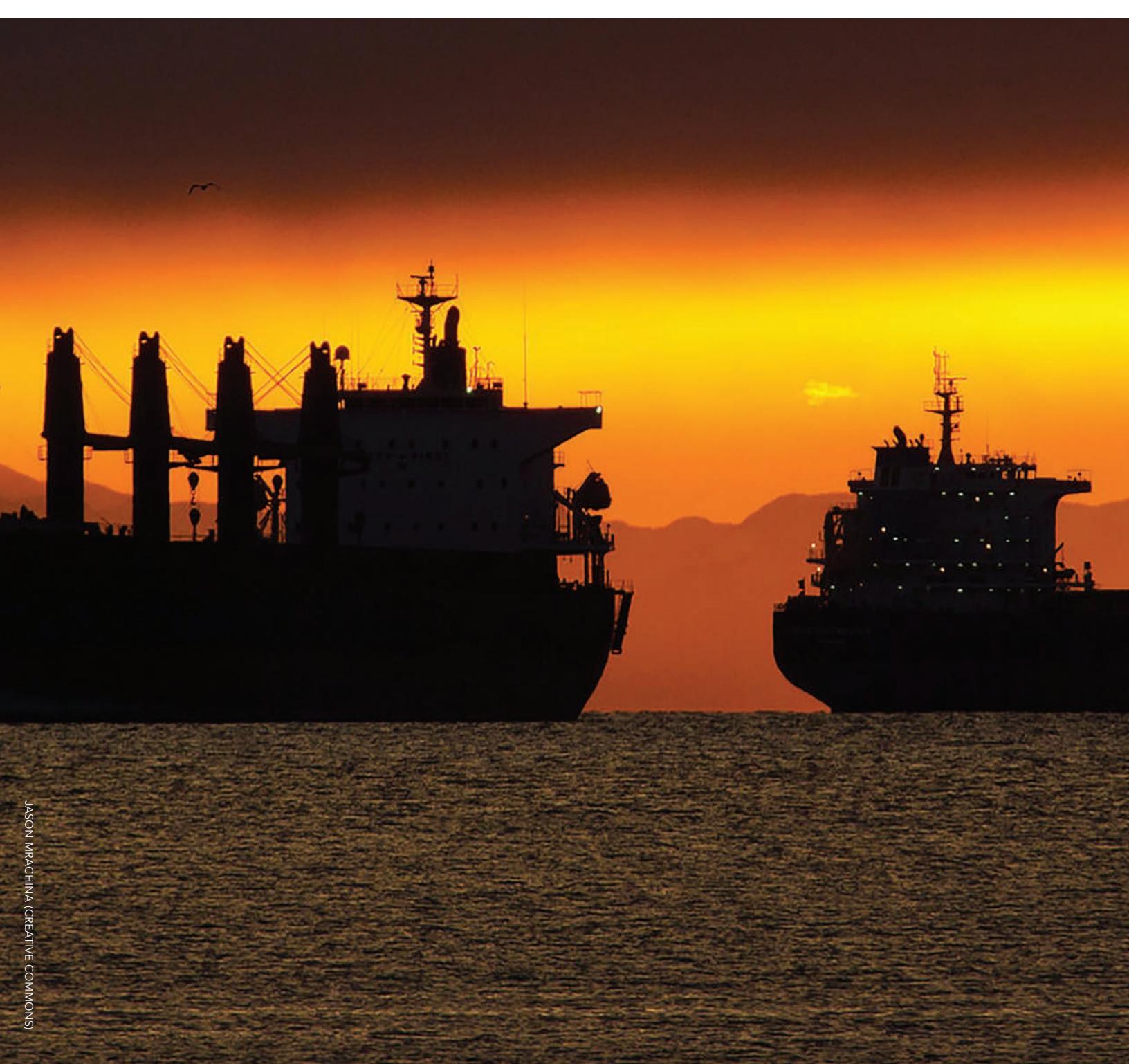


POLLUTION IN PARADISE: DUMPING BY SHIPS IN CANADA'S MARINE PROTECTED AREAS

AUGUST 2022



INTRODUCTION

Marine protected areas (MPAs) are areas of the ocean that are legally protected and managed to achieve the long-term conservation of nature. Canada, in keeping with international guidance, has committed to protecting 30% of its ocean spaces by 2030, and thus far has designated 14% of its ocean spaces as MPAs. However, these MPAs will only be as strong as the legal protections afforded to them.

