, during oceanographer Robert Ballard's exploration of the wreck.*

Further developments have allowed for varying levels of human interaction, ranging from complete autonomy to remote operation. Through the use of radio, satellite, or cable communications, operators can remotely control unmanned vehicles and receive live feedback from sensors. However, reliance on a telecommunications 'umbilical cord' presents challenges in the event such a link is lost, and greater autonomy helps to reduce manning requirements. Thus, expanding and improving autonomy – in aspects ranging from obstacle avoidance to target identification and mission identification – remains a chief objective in unmanned vehicle development.

Modern autonomous marine systems in military applications fulfill a variety of functions. In a presentation at the 2010 Maritime Security Conference at Dalhousie University, Defence Research and Development Canada (DRCD) scientist Dr. Mae Seto noted that missions for modern military UUVs and USVs include intelligence, surveillance and reconnaissance (ISR), mine countermeasures, oceanographic data collection, inspection, communications, payload delivery and information operations.[2] While many of these missions are conducted by small, innocuous robots, missions demanding combat capability – anti-submarine warfare, time-critical strikes and force protection are three examples – have led to the development of unmanned vehicles armed with torpedoes, small missiles and machine guns.

Such armed vehicles have reached such a stage of development that they are actively deployed in some navies. During a three-month deployment in the Persian Gulf, the Republic of Singapore Navy (RSN) used Protector USVs to conduct force protection and maritime security operations around the Al Basrah oil terminal and near the RSN landing ship *Resolution*. The Protectors were deployed for up to eight hours at a time, successfully hailing and warding off approaching dhows through use of a loudspeaker.[3] In this instance, USVs proved their utility by fulfilling functions that would have otherwise required naval personnel to conduct long, monotonous, fatiguing and stressful patrols.

The use of unmanned vehicles by the RSN illustrates their capacity for saving human sailors from dull and exhausting tasks. The US Navy identifies five major benefits to using modern unmanned vehicles in maritime surface and sub-surface applications. First, unmanned vehicles typically are far less expensive to operate and maintain than manned vehicles. Second, automated sensors are able to maintain near-constant awareness and coverage of an environment. The third benefit is that near-constant surveillance means persistence in data collection, enabling a better understanding of long-term behaviour patterns and trends. Fourth, unmanned platforms also promise to improve productivity, as they allow manned platforms to pursue tasks elsewhere. Lastly, and perhaps most importantly, unmanned platforms keep human sailors and expensive manned platforms away from danger. These benefits make USVs and UUVs a highly appealing addition to modern fleet structures.[4]

These benefits have not gone unnoticed. As a matter of policy, navies are embracing autonomous marine systems.

Maritime Forces Pacific personnel tow the Dorado, a 30-foot, 7-ton Interim Remote Mine Hunting and Detection System used for detecting man-made objects up to 700 feet below the surface of the water in the Piscataqua River, Portsmouth, New Hampshire, during Frontier Sentinel 2008.

US Navy demonstration of a fully autonomous USV depicting the use of navigation systems to patrol and scan designated areas for intruders using onboard sensors and obstacle avoidance software, 14 January 2009.

The US Navy's "USV Master Plan" lays out future objectives for the integration of unmanned platforms into the US Navy's arsenal. According to the plan:

> USVs will augment current and future platforms to deliver enhanced steady-state and surge capability to help deter the enemy at the regional, transnational, and global levels. USVs will be highly automated, to reduce communication and data exchange requirements, and will deploy or retrieve devices; gather, transmit, or act on a wide spectrum of information; and engage targets with minimal risk or burden to US and Coalition Forces.[5]

With increased development of unmanned marine vehicles, clear benefits to operating them, and cases demonstrating their utility, it is clear why navies are interested in their development and procurement. Therefore, further analysis into the potential uses of unmanned marine vehicles within a Canadian context may lead to great benefits for Canada.

Autonomous Marine Systems in the Canadian Navy

The Canadian Navy's development and deployment of autonomous marine systems is limited to only two mission areas – mine countermeasures (MCM) and oceanography. These limitations indicate that Canadian naval planning for autonomous marine systems has not yet reached a stage of integration mirroring that of other navies, for better or worse. Why do these limitations exist, and what place do autonomous marine systems have in the navy's future?

The Canadian Navy's use of autonomous marine systems in MCM has been particularly positive, with systems like the Interim Remote Mine Hunting and Disposal System proving effective even in relatively strong currents.[6] Yet despite these successful examples of Canadian autonomous marine systems, using unmanned vehicles in other mission areas like payload delivery, ASW and ISR is not part of the navy's current considerations.

That the navy is uninterested in autonomous marine systems or is otherwise slow to pursue them seems surprising. It is not for lack of Canadian technology. Canada is host to some industry leaders such as International Submarine Engineering Ltd. of Port Coquitlam, British Columbia. Nor is it because there is no need for them. The navy's current recruitment and retention woes should make autonomous marine systems doubly attractive. Recruitment objectives are being met for now,[7] but vacancies remain as high as 20% by some estimates.[8] One of the chief benefits of unmanned systems, as noted above, is their ability to free up personnel and platforms for assignments elsewhere. Likewise, Canada's vast coastlines could be surveilled continuously and with limited costs by autonomous systems.

Unmanned systems seem highly relevant to the Canadian Navy's needs. So why not solve personnel vacancies with robots patrolling Canada's coasts and conducting other missions? The answer is that, despite the many benefits attached to autonomous marine systems, they may in fact not be a simple solution to the navy's current personnel problems. A close examination of autonomous marine systems and their utility is necessary.

Autonomous Marine Systems: Emerging Dilemmas

Unmanned systems in navies solve some problems, but at the same time they raise their own questions and problems. The emerging dilemmas attached to these systems in general are not insignificant, and add uncertainty to prescribing unmanned vehicles in a Canadian context. These dilemmas include the morality of equipping autonomous or remotely-operated vehicles with lethal weaponry, the actual personnel demands of unmanned systems, and the implications of replacing personnel and vehicles with robots for a broad array of navy missions.

The main question raised by the use of unmanned systems everywhere – not only on or in the seas – is the ethical issues attached to lethal weaponry employed by autonomous or remotely-operated vehicles. In software programs composed of thousands or possibly millions of lines of code, unexpected behaviour can emerge from unforeseen circumstances, unintended usage, or simple programming mistakes. In the context of home computing, unexpected behaviour in the worst case might result in a crash or some lost data – the worst case related to weaponized unmanned systems could be much more significant.

The computer systems that drive autonomous vehicles are not invulnerable to the problems of complexity and unexpected behaviour. Yet, when weaponized, such

unexpected behaviour can have disastrous consequences. One such incident took place in South Africa in 2007 when an automated anti-aircraft cannon malfunctioned during a live-fire training exercise. The cannon began firing uncontrollably, killing nine soldiers and wounding 14 others.[9] Although not necessarily living up to the terrifying imagery of killer robots in science fiction, the possibility of such malfunctions is real enough to make us think long and hard about equipping fully-automated marine systems with lethal weaponry.

In the context of international humanitarian law, such malfunctions may have grave consequences. Suppose an armed and fully-autonomous USV conducting maritime security operations suffers a software malfunction and misconstrues fishing gear as weaponry, perceives an imminent threat, and opens fire on a civilian vessel with fatal results. This would be a violation of the 1977 Protocol I Additional to the Geneva Conventions, which states that "the civilian population as such, as well as individual civilians, shall not be the object of attack."[10] But who, if anyone, should be held responsible? The attack was carried out by a robot, operating only on the commands it is given and the software upon which it operates; the USV is not a 'moral agent,' so it has little to no liability for its actions. The Association for Computing Machinery's 1992 Code of Ethics seems to infer responsibility on negligent system designers and programmers. It states that "[w]ell-intended actions, including those that accomplish assigned duties, may lead to harm unexpectedly. In such an event the responsible person or persons are obligated to undo or mitigate the negative consequences as much as possible."[11] Perhaps policy-makers or military personnel could be held responsible for fielding the system despite the risks. Unmanned aerial vehicles in combat situations are already embroiled in legal controversy, and autonomous systems in general will challenge existing understanding of international humanitarian law.

The practice resulting from these risks and legal ambiguities is that unmanned vehicles equipped with weaponry are not fully autonomous, and retain a 'human-in-the-loop' to a significant extent. As the US Navy's "USV Master Plan" states:

> The autonomous use of weapons with unmanned systems of all types is an issue being investigated…. Certainly for the near term, human-in-the-loop control will be required for most weapon applications, to ensure that the target is properly identified. In the case of armed USVs, for example, an ASW "kill box" or … "mine danger area" could be designated allowing for automatic modes to be used with greater confidence.[12]

*ScanEagle UAV in launch position onboard HMCS **Glace Bay** prior to sea trials and evaluation by Canadian Forces Maritime Warfare Centre personnel, 28 October 2009.*

Yet even retaining the human-in-the-loop factor of autonomous marine systems does not solve all the dilemmas. In his 2001 book, *Virtual War*, Michael Ignatieff discusses the adoption of precision weaponry and the 'virtualization' of conflict. He argues that, through the adoption of guided, stand-off weapons, major powers have lost their appetite for 'getting their hands dirty' with extensive expeditionary forces needed in situations such as Kosovo.[13] Although the conflicts in Iraq and Afghanistan might illustrate that Ignatieff was wrong, he was correct in that the general public in the West has clearly lost its appetite for casualties in war. Ignatieff's warnings are not new to maritime security. Thus, for example in anti-submarine warfare a helicopter or maritime patrol aircraft could locate and destroy a submarine without ever having been in critical danger or even actually seeing the target. Miles of ocean already separate humans in conflicts like this, and the introduction of autonomous marine systems would not be particularly disruptive or revolutionary.