Ship-source discharges and dumping are major sources of pollution that threaten MPAs in all three of Canada's ocean basins. A recent report by WWF-Canada found that ships dump 147 billion litres of harmful wastewater each year while in Canadian waters, and the vast majority of this is likely dumped into the ocean. Roughly 10% of this waste, or 14.7 billion litres, is generated within MPAs – the vast majority of which is dumped as it is created.¹

To address the threat of dumping and other harmful industrial activities in MPAs, the Government of Canada committed to introducing “minimum standards” in MPAs in April 2019, which would provide a baseline of protection from these activities.² The Government of Canada has not yet specified how the standard on dumping will be legally implemented, and some have suggested that ocean dumping is already legally prohibited within Canada.

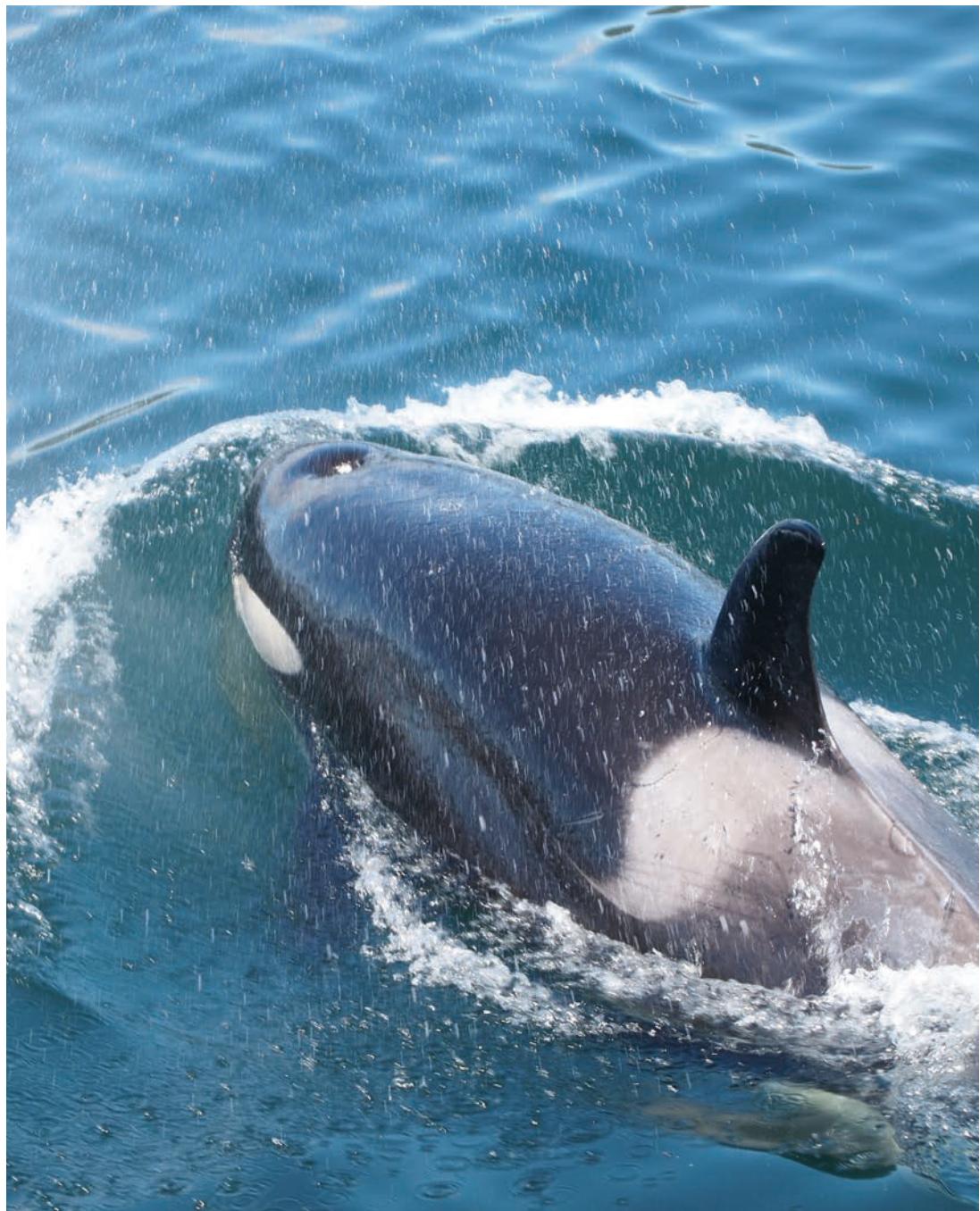
However, a closer look at the law tells a different story. Canada's most important laws on dumping, **the “disposal at sea” provisions under the Canadian Environmental Protection Act, 1999 (CEPA), apply only to a small minority of the actual dumping that takes place in Canada’s ocean.** This is because of huge legal loopholes in CEPA that exempt accidental dumping and any discharges that are part of the “normal operation of a ship.” And the regulations that do apply to these “routine” discharges, found under the *Canada Shipping Act, 2001* (CSA), fall far below standards set for shipping in other countries, including the United States.

We found that, furthermore, as the law currently stands, the vast majority of MPAs permit discharges from ships in accordance with CEPA and/or the CSA. This means that, when it comes to dumping, an MPA designation does nothing to protect the area from harmful discharges. **Within almost all MPAs, dumping is permitted as if these areas were the same as any other area of the ocean.**

¹ WWF-Canada, *National Vessel Dumping Assessment: Quantifying the threat of ship waste to Canada’s marine protected areas* (2022), prepared by Davin S, Saunders S, Liang C, Merritt W. World Wildlife Fund Canada. Toronto, Canada, online: <https://wwf.ca/wp-content/uploads/2022/02/2022-WWF-NO-DUMPING-SUMMARY-REPORT-EN.pdf> [WWF Canada] at 4.

² Fisheries and Oceans Canada, “Protection standards to better conserve our oceans,” (2019), online: <https://www.dfo-mpo.gc.ca/oceans/mpa-zpm/standards-normes-eng.html>. The three other industrial activities are mining, bottom trawl fishing and oil and gas activities.

The “disposal at sea” provisions under the Canadian Environmental Protection Act, 1999 (CEPA), apply only to a small minority of the actual dumping that takes place in Canada’s ocean... Within almost all MPAs, dumping is permitted as if these areas were the same as any other area of the ocean.



CORY SCHADT (CREATIVE COMMONS)

DUMPING UNDER THE CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999

The Canadian Environmental Protection Act, 1999 (CEPA) is Canada's flagship legislation on ocean dumping.³ Part 7, Division 3 of CEPA, "Disposal at Sea" and its associated regulations⁴ incorporates Canada's international legal commitments on disposal of substances at sea into Canadian legislation.⁵ It applies to Canada's internal waters, territorial sea and exclusive economic zone.⁶

However, in reality, the scope of the "Disposal at Sea" provisions is quite limited. These measures are intended only to address intentional disposals of substances at sea, such as dredged material and other low-risk substances like fish waste.⁷ **CEPA does not apply to disposal that is "incidental to or derived from the normal operations of a ship."**⁸ Thus, CEPA does not apply to the vast majority of pollution that ships discharge into the ocean, including sewage, greywater and scrubber washwater.

Legal Loophole:

CEPA does not apply to the vast majority of pollution that ships discharge into the ocean, including sewage, greywater and scrubber washwater... This means that the prohibition on dumping under CEPA does nothing to prevent the vast majority of ship-related dumping, which would be considered part of the "normal operations" of a ship.

³ Canadian Environmental Protection Act, 1999, SC 1999, c 33 [CEPA].

⁴ Disposal at Sea Regulations, SOR/2001-275; Disposal at Sea Permit Application Regulations, SOR/2014-177; Disposal at Sea Permit Fee Regulations, SOR/99-114.

⁵ Canada is a party to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (also known as the London Convention) and the related 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (also known as the 1996 Protocol). These provisions were initially enacted in Canada under the Ocean Dumping Control Act in 1975, before being incorporated into CEPA.

⁶ CEPA, *supra* note 3, s 122(2).