However, there is a cautionary tale here about the potential problems arising from putting unmanned systems in the places of live sailors and manned platforms. A parallel can be drawn between the 'virtualization' dilemma and the diplomatic and constabulary missions assigned to the navy. To phrase the question differently, is a navy without sailors still a navy? Could robots be made to deliver

US Air Force MQ-9 (Reaper) unmanned aerial vehicle carries up to 3,750 pounds of laser-guided munitions, giving ground commanders both excellent situational awareness and choice about the amount of force to use.

drinking water and build shelters in Haiti? Could robots be made to arrest and detain pirates in the Gulf of Aden? Could robots be made to intercept, board and inspect ships carrying immigrants bound for Canada's shores? Can a robot conduct naval diplomacy and reassurance in the same way a destroyer or cruiser can? The age for these sorts of autonomous systems is not yet here, and it is useful to recognize that missions like MCM and ASW comprise but one aspect of the overall functions Ken Booth identified for navies – the military functions. The diplomatic and constabulary functions, including tasks like humanitarian assistance, negotiation from strength, prestige and maintenance of good order[14] may – for now – be jobs best left to human sailors.

As noted earlier, using autonomous systems in areas like ASW and MCM does potentially relieve personnel and allow them to dedicate more time to other tasks like diplomatic and constabulary functions. However, it is critical to understand the true costs of autonomous marine systems. A USV or UUV does not require an embarked crew, but it still requires operators, upkeep and maintenance. The personnel gaps that unmanned vehicles might be intended to fill are largely in technical trades. Thus, newly procured autonomous marine systems may still find themselves short of technicians, engineers and mechanics. The recruitment and retention problems of the Canadian Navy are therefore only partially alleviated by autonomous marine systems.

Conclusions

These drawbacks and emerging concerns do not necessarily rule out greater integration of autonomous marine systems into the Canadian Navy's fleet structure. As described earlier, UUVs and USVs are currently capable of performing a variety of dangerous, dirty, or dull tasks. Furthermore, they may help to reduce costs and improve productivity in naval missions.

Rather, autonomous marine systems are not a panacea or silver bullet for the navy. They cannot replace humans and end the navy's current personnel deficit – engineers, mechanics and technicians are still required to maintain and repair even unmanned vehicles. Furthermore, they are not reasonable substitutes for platforms and personnel assigned to some diplomatic and constabulary functions. Unmanned systems assigned to combat roles in general also raise questions about the ethical use of force and the possibilities of malfunctions with deadly consequences.

Yet autonomous marine systems have significant promise and have benefited the navy greatly in areas like mine countermeasures. Unmanned surface vehicles and unmanned underwater vehicles may be able to augment current naval platforms and capabilities in mission areas like ISR with minimal costs. A slow but steady approach is therefore sensible to evaluate developments in autonomous marine systems, weigh their costs and benefits, and integrate them into the fleet structure where suitable.

Notes

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Build It and They Will Call: Designing Navy 2060 Today

Janet Thorsteinson

Fifty years ago, a writer for *̀ e New Yorker*, A.J. Liebling, cut through the pretensions of journalistic idealism in a phrase that has sobered generations of would-be crusading reporters. He stated that "[f]reedom of the press is guaranteed only to those who own one."[1] The same logic applies to the world's oceans in general and to Canada's sovereignty over its three coastlines and extensive economic zones – in particular it points directly to the possession of a modern navy. What better guarantee of the law of the sea than having the means to enforce the law?

Vice-Admiral Dean McFadden, Commander Maritime Command, has written that the United Nations Convention on the Law of the Sea (UNCLOS) could well be "history's crowning legal achievement." "Nonetheless," he continued, "it's by no means assured that the remarkable consensus embodied in UNCLOS will withstand the tremendous change this century is likely to witness."[2] If and when those tremendous changes occur, the Canadian Navy being designed today will answer Canada's call to action, and it will still be responding half a century from now.

Over the last few years, while the immediate and compelling focus of Canada's military has been to support combat operations in Afghanistan, work has been proceeding on the intellectual underpinnings of the armed forces of the future. One result of that work is the conclusion that the navy of the future will be expected to operate in new ways. The Canada First Defence Strategy explicitly states that the navy is one asset within a range of policy instruments which will make up a 'whole-of-government' approach to addressing both domestic and international security needs.[3]

This integrated approach will undoubtedly involve the navy in a whole new range of 'joint' operations with other government departments. Witness the 2006 operation in which the frigate HMCS *Fredericton*, working with the Royal Canadian Mounted Police, sailed to the coast of Africa in a six-week deployment that led to the seizure of 22.5 tones of hashish.[4] Not only will the navy be involved, it will often take the lead in such whole-of-government operations because no other organization has the ability to coordinate complicated operations while at sea.

A recent document called "The Future Security Environment 2008-2030: Part One, Current and Emerging Trends," produced for the Chief of Force Development, looks at some of the trends that will shape the environment in which Canada's navy will operate. This document argues that:

> Given Canada's extensive coastline and the fact that over three-quarters of the world's population live in littoral areas, the defence team of the future will need to be able to project maritime force. Furthermore, given Canada's immensity and the vast distances that separate it from probable theatres of operations, strategic lift and transport capabilities are essential.[5]

Photo: Greenpeace/Paul Hilton

*Greenpeace activists demonstrate against tuna fishing operations in the international waters of the Pacific alongside the Korean purse seiner **Olympus**, 17 April 2008. Greenpeace is campaigning for marine reserves in international waters.*

View aft starboard side of proposed Arctic/Offshore Patrol Ship.

This wide-ranging document examines the social, environmental, technological and political challenges of the future, with a focus on areas where Canadian forces could be called to respond. It notes that exploitation of the ocean's resources will intensify in the future and may constitute a serious source of confrontation. The implications for Canada's navy of increased exploitation of resources are the need for increased surveillance capabilities and presence in the marine areas that are within Canadian jurisdiction.

As studies like "The Future Security Environment" help strategic planners to narrow down the range of possibilities over the next half century, other guidance has defined the physical reality of the future fleet. The May 2008 Canada First Defence Strategy calls for new replenishment ships, as many as eight Arctic patrol ships and 15 surface combatants that will replace the current mix of frigates and destroyers in the fleet. The increase in defence spending over the last five years has meant present and future assets for the air force (C-17 and C-130J transport aircraft, and the announced F-35 jet fighter purchase) and the army (artillery, trucks, tank upgrades and armoured vehicles) but so far, nothing tangible for the navy. To use an understated phrase in an article about Canadian defence spending in *The Economist*, "[t]he navy has been less fortunate."[6]

But good fortune for the navy is certainly on the horizon with last summer's announcement of the National Shipbuilding Procurement Strategy. By spring 2011, the government plans to select two Canadian shipyards, one to supply combat vessels and the other non-combat vessels. The large vessel 'work package' comprises the Arctic/Offshore Patrol Ships, with plans to build them between 2012 and 2019, Joint Support Ships and the Canadian Surface Combatants.

While these various policy and program 'keels' for tomorrow's navy are being laid down, the necessity to move quickly to *build* the ships remains. Unlike many other types of military equipment, the longstanding 'build ships in Canada' policy means there is no assembly line that Canada can 'cut' to meet an immediate operational requirement for naval vessels. The government has seen the navy almost simultaneously respond to a humanitarian crisis in Haiti, the security demands of the Vancouver Olympics and deploy personnel to Afghanistan. If the government values that flexibility and wants to make it available to future governments, it will recognize the need to hold to its purpose of buying new ships. To quote Peter Haydon, "a navy is not a 'turn-key' operation that can be switched off and on like a lightbulb at political will when a crisis arises and be readily available to sail to be useful. It also requires a large organization for its maintenance, training and general support."[7]

It will be months if not years before designers begin work on the physical ships of tomorrow's navy. In the meantime, the work will continue on defining the role that the navy will play and the tasks it will be called on to assume. Throughout its history, the navy has worked with allies in combined operations, with the other branches of the Canadian Forces in joint operations, and it has responded as needed to requests for assistance from other departments and agencies of the government of Canada. Now, an entire fleet is being designed, conceptually at least, to reflect a whole-of-government strategy. Naval vessels have always been designed to 'float, move and fight.' In future, they will need to cooperate as well. ♣

Notes
1. A.J. Liebling, "Do You Belong in Journalism," *The New Yorker*, 14 May 1960, p. 105.
2. Admiral Dean McFadden, "The Navy and Canada's National Interests in this Maritime Century," *Canadian Military Journal*, Vol. 10, No. 4 (Autumn 2010).
3. Department of National Defence, "Canada First Defence Strategy," 2008, p. 4, available at www.forces.gc.ca/site/pri/first-premier/index-eng.asp.
4. "The Maple Leaf," 3 January 2007, p. 13.
5. Department of National Defence, Chief of Force Development, "The Future Security Environment 2008-2030: Part One, Current and Emerging Trends," 2010, p. 7, available at www.cfd-cdf.forces.gc.ca/sites/page-eng.asp?page=7241.
6. "Fighting to Keep Fighting," *The Economist*, 11 September 2010, p. 47.
7. Peter Haydon, "Why Canada Needs a Navy," Navy League of Canada, October 2010, p. 11.

After over 30 years in the pubic service, Janet Thorsteinson became Vice-President Government Relations at the Canadian Association of Defence and Security Industries (CADSI).

Making Waves

NORAD Maritime: Time for a Re-evaluation?
Calvin Mofford

Clearly, the United States is concerned about the security of its land borders. However, it has even larger insecure borders – its vast and porous maritime flanks. These flanks do not lend themselves to being fenced and patrolled, and surveillance and response is a challenge given the vast distances and the limitations of aircraft, ships, submarines and shore- and space-based sensors.

The maritime approaches to North America are currently being used to deliver contraband, illegal drugs and illegal migrants. These approaches can be used to deliver an asymmetric attack by changing the payload to a weapon or terrorist. How should Canada deal with this potential threat? Should it adopt a comprehensive bi-national approach through NORAD or a bilateral approach by developing a Canada-United States (CANUS) Maritime Defence Plan?

Photo: MCpl Angela Abbey Canadian Forces Combat Camera

*HMCS **Whitehorse** escorts the MV **Sun Sea** with 491 Tamil refugees onboard off the coast of British Columbia, 17 August 2010.*

There has been significant border security cooperation between Canada and the United States – the RCMP/US Coast Guard Shiprider Agreement and Integrated Border Enforcement Teams are the most noteworthy. CANUS military cooperation has been less robust, with the exception of NORAD. This can be explained because terrorism is seen principally as a criminal activity within Canada and the United States (although both states can invoke national self-defence when using military forces to deal with an attack according to Article 51 of the UN Charter). Furthermore, security forces in Canada and the United States do not have the capability to conduct armed airborne intercepts (a NORAD forte) and are unlikely to acquire this capability given the cost.

The NORAD agreement represents more than 50 years of cooperation and commitment between Canada and the United States to defending North America. When the NORAD agreement was renewed in 2006, maritime warning was added to the mission set. However, limiting the agreement to 'warning' has effectively bounded the maritime mission set, obliging both states to warn one another when they become aware of a maritime threat – no more. Maritime surveillance and response is left to each state to conduct independently. By comparison the aerospace defence mission set includes mechanisms for cross-agency cooperation, surveillance, warning and response.

The creation of both US Northern Command (NORTHCOM) in 2002 and Canada Command (CANCOM) in 2005 has further muddied the water as both commands suggest that their mission set is the defence of their countries across the land, sea and aerospace domains. These commands represent a sovereign approach to continental defence and while the CANCOM and NORTHCOM relationship is developing, it is fundamentally a bilateral arrangement with few obligations to share surveillance and warning information, provide information concerning response forces or coordinate activities.

In addressing the question of military cooperation in the maritime domain, the discussion should be limited to threats *outside* Canadian and American internal waters and probably territorial waters. *Inside* these waters, national criminal law and security jurisdictions are well defined. As well, the means to intercept and apprehend using security forces is more feasible. However, outside these waters independent action by either country could be at cross purposes, and lead to significant political embarrassment and populist outrage. Imagine the US Navy or Coast Guard intercepting/boarding or sinking a ship that it considers to be a threat 30 nautical miles off the coast of Vancouver Island or Newfoundland, in waters that the less well informed would consider to be Canadian. Many believe that all threats in the maritime environment should be dealt with by waiting for the threat to enter territorial waters, but a nuclear or radiological device is best dealt with as far out to sea as possible.

A key strength of NORAD is that it is a bi-national command which allows for the habitual and integrated exchange of aerospace surveillance and warning information as well as a seamless command of response forces across national borders. Because of the nature of the agreement and its longevity, protocols for dealing with

domestic security agencies and ensuring the necessary governmental oversight of its actions have been established. It also provides Canada with access to capabilities essential to its own security which it cannot afford – for example, cost-sharing for the construction of infrastructure such as the North Warning System and access to the US military intelligence apparatus that Canada could only dream of replicating. Furthermore, because NORAD is a bi-national agreement, it obligates both countries to share information, provides unfiltered insights on intended actions, as well as the control of response forces. Significantly it removes many of the considerable restrictions that the United States places on sharing information even with its closest allies. From a US perspective, this seems an acceptable price to pay for the early warning of a threat especially given that the Canada-US border extends 9,000 kilometres.

A bilateral arrangement such as a Canada-US Maritime Defence Plan under the auspices of CANCOM and NORTHCOM while allowing for independent and potentially cooperative action, would be much less effective. There would be no obligation to share maritime surveillance (classified or unclassified). Nor would there be an obligation for the United States to share intelligence outside of that mandated under the current NORAD agreement for maritime warning. There would certainly be no incentive to create a bilateral and interoperable command and control system given the cost of creating the necessary infrastructure and controlling the information that each state would put into such a system. More importantly there would be no habitual relationship of Canadian and American staffs and forces working together on a daily basis, identifying and solving interoperability issues, and through proximity, having insights into each other's national perspectives. It would be naive to believe that either state would allow the other to have a significant voice or insight into its decision-making regarding response forces or where they operated, except for communicating the decision as a courtesy or exploring areas for cooperation on a case-by-case basis.

The NORAD agreement has been both a pragmatic military arrangement and a confidence-building measure since its inception. It has helped to assure the United States that Canada would not be used as an avenue for attack by others and it has allowed Canada to enforce its sovereignty at a fraction of the cost of going at it alone. While there are some parallels between the airspace approaches to North America and the maritime approaches, there are many significant differences including the extent they are controlled, the density of traffic, and the ability to provide surveillance and respond to a threat. Since both

Canada and the United State are dependent on their ocean approaches for trade, resource exploitation and recreation, and since oceanic traffic generally passes Canada en route to and from the United States, it is in the interest of both states to find a robust means for responding to maritime threats.

The NORAD model with its history of bi-national rather than bilateral cooperation and problem solving is the better model. It forces both states to be aware of each other. It provides for better sensors, intelligence sharing, command and control, and quality and quantity of forces. It makes information sharing at the military, inter-agency, diplomatic and political levels more natural and habitual. In summary, it helps builds confidence at a time when the United States seems to be hell-bent on building a wall around itself.

Cheap and Nasty: Just What Types of Ship does the Navy Need?
Dave Mugridge

Cheap for us and nasty for the Germans.
    Winston Churchill, 1940

In the Canadian Navy's centenary year, there was much to be proud of but more to be concerned about. The course envisaged by *Leadmark*, the future fleet structure as outlined by the National Shipbuilding Procurement Strategy (NSPS), the envisaged role within the Canada First Defence Strategy and the distortion of today's strategic environment by events in Afghanistan all suggest that the Canadian Navy is following the wrong path and will increasingly be ill-prepared for its future employment. I'm writing for two reasons: (1) in response to Captain McDonald's thinly disguised piece of propaganda (*CNR*, Vol. 6, No. 2 (Summer 2010)) about the Canadian response to the earthquake in Haiti and the call for humanitarian assistance; and (2) in response to the announcement of the NSPS.

If something is not done, like many NATO navies, the Canadian Navy will follow an expressway to irrelevance, spending billions of dollars to get there. We should accept that the world has changed from the simple days of the Cold War. Today we face a complex future of global warming, anti-terrorism, organized crime, failing states and intervention within failed states. That is the uncertain future *Leadmark* should address as its goal, not conventional fleet-on-fleet battle, fought in deep blue water.

Sadly, Canadian Navy and Coast Guard planners refuse to acknowledge that current shortfalls in capability warrant an examination of future requirements. Events in Haiti, the Gulf of Aden and off the coast of British Columbia all suggest Canada needs to redefine how it delivers national maritime security and how it contributes to creating a world order that promotes prosperity and maritime security for all.

Does the Canadian Navy need to stay in the task group game or should it embrace a new fleet model which would deliver increased global influence and more efficient military effect? The centenary year, not surprisingly, focused on an artificially positive image, not the serious military, political and financial storm clouds gathering on the horizon. Similar storm clouds are already threatening significant areas of the US Navy's future procurement strategy and have recently decimated the Royal Navy as a fighting force.

*The Royal Navy flagship HMS **Ark Royal** arrives on the River Tyne for the last time before being paid off 19 November 2010.*

Like their Canadian cousins, these two organizations have suffered from the land-based Afghan war (although these navies shaped the conflict until the land and air forces could take up their operational role). In the UK this has manifested itself in the publication of the Strategic Defence and Security Review, in which the RN is the biggest loser. The review recommended reducing £38 billion ($61 billion CAD) from defence procurement in order to help offset some of the national deficit. Tomorrow's RN is a coast guard in waiting.

Canada's Chief of the Maritime Staff (CMS) is clear about what the navy should do and has spoken at length about these roles. He lists the roles as:

- protecting a regulated ocean commons at home and abroad;
- promoting 'good' around the world in the national interest;
- preventing conflict wherever possible; and
- prevailing in combat when the use of force becomes inevitable.

All of these are laudable, but how can Canada deliver them in a sustainable manner which is cost-effective, promotes an intelligent use of trained personnel and optimizes equipment use? To do this does not mean re-creating the capabilities of today's fleet. It demands an intelligent and flexible response that can contribute to the joint military environment.

Captain MacDonald describes *Operation Hestia* in Haiti as a tsunami of Canadian relief. In reality, the lack of amphibious capability and support helicopters meant an intermittent drip rather than a tidal wave until such assets could be poached from the United States. Mentioning this is heresy but without amphibious capability you lack effective maritime force projection, theatre entry, flexible global reach and influence over the littoral region. Without strategic sealift you become reliant on a few C-17s. If the Camp Mirage fiasco teaches us anything it is that air bridges and land bases are dependent upon continued third party goodwill (and landing rights at Pearson International Airport), whereas use of the sea is not.

NATO's mission to protect aid convoys destined for Somalia and to counter piracy in the region has been a qualified success. No matter how many warships are sent to the Gulf of Aden, piracy will continue because no one is treating its root cause – the failure of governance in Somalia. Furthermore, desperate pirates will not be deterred with toothless rules of engagement and a polite 'catch and release' policy. Is Canada getting value for money in deploying a frigate ($125,000 per day) to this operation? Today's maritime security issues require ships capable of delivering an effective asymmetric response rather than wasted high-end capability.

The task group model for future operations has been used to justify a Joint Support Ship (JSS) project budget of $2.5 billion CAD for just two or three ships. This is a huge sum of money and explains why there are three

Canadian shipyards fighting desperately over the NSPS. This contract alone will rescue an industry that has sucked on the hind tit of government contracts since the *Halifax*-class contract was awarded. In modern times, Canada has never deployed the sort of task group envisaged by today's planners (1 JSS, 2-3 escorts and 1 submarine) and it would break its logistics support and training organization to do so.

Why does the navy – unlike the Canadian Army – refuse to update its strategy to deliver maritime security? The majority of the navy's future tasks will be lower order and less militarily demanding, and therefore do not sit well with today's force generation and platform employment model. But like capability should not be replaced by like and tomorrow's fleet should not look like a smaller version of today's fleet.