⁷ Government of Canada, "Disposal at sea: program information," (December 8, 2017), online: <https://www.canada.ca/en/environment-climate-change/services/disposal-at-sea/information.html>

⁸ CEPA, *supra* note 3, s 122(1)(h).

This huge legal loophole includes “discharge arising from the vessel-source pollution of the ship, such as galley wastes, bilge water, ballast, cleaning operations and machinery leaks” as well as disposal “from other operations taking place on the ship.”⁹ In addition, the BC Provincial Court has found that the provisions under CEPA apply only to intentional dumping, not accidental dumping or discharges like spills.¹⁰

This means that the prohibition on dumping under CEPA does nothing to prevent the vast majority of ship-related dumping, which would be considered part of the “normal operations” of a ship.



PACESTEPPERFORCHANGE (PIXABAY)

⁹ *Nanose Conversion Campaign v Canada (Minister of Environment)*, [2000] F.C.J. No. 952 (FCA).

¹⁰ *R v MV Marathassa*, 2018 BCPC 237, at para 69.



OPERATIONAL DISCHARGES: NAVIGATION IN ACCORDANCE WITH THE CANADA SHIPPING ACT, 2001

The CSA and its regulations address “discharges from normal vessel operations,” including three of the main sources of vessel discharge: sewage, greywater, and scrubber washwater. Greywater and sewage discharges are regulated under the *Vessel Pollution and Dangerous Chemical Regulations*. Unfortunately, these regulations are weak, and fall far below the standards in other countries like the United States. Scrubber washwater is largely unregulated in Canada.¹¹

- 1. Sewage.** Sewage includes human and animal waste, and drainage from toilets, medical premises and spaces containing live animals.¹² The discharge of raw sewage is prohibited within 3 nautical miles of the shoreline, with few and specific exceptions. Beyond that distance, sewage may be discharged if fecal coliform levels are lower than 250/100mL.¹³ In comparison, the fecal coliform limit within 3 nautical miles from shore allowed under the US *Clean Water Act* is 20% lower at 200/100mL, and much lower for sewage dumped within Alaska state marine waters (14/100mL/day, and a monthly max of 40/100mL).¹⁴

¹¹ Stand.earth and West Coast Environmental Law, *Regulating the West Coast Cruise Industry: Canada at the Low Water Mark* (2021), online: https://wcel.org/sites/default/files/publications/regulating_the_west_coast_cruise_industry_final.pdf at 22, 25.

¹² *Vessel Pollution and Dangerous Chemicals Regulations*, SOR/2012-69, s 1(1).

¹³ *Ibid*, s 96.

¹⁴ Stand.earth and West Coast Environmental Law, *supra* note 11 at 14, 16.

2. Greywater. The standards for greywater are even lower than those for sewage.

Greywater discharges, which include drainage from sinks, laundry, dishwasher and showers, must not result in any "deposit of solids or leave a sheen on the water."¹⁵ This applies anywhere within waters under Canadian jurisdiction, including internal waters, territorial sea and the exclusive economic zone.

There is no fecal coliform limit for greywater, unlike Alaskan regulations, which apply the same standards to greywater as sewage.¹⁶ This Canadian omission is remarkable given that fecal coliform counts can be even higher in shipping greywater than in inflow (i.e. untreated) municipal sewage.¹⁷

3. Scrubber washwater. Because of loopholes within Canadian legislation,

the vast majority of scrubber washwater is unregulated and may be discharged without limitation into Canadian waters.¹⁸ This is significant given that scrubber washwater accounts for 97% of the total waste generated and discharged by ships in Canadian waters.¹⁹ Scrubbers are installed to remove exhaust gases, such as sulphur oxide and nitrogen oxide, from the heavy fuel oil traditionally burned by ships. The scrubbers displace pollution from the air to the water by producing an acidic and toxic washwater which is commonly discharged into the ocean. This practice has been prohibited in Californian waters.²⁰

Thus, under the CSA, ships are permitted to dump large amounts of harmful substances into the ocean, so long as they are considered part of the "normal operation" of the ship. Canada's standards for discharges of greywater, sewage and scrubber washwater all fall far below standards in neighbouring jurisdictions.

The vast majority of scrubber washwater is unregulated and may be discharged without limitation into Canadian waters – which is significant because it accounts for 97% of the waste generated by Canadian ships.