Those military tasks not requiring the highest levels of military capability should be undertaken by a new generation of combat ship. Because these platforms would be custom designed to deliver military effect at a lower order, considerable savings could be made against both unit platform costs and their through-life support. If designed with a relatively short life of 15 years, they could provide the basis of an evolving national warship procurement strategy that would maintain an essential component of the defence industrial complex for the generation to come. The ships would simply be decommissioned and sold at 15 years to be replaced by the latest ship to roll off the production line. Employment flexibility comes through reduced initial unit cost which allows for timely upgrades in capability rather than expensive legacy systems.

These combat ships would be multi-role warships capable of being deployed long term and globally to discharge those missions that occupy the lower categories of today's spectrum of operations. They would be based upon an evolving hull form so as to realize long-term economies of scale and embrace substantial through-life cost savings such as modular structures, commercial-off-the-shelf equipment, low-level maintenance and commercially derived logistical support. These ships would be able to meet overseas commitments and still make a contribution to joint operations. These platforms would also be able to support law enforcement operations as well as develop the unmanned vehicle, and intelligence, surveillance, target acquisition and reconnaissance (ISTAR) concepts in all three environments. With long range and long-term endurance, they would return the navy (and other government departments too) to global influence at a fraction of the price of more traditional models. They would be the equivalent of Nelson's frigates – dynamic,

capable, enduring and adaptable to today's fluid strategic environment. They would also support maritime security operations within the Canadian Exclusive Economic Zone at a time when Canada is not fully aware of what goes on off its shores.

The remaining high-end military tasks could be undertaken by a much smaller number of high-end warships. These would perform those tasks that require the latest in weaponry and sensors. Under a revised NSPS, the navy could procure sufficient super-escorts to deliver high-end war-fighting capability when required and invest the differential into cheap and nasty combat ships.

If Canada does this, tomorrow's navy would keep a toe hold in the high-end capability game and maximize its efforts in delivering what Ottawa demands without breaking the bank. Thus, the spears of the Praetorian guards are honed and ready for battles of national survival while the day-to-day business is done on the cheap but nasty ships that focus on countering terrorism, rogue or failing states, organized crime as well as delivering capacity-building and humanitarian assistance.

A Response to Luciano
Eric Lerhe

Let me first thank Luciano for his response (*CNR*, Vol. 6, No. 3 (Fall 2010), p. 29) to my article in *Canadian Naval Review* last winter (Vol. 5, No. 4 (Winter 2010)). He makes a good point in warning of the article's "cap-badge trade unionism" and I may well be guilty of this. Regrettably, he does so via an anonymous article and this weakens the thrust considerably in my opinion.

More seriously, I was taken aback by his word choice. In fact, I probably would not have responded except for this. When Luciano claims that my work involves a "spurious conclusion" and "at least four fallacies" one expects this to be backed up with strong opposing evidence. Regrettably, I could not find much of this.

Let us look first at the "spurious" nature of my claim that the cost of our Afghanistan operations will have a "deleterious effect on the Canadian Forces." I do not think this conclusion is spurious given the following supporting expert commentary. The Senate Standing Committee on National Security and Defence stated that "the Forces' involvement in Afghanistan not only precludes other missions at home and abroad that

may prove to be important, it ties up resources that the Forces could be using to transform and grow after years of neglect."[1] Analyst Elinor Sloan notes that "the overall picture remains one of 'transformation on hold' as Canada continues to determine its future course in Afghanistan."[2] And according to Dave Perry, "by 2017 virtually the entire inventory of Canadian forces' equipment will need replacing as a result of the stress Afghanistan is placing on army vehicles" and "[o]ne hopes that the long-term future of the Canadian forces is not being sacrificed to support the immediate demands of the Afghanistan conflict."[3]

Next one must examine the four reported fallacies Luciano found in my article. First, he claims there is "no consensus on what a balanced force would look like." This is probably true, but I am unable to relate that tidbit directly to anything I said, fallacious or not. If this 'fallacy' involves my failure to attack air force expenses at the same time I did Afghanistan ones, it is because I did not see this as a problem, and here I am joined by most of the above commentators. As well, there is nothing in my article that argues for a dominance of naval capability over another arm or that this is what I think 'balanced' means.

Second, when I quote General Leslie I did not, according to Luciano, appreciate that he "might" have been referring to only the army's future when he predicted Afghanistan provides the model. Here, Luciano is quite wrong. That article makes crystal clear that General Leslie was referring to Afghanistan as being the model for the entire Canadian Forces.[4]

Third, I reportedly have suggested that the army has "captured political and financial attention" in some "insidious" manner. I did not make that suggestion anywhere. I will leave it to *CNR* readers to determine how this self-evident statement constitutes my third falsification. Further, it is claimed I do not recognize that an army heavily committed in Afghanistan will necessarily demand above average expenditures. In fact, I recognized this and made the case that while this may have been necessary at the time, by no means do the costs of that operation qualify it to serve as the dominant model for our future. Again, at no point in the paper do I argue for a priority of naval capabilities over others.

Fourth, I was "unreasonable" in placing an arbitrary 1,000 person limit on future Canadian Forces contributions

to Afghanistan. I indeed recommended 1,000 as our future commitment and am happy to see the government recently fixed on a figure of 900 for the 2011 training task. My statement was, in hindsight, neither unreasonable nor false in the shared view of the government and the opposition.

In fact, none of these are fallacies – they could be considered a robust difference of opinion. In that light, I find disconcerting Luciano's readiness to classify my differing views as "fallacies." The point of my article was the role maritime forces could have in the future. My few comments on Afghanistan were to point out that repairing failed states is a difficult and costly task. Today, I would be surprised if anyone could come to a different conclusion. After suffering our valiant dead and spending billions of dollars, I also think we could start drawing some of the lessons from our Afghanistan commitment and looking at other security challenges and other military options. However, if every effort is immediately termed a 'fallacy,' I see little hope in learning much of anything.

Notes

1. Standing Senate Committee on National Security and Defence, "Canadian Troops in Afghanistan: Taking a Hard Look at a Hard Mission," an Interim Report of the Standing Senate Committee on National Security and Defence, February 2007, p. 5.
2. Elinor Sloan, "Military Transformation: Key Aspects and Canadian Approaches," Canadian Defence and Foreign Affairs Institute paper, December 2007, p. 12.
3. David Perry, "Canada's Seven Billion Dollar War," *International Journal*, Summer 2008, pp. 696, 700.
4. See General Andrew Leslie, quoted in Jon Elmer, "Canada: Counterinsurgency Manual Shows Military's New Face," *Global Research*, 25 March 2007, p. 25, available at www.globalresearch.ca/index.php?context=va&aid=5175.

Update on Piracy off the East African Coast
A Correspondent in Africa

Piracy remains a huge threat to east Africa and international shipping. Rising insurance costs render east African waters an expensive area and force shipping companies to use longer routes via the Cape to reach European countries. The cruise business to east Africa has virtually dropped off and the Kenyan port of Mombasa, for example, is suffering from the reduction of regional tourism as well as from lack of transshipment of goods through to other Great Lakes countries. This causes economic hardship.

Attacks have changed in the last two years from sporadic opportunistic events by small boats in daring attacks

organized by independent raiders to coordinated and targeted efforts often controlled by mother ships lying hundreds of miles offshore. It is clear that Somali criminal 'big business' has entered the game to seize, control and ransom captured ships and crews. Absolute numbers of hijackings hit a five year high in 2010 as the pirates' area of operations continues to expand from off the coast of Somalia and Kenya further south to the Seychelles and Madagascar, and east to Oman.

NATO (*Operation Ocean Shield*) and European Union (EU) (*Operation Atalanta*) naval forces in the Gulf of Aden and adjacent waters have attempted to deter the attacks. An Internationally Recommended Transit Corridor (IRTC) has been created in the Gulf of Aden through which merchant ships can effectively be convoyed. The US-led Combined Task Force 151 is active in the area and ships from states such as China, Russia, India, Iran and Japan have also been deployed. HMCS *Fredericton* was on station until February 2010. All naval forces operate under the authority of UN Security Council resolutions.

Deployment of warships is one facet of the international response. But littoral states such as Kenya which have a stake in the outcome have a role to play as well. Much international support has gone to these countries to build their capacity to handle pirates who are consigned to their jurisdiction for prosecution. Kenya had signed Memoranda of Understanding (MOUs) with a number of states, including Canada, on how to handle pirates landed ashore in Kenya but these were allowed to lapse in autumn 2010 and there has been little success in reviving them.

Overall counter-piracy efforts continue to be problematic due to limitations in domestic laws, rules pertaining to evidence and jurisdiction over suspected pirates. Most international players are reluctant to send any captured pirates 'home' for prosecution. There have been calls to create an international tribunal to deal with pirates but this is not generally supported and would be complex, expensive and time-consuming to operate. A preferred way ahead perhaps would be to create a special piracy court in one or more of the affected countries within their existing justice systems. But this presumes that the reluctance of countries such as Kenya can be overcome. It is worth noting that Mauritius and Tanzania have both agreed in principle to accept pirates.

No Canadian vessels or nationals have been the victim of piracy in the region. In fact less than 7% of Canadian imports and 2% of exports transit the Gulf coming or going via the Suez Canal. However, as a major trading state, it is in Canada's interest to deal with the threat that piracy poses in one of the world's busiest shipping lanes.

Canada also supports humanitarian assistance and should be concerned by threats against vessels carrying such aid. Ironically, and sadly, pirates are seizing ships carrying food aid to their own people in Somalia.

There has been major commitments made by the international community to combat piracy off east Africa. Discussion fora such as the G8 and the Contact Group on Piracy off the Somali Coast allow interested states to discuss measures to combat this scourge. The International Maritime Organisation (IMO) and players in the shipping industry have united in their efforts to seek a more robust response by the UN to piracy and the release of hostages. The UN Office on Drugs and Crime has provided support for courts and prisons in trying and detaining convicted pirates in Somaliland and Puntland (regions in Somalia) as well as in other states. Over $10 million has been contributed in support of this program including $730,000 from Canada. To date approximately 500 pirates have been apprehended in various jurisdictions. It is not clear how many of them have been tried or convicted.

Despite the work that has been done by regional and international actors, none of these efforts target the underlying cause of piracy and that is the lawlessness that pervades Somalia. One can hope that a functioning Somali government some time in the future will be able to control its territory and patrol its shores to bring an end to piracy by its citizens. This will not happen tomorrow, so for now the possible riches that poor coastal Somalis stand to gain from piracy far outweigh any other opportunities that might be available to them. For them, the risks, including possible death, remain worthwhile.

Editor's Note

Our cover photo for the Summer 2010 issue was a wonderful photo of the Queen's Standard flown from HMCS *St. John's* during the International Fleet Review in Halifax, 29 June 2010. We acknowledged that this photo came from DND Combat Camera but we did not give the photographer's name. I'd like to rectify this by noting that the photograph was taken by Corporal Francis Gauthier, Formation Imaging Services, Halifax.

Plain Talk: Dollars and Disasters: Time to Ante Up

Sharon Hobson

For the past nine years, the Canadian Forces (CF) have focused on Afghanistan. That commitment, with 2,900 personnel deployed along with hundreds of pieces of equipment, has shaped Canada's military for the next decades, for better or worse. But what happens after the troops come home? Sure, the CF has proven its combat capability, but given the high costs of this protracted venture, politicians will be unlikely to send soldiers into battle again any time soon.

Canadians will probably want to keep the CF home for a while, looking after the Arctic, protecting fisheries, intercepting smugglers, working with American allies and occasionally participating in NATO exercises. However, there is one role for which Canadians would be willing to dispatch an expeditionary force, and that's humanitarian assistance. Given that natural disasters are a fact of life, and that climate change is expected to increase the frequency and intensity of those disasters, the CF will increasingly be called upon to help out in the event of hurricanes, tsunamis, floods and earthquakes around the globe.

The Liberal government recognized the importance of the humanitarian assistance role but it connected it to the combat role. In its 2005 International Policy Statement (IPS), it talked about failed and failing states, and noted, "[i]n these demanding and complex environments, ... our military must be prepared to perform different missions – humanitarian assistance, stabilization operations, combat – all at the same time."[1]

The 'three block war' (combat, stabilization and humanitarian assistance operations all occurring at the same time and in close proximity) figured prominently and the IPS talked about the blurring of the line between peace and war. It noted that

> These situations are volatile, and a humanitarian mission can swiftly turn into a combat operation…. They call for a wide variety of tools, from negotiation, compromise and cultural sensitivity to precision weapons. The aim is always to produce focused effects that put a premium, even in conflict situations, on the sanctity of human life. Consequently, the Canadian Forces will seek to maintain the right mix of military capability

Canadian sailors digging latrines alongside displaced Haitians in Jacmel, 26 January 2010.

to ensure that they can carry out all potential aspects of a three-block war.[2]

In contrast, the Conservative government's 2008 Canada First Defence Strategy (CFDS) separates humanitarian assistance from combat operations. The government notes the threats to international security posed by "ethnic and border conflicts, fragile states, resurgent nationalism and global criminal networks" but limits its discussion of humanitarian assistance operations to the North American context. The CFDS points out that:

> Over the last decade, our military has been called upon to assist civil authorities in dealing with a number of natural disasters, including floods in Manitoba and Quebec, the ice storm in Eastern Canada, and forest fires in British Columbia. As Hurricane Katrina has shown in the United States, such disasters will continue to occur, often with devastating consequences, and the citizens affected will expect immediate responses.[3]

The government does not designate 'humanitarian assistance' as a primary role for the Canadian Forces. It does say, however, that for Canada to be a credible player on

*The merchant ship **Golina** carrying World Food Program supplies under the watchful eye of HMCS **Ville de Québec** off Somalia, September 2008.*

the world stage, the CF need to have the capabilities "*to make a meaningful contribution* across the full spectrum of international operations, from humanitarian assistance to stabilization operations to combat."[4]

Unfortunately that is a rather vague statement that provokes a lot of questions, not least of which are about the humanitarian assistance role. What does this mean to the navy? Does the navy need different kinds of ships to fulfill the humanitarian assistance role or is what it has now sufficient? Is sending a warship to help out after an earthquake overkill or an effective use of limited resources?

The navy has not been involved in a lot of humanitarian missions over the last 20 years, but when deployed, it has made a significant contribution. When a major earthquake hit Haiti on 12 January 2010, Canada responded immediately, with troops, airlift and ships, including a civilian roll-on roll-off cargo ship that is kept under contract to the CF. HMCS *Athabaskan* and *Halifax* departed Halifax on 14 January, loaded with supplies and arrived in Haiti five days later.

Athabaskan anchored off Leogane and *Halifax* off Jacmel. *Athabaskan* provided a headquarters for the joint task force until a shore base could be established. Personnel from both ships provided security at aid distribution centres, cleared rubble, dug latrines, cleared trees, built shelters, serviced machinery and provided medical aid. *Athabaskan*'s Sea King helicopter was used to transport passengers, supplies and tanks of potable water. Particularly important in the early days was the fact that the ships, equipped with reverse osmosis desalination systems, were able to produce potable water – over the course of their one-month deployment, *Athabaskan* delivered 32,760 litres and *Halifax* delivered 184,930 litres of clean water to Haitians.

While the mission was perceived as a success, the fact is the navy was having to make do with ships not suited to the task. What was really needed was a supply ship with many times the carrying capacity. However, HMCS *Protecteur*, on the West Coast, was too far away to arrive in time to help, and HMCS *Preserver* was in refit on the East Coast. Since paying off HMCS *Provider* in 1998, the navy has been without a third auxiliary-oiler-replenishment (AOR) ship.

The same situation arose in 2005 when Hurricane Katrina devastated the Gulf Coast region. At that time *Preserver* was just coming out of a refit and not ready for operations, so Canada sent the warships HMCS *Ville de Quebec*, *Athabaskan* and *Toronto* to help out. The ships delivered supplies, navy divers helped to clear debris, and the crews helped in reconstruction efforts.

While the navy rose to the challenge and was able to provide ships and personnel to these international relief operations, it could have done more with the right ships. If the government intends for the navy '*to make a meaningful contribution*' to future humanitarian assistance operations, it needs to ante up the money for at least three – even better, four – Joint Support Ships.

The government has committed to spending $9 billion on new fighter aircraft – through a sole-source contract award – but maybe it should also be looking at the benefits of acquiring more of the multi-purpose support ships. These ships, with slightly more capability than the current AORs if fully outfitted, will be available to support naval task groups, provide support to land forces, host a joint task force headquarters, and offer medical/hospital services to stricken areas of the globe. However, one ship can only be in one place at one time, and there will likely come a time when there will be a conflict of priorities. Having three ships would mean at least one ship would be available 95% of the time (as opposed to 65% availability with a fleet of just two). It would also mean that the navy would be able to respond with the appropriate vessel to more than one crisis at a time.

It's all about flexibility. No one knows what the future will bring, but it's a sure thing that the navy's importance in a multi-polar, climate-changing world will not decrease. So if Canadians are to respond with compassion *and* capability, the government has to increase what it plans to spend on its naval force. ⚜

Notes

1. Government of Canada, "Canada's International Policy Statement: A Role of Pride and Influence in the World, Defence," 2005, pp. 2-3, available at http://merln.ndu.edu/whitepapers/Canada_Defence_2005.pdf.
2. *Ibid.*, pp. 26-27.
3. Government of Canada, Department of National Defence, "Canada First Defence Strategy," 2008, p. 6, available at www.forces.gc.ca/site/pri/first-premier/index-eng.asp.
4. *Ibid.*, p. 9. Emphasis added.

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The View From the West: Navies and Non-Traditional Security Threats

Christian Bedford

The image of the MV *Sun Sea*, carrying nearly 500 illegal Sri Lankan migrants, being escorted into Esquimalt harbour by Canadian Navy vessels in August 2010 was a potent reminder of the frontline role that our navy plays in defending Canada from seaborne security threats. The image, however, also reminded us of the amazingly broad scope of security issues to which modern navies must respond. Whereas historically naval fleets were established to protect maritime commerce from disruption by outside actors and to destroy enemy fleets, today's navies find themselves dealing with an array of maritime and non-maritime security threats, a situation that places more and more strain on a country's naval personnel and assets.

Since the end of the Cold War, and more recently since the 9/11 attacks in the United States, security practitioners have debated and scrutinized the variety of real and potential security threats that navies are likely to face in the 21st century. Prior to 2000, few maritime security watchers would have thought that a dinghy could pose much of a threat to a guided missile destroyer, yet that notion was dispelled in a spectacular fashion when al Qaeda's operatives attacked USS *Cole* in Yemen. Before the dramatic rise in piracy over the past few years off Somalia, few would have imagined that a 100,000-ton supertanker could be considered at risk in the middle of the Indian Ocean from bandits operating skiffs powered by outboard-motors. Similarly, few would guess that modern warships, with their advanced missiles and high-tech sonars, would be considered valued assets when it came to natural disasters and humanitarian assistance missions.

However, several recent events have showcased the value of having readily-deployable or pre-positioned naval assets in regions prone to humanitarian crises or extreme climatic events. Following the December 2004 tsunami that devastated several Indian Ocean countries, the US Navy (USN) was able to respond quickly because, fortuitously, the USS *Abraham Lincoln* carrier strike group was conducting exercises in the region. Having its ships forward deployed in the Indian Ocean allowed Washington to be among the first responders to the crisis. Accordingly, the USN was able to help thousands of vulnerable

*A refugee family disembarks from the MV **Sun Sea** after the ship was intercepted in Canadian waters and taken to Colwood, British Columbia, 17 August 2010.*

people in those early days, enhance Washington's international image and diplomatic clout with affected states, and re-affirm the value of American seapower. In fact, humanitarian assistance was subsequently deemed so important that the USN, in its "Cooperative Strategy for 21st Century Seapower," named it as one of the navy's four core operational capabilities.

China, by comparison, had little experience in providing humanitarian assistance and disaster relief (HADR) at the time of the 2004 tsunami, and had no vessels ready to provide assistance. Thus, Beijing's contributions to tsunami relief efforts were largely confined to financial assistance, and several naval watchers have noted that this was part of the reason that China has, since 2004, designed and built new types of naval vessels better suited to HADR operations. These include a hospital ship and amphibious transport ships that can ferry troops and supplies into an affected area much more efficiently.

Even smaller countries have understood the importance of humanitarian missions for their navies. Singapore, despite being roughly the same size as Toronto in terms of land area and population, constructed a fleet of four 8,500-ton *Endurance*-class amphibious transport docks in the early 2000s. These vessels proved their versatility when three of them were deployed to provide assistance off the coast of Aceh following the tsunami. Being a small country with a high standard of living, in what is generally seen

China's first hospital ship, **Daishandao** (nicknamed 'Peace Ark'), is currently serving with the sixth Chinese naval escort flotilla in the Gulf of Aden.

Photo: www.china-defense-mashup.com

as an underdeveloped region, Singapore recognizes that employing its naval forces for such missions does much to strengthen relations with its neighbours and improve its image in southeast Asia.

The boats that brought the Tamil migrants to Canada in 2009 and 2010 were a strong reminder that the maritime security calculus of the 21st century will be infinitely more complex than that which occupied naval planners in the 20th century. Today, the Canadian Navy must be as ready to undertake maritime interdiction operations in the Persian Gulf as it is to conduct covert surveillance on suspect vessels within Canada's Exclusive Economic Zone, or to respond to climatic and geologic events that could threaten the safety of Canadians and non-Canadians alike. When a massive earthquake struck Haiti in early 2010, Canada was expected to provide assistance and, in fact, mounted an outstanding response to the crisis through *Operation Hestia*. Nearly a year after the earthquake, Haiti was hit with another crisis, a cholera epidemic that threatened the lives of thousands.

These back-to-back emergencies are a reminder that HADR operations will become more common in the future as an exploding world population gathers in urban centres around the globe. Population centres – many of which are close to coastal areas – will be forced to contend with a variety of non-traditional security threats, from extreme weather, to resource scarcity and pandemics, among others. And as these crises occur throughout the world, many disaffected people will look to Canada for assistance on the grounds that it is seen as welcoming, rich, sparsely populated and largely shielded from the climatic and political shocks that will afflict so many other states. The government's new special advisor on human smuggling and illegal migration, Ward Elcock, spoke about this recently when he stated that "[a]t the moment we haven't had anybody but Sri Lankans coming … [but that] doesn't mean it won't tomorrow be Sri Lankans and/or Iranians coming."[1]

The issue of HADR operations on Canada's West Coast is particularly important, given British Columbia's proximity to Asia. Despite being an ocean away, the arrival of the ships carrying Tamil migrants reminds us that Asia's

security issues can become Canada's security issues in an instant. This realization becomes increasingly important when Asia's security landscape is examined. In terms of environmental security, the majority of climate refugees in the future are likely to come from those states most affected by rising sea levels, namely the Maldives, Bangladesh, Kiribati and Tuvalu. Seismic activity is also of particular concern as dozens of 6.0-plus tremors have hit the south Pacific and Indonesia over the past year, some of which triggered small tsunamis. Politically, there continue to be regimes in Asia that oppress their populations, thereby increasing the likelihood that the disaffected will seek a better life elsewhere. This will sometimes happen with the 'help' of human smuggling rings as was the case with the passengers onboard MV *Sun Sea* and *Ocean Lady*.

Photo: Republic of Singapore Navy

à e **Endurance**-class landing platform dock ship RSS **Resolution** (LPD 208) during Navy Open House at Changi Naval Base, Singapore, 23 May 2010.

HADR operations have become, and will continue to be, important missions for navies in the future. With security threats in the maritime realm now arguably more diverse than ever before, navies will be increasingly expected to cover the waterfront when it comes to responding to crises around the globe. As Canada's navy prepares for a new generation of ships, including modernized *Halifax*-class frigates, Arctic patrol ships, the Joint Support Ships, updated submarines, and replacements for destroyers, HADR missions will surely figure prominently in their tasks in the years to come. ⚓

Notes

1. "Human Smuggling Arrests Coming: Canadian Adviser," CBC News online, 1 December 2010, available at www.cbc.ca/politics/story/2010/12/01/migrant-smuggling-arrests.html.

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Warship Developments: Humanitarian Assistance and Disaster Relief

Doug Thomas

A topic not often discussed in the media is the capability of naval forces to provide aid, either in cases of disasters such as tsunamis, earthquakes and hurricanes, or pre-planned assistance to peoples and states who desperately need whatever help the developed world can provide.

The Canadian Navy has been involved in disaster relief a number of times over the past 20 years and there have been articles in *CNR* describing assistance to the US Gulf Coast in the wake of Hurricane Katrina and support to Haiti after the calamitous earthquake of 12 January 2010. Earlier examples include both of our current Combat Support Ships, HMC Ships *Preserver* and *Protecteur*, which transported and delivered vital building materials and equipment to the Bahamas and Florida after two particularly damaging hurricanes swept that area in the autumn of 1992. The great thing about ship-borne assistance is that the talented ships' companies, and additional personnel with specific repair and building skills, are able to put the embarked supplies to good use to repair roofs, rebuild schools and hospitals, and work alongside local people to help them be self-sufficient again.

Another great thing about ships is that they don't require airfields or barracks or mess halls – they are self-sufficient within themselves. They make their own water, they anchor offshore if ports have been devastated, and they have embarked boats and helicopters to provide transportation for relief workers and to evacuate those requiring medical assistance. A recent example was the earthquake in Haiti, with naval and coast guard ships arriving in the following days and weeks. The American aircraft carrier USS *Carl Vinson*'s speed, flexibility and sustainability made it an ideal platform to carry out relief operations. After being tasked to support the relief effort, the ship immediately set sail from Norfolk to Mayport, Florida, at speeds in excess of 30 knots, loaded 19 helicopters, personnel and support equipment from five different naval air squadrons in less than eight hours, and then proceeded to Port-au-Prince, arriving less than 72 hours after the earthquake. Over the next several weeks, *Carl Vinson* and its 19 helicopters flew more than 2,200 sorties, delivering more than 166 tons of food, 89,000 gallons of water and 38,700 pounds of medical supplies to earthquake victims. Additionally,

*HMCS **Athabaskan**'s Master Corporal J.P. Somerset (left) and Able Seaman P.J. MacKenzie provide medical assistance to earthquake casualties in Leogane, Haiti, 19 January 2010. & is photo, Helping Hands, won first place in the 42nd DND photography contest.*

its helicopters conducted 476 medical evacuations and the ship's medical personnel treated 60 patients in its medical ward.

Hospital Ships (Writ Very Large)

The US Military Sealift Command (MSC) operates two huge hospital ships, US Naval Ships (USNS) *Comfort* and *Mercy*. One is maintained on each coast with a small civilian crew and an embarked core naval medical team, and they are available for deployment at five days' notice. The ships are 894 feet long with a beam of 106 feet, displacing 70,000 tonnes and when fully operational have 63 civilians, 956 naval hospital staff, 258 naval support staff and can handle up to 1,000 patients. *Comfort* and its crew had previously distinguished themselves in New Orleans after Hurricane Katrina in 2005, and on the day following the Haitian earthquake *Comfort* was ordered to make ready to sail, embarked many additional personnel and supplies, and departed its home port of Baltimore, Maryland, on 16 January. It arrived in Port-au-Prince on the 20th and began providing medical treatment the same day. In fact the activity rate was such that the ship reached

*A young Haitian boy is comforted by medical personnel onboard the **Nimitz**-class aircraft carrier USS **Carl Vinson** (CVN 70) following life-saving surgery, 23 January 2010.*

full operational capacity for the first time since it was delivered to the navy in 1987, utilizing all 12 operating rooms and all 1,000 beds. Although the ship was less capable than a traditional hospital on land, *Comfort* offered the most advanced medical care available in Haiti following the earthquake.

Both *Comfort* and *Mercy* have also conducted planned humanitarian missions, particularly in areas of the world where medical facilities are minimal or non-existent. For example, in 2007 *Comfort* visited 12 Central American, South American and Caribbean states where its embarked medical crew provided free health care services to communities in need. The objective of the mission was to offer valuable training to military personnel while promoting goodwill in the region. In all, the civilian and military medical team treated more than 98,000 patients, provided 386,000 patient encounters and performed 1,100 surgeries. That embarked medical crew was made up of more than 500 doctors, nurses and health care professionals from military (including other states, such as Canada) and non-governmental organizations, with the aim of supporting medical humanitarian assistance efforts ashore. *Comfort*'s dental staff treated 25,000 patients and about 1,000 pieces of medical equipment were repaired at local health facilities.

A Medium-Power Response

Yes, you may say, a superpower can provide this type of capability, but what about medium-power countries such as Canada?

Canada did send ships to the Gulf Coast after Katrina and also to Haiti after the earthquake. Unfortunately, as the East Coast AOR HMCS *Preserver* was unavailable for deployment due to refit or maintenance issues, the only naval vessels available were destroyers and frigates with limited capacity to carry supplies. In 2005 a Canadian Coast Guard icebreaker with large cargo holds full of building materials accompanied the task group but no such large vessel was available in January 2010. Nevertheless, the ships' companies consisted of about 500 well-trained

and highly motivated sailors who made themselves very useful, as was reported in Captain (N) Art MacDonald's article in the Summer 2010 issue of *CNR*.

If Canada is to contribute, in a smaller but still significant way, it could accomplish this with a ship like the Joint Support Ship if two conditions are met. First, it could make a contribution *if* that vessel has significantly greater capacity to perform these roles than the AORs *Provider*, *Protecteur* and *Preserver* (all of which were/have been in commission for over 40 years) which they will eventually replace. And, second, Canada could make a contribution *if* a third ship is built so that the navy has spare capacity to re-role one or more vessels for disaster relief or a planned humanitarian assistance mission which could perhaps be conducted on an annual basis.

With a large-capacity (1,500 lane-metres) general purpose cargo deck, which initially had been planned for these ships, I believe the equivalent of a field hospital – manned by the Canadian Forces' Disaster Assistance Response

*Military Sealift Command hospital ship USNS **Comfort** (T-AH 20) anchored off the coast of Port-au-Prince, 5 September 2007 during a four-month humanitarian deployment to Latin America and the Caribbean providing medical treatment to patients in a dozen countries.*

Team (DART) or a multinational and non-governmental medical team – could be readily installed to meet these important missions. One has only to look at the private donations of hundreds of millions of dollars made by Canadians after the Indonesian tsunami and the Haitian earthquake to see that this type of aid has huge support across the country. Why couldn't some of the federal government's matching funds go to establish this capability in the Joint Support Ships which then could be put to good use in responding to a number of such incidents over their long service lives – some of them perhaps in our own coastal waters? 🦫

Book Reviews

Assault Landing Craft: Design, Construction and Operations, by Brian Lavery, South Yorkshire: Seaforth Publishing, 2009, 128 pages, diagrams and photographs, ISBN 978-1-8483-2050-5

Reviewed by Major R.D. Bradford, CD

This book details the development and employment of the Landing Craft, Assault (LCA), one of Britain's war-winning tools of the Second World War. The story of the LCA has obvious relevance to the major amphibious operations conducted by British Commonwealth forces. It is related to the history of the Royal Canadian Navy, for the LCA was the principal equipment of four war-time landing craft flotillas. However, this book is also relevant today given the continuing focus on littoral manoeuvre in the Canadian north and the Caribbean and two new ship programs that incorporate landing craft. Canadian experience with landing craft is very limited, so any volume that usefully augments our present elementary knowledge is therefore welcome.

The LCA's development began in 1938. It was the result of an effort to provide a craft "having a small silhouette, capable of carrying forty fully equipped men and having a speed of 8-10 knots" (p. 10) for the purpose of landing the initial wave of troops in an assault while preserving organizational integrity. The first examples went into action in 1940 and a total of 1,929 were built. In British service, the LCA last saw action in the Suez Crisis of 1956. It had been the principal British and Commonwealth assault craft for raids, invasions and other littoral manoeuvre in the European, Mediterranean, African and southeast Asian theatres.

Brian Lavery does not attempt an exhaustive history but rather wishes to exhibit not only the craft but the entire experience that was the LCA. Accordingly, he provides chapters outlining the design and manufacture of the craft, the crews, the parent amphibious ships, handling and employment, the embarked troops, special versions and major operations. The author is well known as a writer of maritime books ranging in scope from the very broad (*Ship: 5000 Years of Maritime Adventure*) to the very specific (*74-Gun Ship Bellona)*, encompassing all aspects of the naval experience. That he is not specifically versed in amphibious warfare is evident in several ways in *Assault Landing Craft*. For example, in "The Army on Board" he spends an inordinate amount of time describing the British regimental system, arguably an irrelevant topic, apparently not fully realizing that the British 'regiment' is not part of the hierarchy of field formations and

units. In contrast, he never mentions that other principal 'customer,' the Commando unit.

Certain errors of fact reinforce this impression – for example, he credits US Rangers with the attacks on Port Cros and Levant in 1944 instead of the US-Canadian First Special Service Force. These problems become less troubling once the reader appreciates Lavery's technique of 'quarrying.' A very experienced researcher, Lavery sought what he assessed to be key sources, particularly official documents and doctrine pamphlets, and extracted from them sizeable blocks of information, loosely arranging them in a logical order to produce the story.

The result is not a smoothly woven, comprehensive history nor a meaningful interpretation. However, those quarried blocks contain much intriguing information in raw form for people interested in amphibious matters, especially Canadians potentially involved in landing craft procurement and operations. From kedge anchors, problems of retracting from the beach and maintaining formation to loading, deploying from davits and cranes, and crew specifications, *Assault Landing Craft* prompts thinking. One of the most important points concerns surf operations, particularly the unsuitability of the LCA in heavy Pacific surf, which contrasts with its superior merits along rocky coastlines.

As a general history, *Assault Landing Craft* is quite acceptable, notwithstanding its shortcomings, and is suited to the interested layman. The sections that focus on design, technique and certain operations make it a valuable reference for the interested practitioner, for whom it is highly recommended.

Mobilizing the Will to Intervene: Leadership to Prevent Mass Atrocities, by Frank Chalk, Romeo Dallaire, Kyle Matthews, Carla Barqueiro and Simon Doyle, Montreal: McGill-Queen's University Press, 2010, 191 pages, index, bibliography, appendices, ISBN 978-0-7735-3804-7 (paper)

Reviewed by Ann Griffiths

The Will to Intervene (W2I) Project was launched by the Montreal Institute for Genocide and Human Rights Studies at Concordia University in 2007. This book, *Mobilizing the Will to Intervene*, is a result of this project which involved examining the case studies of Rwanda and Kosovo, interviewing 80 people who were involved in or tried to influence the decision-making of the Canadian and American responses to these crises, and making recommendations about how the responses could be improved in future. As it states in the Preface, the book is

concerned with "identifying strategic and practical steps to raise the capacity of governments in the United States and Canada to prevent mass atrocities" (p. xvi). It asks why the world's record of preventing and responding to mass atrocities is so bad. And it asks what can be done to improve it.

Part Two of the book is dedicated to case studies of Rwanda and Kosovo. It is an interesting examination of the decisions made in both Canada and the United States about these two massive violations of human rights. The discussion in the United States about Rwanda as the genocide unfolded in 1994 is particularly unsettling. The case study section is designed to help the authors learn what they can from a case when intervention *did not* occur and a case when it *did* occur.

In my opinion it is Part One that is the most useful section of the book. There is no secret that this book is a call for action. The authors refer to the doctrine of the responsibility to protect (R2P), in particular its focus on *preventing* mass atrocities rather than *reacting* to them. They do not make the argument that intervening to stop civilians from being killed is the right or moral thing to do – they argue that it is in our national interest to intervene. In this day of globalization, the Rwandas and Kosovos cannot be dismissed as isolated countries far away. We *must* intervene in such places because if we do not, the result will affect our interests in the form of refugees, destabilized neighbouring countries that contain resources we need, diseases born, raised and then transmitted from refugee camps, trade that is destabilized by pirates in the absence of law and order, and/or terrorists or criminals who are born from boredom or radical influences in refugee camps. This argument is made to overcome the lack of political will to intervene in countries where mass atrocities are about to occur or are occurring already.

Part Three of the book provides policy recommendations. Its sections include enabling leadership, enhancing coordination, building capacity and ensuring knowledge. Recommendations relating to government include: make preventing mass atrocities a government priority; create a caucus (United States) and committee (Canada) for the prevention of mass atrocities; encourage individual members of the legislatures to press the executive to implement R2P; provide government support to public discussion of the country's role in preventing mass atrocities; create inter-agency bodies to coordinate research, policy and responses to mass atrocities; implement funding to institutionalize prevention of mass atrocities as a policy; expand diplomatic and development representation abroad so that more information can be gathered about potential violence; and enhance the ability of the military

to act and to be better trained to protect civilians. The book also includes recommendations on how Canadian and American citizens and the media can help build the will to intervene.

As Romeo Dallaire and Frank Chalk write in the Preface, "this book was born in hope" – hope that leaders can be persuaded to act to prevent mass atrocities from happening again. Both of these men have good reasons to want to prevent mass atrocities – Dallaire because of his experiences in Rwanda, and Chalk because many members of his family perished in the Holocaust. I want to feel this hope. I want to love this book and, indeed, parts of it are excellent. The sections about how important it is to create the political will to intervene and that it is in the national interest to intervene are well argued and the case studies are very interesting. But I fear most of the recommendations will die at birth – unfortunately, prevention is not something at which we excel. Governments can easily create committees and issue executive orders deploring mass atrocities, but when push comes to shove, they still won't act. The media certainly aren't going to focus on prevention. After all, no one buys newspapers or watches the news to read/see a story about something that didn't happen. I hope I'm wrong, I hope that *Mobilizing the Will to Intervene* is a hugely successful call to action. And, if so, the Canadian Navy may receive some calls to action in the near future. 🍁

The Battle of Leyte Gulf: The Last Fleet Action, by H.P. Willmott, Bloomington, Indiana: Indiana University Press, 2005, 398 pages, ISBN 978-0-253-34528-6

Reviewed by Commander Mark R. Condeno

Two days after the allied landings in the Philippines on 20 October 1944 the largest and last naval battle in history was fought in the waters adjoining the island of Leyte between the naval forces of Japan and the United States and its allies.

The battle of Leyte Gulf was marked as Japan's last ditch attempt to turn the tide of defeat as the fall of the archipelago would sever the Japanese Southern Strategic line. In a pincer movement strategy, the Imperial Japanese Navy (IJN) formed three task forces from four different locations that comprised its remaining fleet aircraft carriers, six battleships and scores of heavy cruisers and destroyers. Their task was to lure into a trap the US Third and Seventh Fleets and disrupt the allied landing force in Leyte Island. One of the latest additions in the literature of this enormous campaign, *The Battle of Leyte Gulf* incorporates material untapped previously.

The author, military and naval historian Hedley Paul Willmott (*Empires in the Balance*, *Grave of a Dozen Schemes*, *à e Great Crusade* and *Pearl Harbor*) is to be lauded for this impressive book. It is divided into eight chapters, the first two segments provide a discussion on war, strategy and events leading to the Philippine operation with emphasis on the Japanese conditions and movement, the situation in China, the allies' island-hopping operation, the contentious days in the Pacific between the area commands, and comprehensive background on Japan's merchant and naval shipping losses of 1944. This portion of the book provides insights and the essential understanding of the nature of the conflict and the prelude to the naval battle off Leyte.

The focus of the third chapter is an assessment of Japan's situation and decisions after its disastrous defeat at the battle of the Philippine Sea, the loss of its air groups and a majority of its fleet units that would have a profound effect on its strategy for the defence of the remaining island garrisons and the home islands. A debate on the IJN's order of battle in the aftermath of the Philippine Sea battle and coverage of its defence plan for the Philippines concludes the section.

The next chapters take the readers from the preparations of both sides to the four decisive battles that would ensure American naval supremacy in the Pacific. The author has thoroughly covered the action from the initial opening salvos, to the crossing of the battleline to the retirement of the Japanese fleet. The essence of leadership, critical decision-making and courage are all highlighted. It is made clear that logistical support in a massive operation like this played a pivotal role. The two final chapters provide a discussion of the aftermath of the battle and a look at history's verdict of the engagement.

The book is well researched and has a distinctive type of writing. As a student of naval history and having read some of the author's earlier works, I admire his in-depth historical insights and strategic and tactical analysis. It is well illustrated with an eight-page photo gallery, nine maps and nine tables. It also includes an appendix comprising the detailed order of battle of the fleets engaged, tables noting the strength of the two US fleets in the Philippines and Japanese naval and merchant shipping losses. A listings of primary and secondary sources, and an index supplement the book.

These pages provide the reader a veritable wealth of information. The book is a valuable addition in the historiography of the Battle of Leyte Gulf specifically and to naval history and World War Two in general. It will certainly become a classic. ⚜

Terrorism and Counter-terrorism: Understanding à reats and Responses in the Post-9/11 World, by Brigitte L. Nacos, 3rd edition, 2009, Toronto: Pearson Longman, 325 pages, ISBN 978-0-321-16414-8

Reviewed by Dave Mugridge

The most recent contribution by Brigitte Nacos to the examination of the ever-evolving subject of terrorism and counter-terrorism is a mixed offering – to the serious student it may seem superficial but it will be manna from heaven for political science undergraduate students. Billed as both an "accessible introductory text-book" and an "accurate, realistic, encompassing text," I found it disappointing. It is overly focused on an American interpretation and lacking in detail when examining the issue from a more global perspective.

Sadly, this book contributes little to the debate apart from introducing its fledgling readers to the grim reality of the contemporary academic study of terrorism, although it does this well. When viewed in comparison to the works of Paul Wilkinson or those of Laura Donohue (especially *à e Cost of Counterterrorism* (Cambridge University Press, 2008)), this book is both light and parochial. This is particularly the case when looking at whether/how US security policy may have contributed to the disasters that were 9/11. The introduction and conclusions are excellent, but to my mind, the author attempts to cover too much ground in the intervening pages and be all things to all men.

While Nacos talks about a more comprehensive approach to counter the threat of terrorism, her arguments are not new. I believe that the concepts of three-block warfare and maritime versatility may be beyond her grasp of coherent military planning. I would argue that the book is more study guide than textbook, providing the reader with a handy reference of dates and facts from which to write an overdue essay for an unattended class. If Nacos is your appetizer then you owe it to yourself and your education to read both Wilkinson and Donohue as your entrée and dessert before enjoying T.E. Laurence's *Seven Pillars of Wisdom* (Wordsworth, 1935) with your cognac.

I will refrain from venting further personal frustration and criticism of a non-descript addition to the library. In an attempt to please everyone, Nacos has created a hybrid fruit which looks like an orange but tastes like an apple. So I will simply say your time and money could be better spent, unless of course you skipped your political science terrorism class, forgot about your essay deadline, in which case this could be the route to a cost-effective B. This book is more a gun-room read than preparation for Staff Course or Royal College of Defence Studies. ⚜

Keeping Sackville Afloat

Jacqui Good

As I never tire of telling you, HMCS *Sackville* is Canada's Naval Memorial. She is the last of the *Flower*-class corvettes which shepherded convoys across the Atlantic during the Second World War, bringing much-needed supplies to war-torn Europe. (Perhaps one of the most humanitarian of all naval excursions.) Today, in the summer *Sackville* welcomes visitors at her berth in Halifax, next to the Maritime Museum of the Atlantic. In winter she is berthed in the naval dockyard.

The 1,000 plus trustees who maintain this feisty little ship believe that *Sackville* is to the navy what Vimy Ridge is to the army – a symbol of heroism, sacrifice and a national coming of age.

For several years, there have been plans to get the 69-year-old *Sackville* out of the water and into a permanent indoor home. The received wisdom was that her hull just wasn't going to hold out much longer and that she would be best served by moving indoors. The plan was to become part of the Queen's Landing Project (QLP) development on the Halifax waterfront.

But when the private sector part of that development was announced this fall, *Sackville* was not included. The reason? Research and soul-searching. At a November meeting of the Canadian Naval Memorial Trust (CNMT), Chair John Jay announced important changes of direction. Dockyard Labs (experts on ship hulls) made a detailed study, stem to stern, of *Sackville*. They recommended that she remain in sea water. It seems a move indoors is no longer the logical choice.

There is also a strong belief that this memorial, like Vimy, should be open and accessible to the public. The trustees would like passing pedestrians and ships to be able to see *Sackville* in an enclosed sea water berth. That would not be possible if she was in the centre of a museum – an attraction requiring an admission ticket.

Finally, there is a question of appropriate recognition. Very early on, the Queen's Quay plan called for *Sackville* to provide a backdrop to dinner theatre and simulated submarine attacks. While rejecting that idea, the Trust continues to debate how to balance two sometimes conflicting aims. On the one hand, there is a need to provide a dignified memorial to those who died. On the other hand, there is a desire to bring the ship to life with re-enactments and interpretation for a new generation of Canadians.

*HMCS **Sackville** provides a historical setting for Her Majesty Queen Elizabeth II and His Royal Highness, Prince Philip, Duke of Edinburgh as they unveil a plaque honouring the ship during the International Fleet Review, 29 June 2010.*

So, on to Plan B – a non-commercial, dignified and accessible *Sackville* on the Halifax waterfront next to the Maritime Museum of the Atlantic. At this time, CNMT has entered into an agreement with the province of Nova Scotia and the Waterfront Development Corporation to advance the public sector component of QLP. The CNMT concept plan would incorporate an enhanced Maritime Museum of the Atlantic, a Naval Memorial Hall and HMCS *Sackville* in an enclosed sea water berth. A national design competition would elicit proposals for a striking building next to the ship as a permanent memorial to the sailors who lived and died in the cause of freedom. The Maritime Command Museum (currently located in Admiralty House on the Stadacona Naval Base) might be integrated into the complex.

There is much to think about and much money to be raised. But the process has begun. And it may be that HMCS *Sackville* can be re-commissioned as a ship on active service. This would allow serving officers and men to be assigned to her – as is the case with Britain's HMS *Victory* and USS *Constitution* in the United States.

In association with a maritime and naval museum, *Sackville* could be an iconic and active ship, a memorial and a reason to visit Halifax. And she could do all this while remaining in her true home – the sea. ⚓

Jacqui Good is a trustee of the Canadian Naval Memorial Trust.

Announcing the 5ᵗʰ Bruce S. Oland Essay Competition

The *Canadian Naval Review* will be holding its annual essay competition, the Bruce S. Oland Essay Competition, again in 2011. There will be two prizes for the best essays – a first prize of $1,000 and a second prize of $500. The winning essays will be published in *CNR*. (Other non-winning essays will also be considered for publication, subject to editorial review.)

The first prize will be provided by Commander Richard Oland in memory of his father Commodore Bruce S. Oland, and the second prize will be provided by the Centre for Foreign Policy Studies at Dalhousie University.

Essays should relate to the following topics:

- Canadian maritime security;
- Canadian naval policy;
- Canadian naval issues;
- Canadian naval operations;
- Canadian oceans policy and issues.

If you have any questions about a particular topic, contact naval.review@dal.ca. And see the guidelines for submissions and judging given below.

Announcing the 3ʳᵈ Canadian Naval Memorial Trust Essay Competition

The Canadian Naval Memorial Trust Essay Competition prizes will be award to the best and second best essays written on some aspect of Canadian naval history in the period 1910 to 1990. Essays should either examine the relevance of any lessons learned to contemporary situations or provide a fresh perspective on the origins, course and implications of some event or policy.

A first prize of $1,000 will be awarded by the Canadian Naval Memorial Trust and a second prize of $500 will be awarded by the Centre for Foreign Policy Studies at Dalhousie University.

Contest Guidelines and Judging

Submissions for the 2011 *CNR* Oland Essay Competition and/or the CNMT Essay Competition must be received at naval.review@dal.ca by **24 June 2011**. Essays are not to exceed 3,000 words. Longer submissions will be penalized in the adjudication process. Essays cannot have been published elsewhere. All submissions must be in electronic format and any accompanying photographs, images, or other graphics and tables must also be included as a separate file. Photographs obtained from the internet are not acceptable unless submitted in high-definition format.

The essays will be assessed by a panel of judges. The essays will be judged anonymously – at no point during the judging process will the judges know who the authors are. The essays will be assessed on the basis of a number of criteria including readability, breadth, importance, accessibility and relevance. The decision of the judges is final. All authors will be notified of the judges' decision within two months of the submission deadline.

Operation Lama

When Hurricane Igor slammed into southern and eastern Newfoundland on 21 September 2010 its heavy rains and Category 4 winds left widespread damage and devastation in its wake. Communities were flooded, trees and hydro lines downed, and roads and bridges washed out. For 13 days, more than 1,000 members from the air, land and maritime components of the Canadian Forces were engaged in providing domestic humanitarian relief to the affected areas, delivering critical supplies such as food, water, medical supplies and fuel; providing medical evacuation; assisting in moving power crews and materials to repair power grids; delivering generators and re-supplying fuel to main communications nodes; assisting with bridge and road repair and transporting engineering analysis teams.

"Our business is the safety and security of Canada and of all Canadians," said Commander of Canada Command Lieutenant-General Walter Semianiw. "I want to congratulate all who were involved in this important relief operation."

Photo: Cpl Rick Ayer, MARLANT

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Photo: MCpl Angela Abbey, Combat Camera

Photo: Cpl Francis Gauthier, MARLANT