¹⁵ Vessel Pollution and Dangerous Chemicals Regulations, *supra* note 12, s 131.1(4).

¹⁶ Stand.earth and West Coast Environmental Law, *supra* note 11 at 16.

¹⁷ *Ibid.* at 9.

¹⁸ *Ibid.* at 25.

¹⁹ WWF-Canada, *supra* note 1 at 5.

²⁰ WWF-Canada, *supra* note 1 at 21.

DUMPING IN MARINE PROTECTED AREAS: THE STATUS QUO

Given Canada's relatively weak regulations for dumping and discharges under CEPA and the CSA, it would seem critical that the most sensitive ecological areas of the ocean, designated as MPAs, should have strong protections in place. In order to determine the level of protection currently in place for Canada's MPAs, we analyzed the legislation for each of Canada's three main types of federally-protected MPAs:

1. MPAs designated under the Oceans Act and managed by Fisheries and Oceans Canada (DFO);
2. National marine conservation areas (NMCAs), designated under the Canada National Marine Conservation Areas Act (CNMCA Act) and managed by Parks Canada; and
3. Marine National Wildlife Areas (mNWAs), designated under the Canada Wildlife Act and managed by the Canadian Wildlife Service (CWS).

As discussed further below, we found that the majority of Oceans Act MPAs, as well as Canada's only mNWA, permit navigation in accordance with the CSA and its regulations, with no additional protections. **This means that discharges of greywater, sewage and scrubber washwater – making up 97% of legal discharges, when excluding ballast water – will be permitted within MPAs as a matter of course.**



1. Marine Protected Areas, Oceans Act

Oceans Act MPAs are MPAs that are designated under sections 35 or 35.1 of the Oceans Act for conservation and protection.²¹ Despite this seemingly strong purpose, the majority of Oceans Act MPAs are exposed to the same amount of dumping and discharge from commercial shipping as unprotected areas of the ocean. This is because the majority of Oceans Act MPAs either explicitly or implicitly permit shipping as it is carried out in unprotected areas of the ocean.

Each MPA has its own regulations under the Oceans Act and they all include a blanket prohibition on any activity that “disturbs, damages, destroys or removes” marine life or its habitat.²² The regulations for MPAs designated in 2010 or earlier also specifically prohibit depositing, discharging or dumping substances that are likely to harm marine life and habitat; however, this language is not further defined and does not appear in the regulations for more recent MPAs.²³ DFO has indicated that the prohibition is implicit in newer MPAs as part of the blanket prohibition on disturbing, damaging or destroying marine life.²⁴

However, all Oceans Act MPA regulations also include a list of exceptions for activities that are allowed within the MPA despite the general prohibition, and there is almost always an exception for navigation in shipping. MPAs designated after 2010 all contain an explicit exception for navigation, which is typically permitted if carried out in accordance with the CSA and its regulations. DFO has indicated that regulations for those MPAs designated before 2010, which are silent on shipping, may in fact have intended to allow navigation in accordance with the CSA as well.²⁵

One recent improvement to this overall trend is the Banc-des-Américains MPA, designated in 2019. Large ships (more than 400 tonnes, or certified to carry more than 15 people) may not discharge greywater or sewage within the MPA.²⁶ This suggests that the Government of Canada has recognized that discharges which it considers to be within the normal operations of ships can cause harm to MPAs and should be restricted.

In the majority of MPAs, dumping and discharges from ships are no more restricted than in unprotected areas of the ocean.

²¹ Oceans Act, SC 1996, c 31, ss 35, 35.1.

²² A typical prohibition provision resembles this one found in the *Anguniaqvia niqiqyuam Marine Protection Areas Regulations*, SOR/2016-280, s 3: “It is prohibited in the Marine Protected Areas to carry out any activity that disturbs, damages, destroys or removes from the Marine Protected Areas any living marine organism or any part of its habitat or is likely to do so.”

²³ *Basin Head Marine Protected Area Regulations*, SOR/2005-293, s 3(1)(b); *Eastport Marine Protected Area Regulations*, SOR/2005-294, s 4(1)(b); *Gilbert Bay Marine Protected Area Regulations*, SOR/2005-295, s 3(1)(b); *Musquash Estuary Marine Protected Area Regulations*, SOR/2006-354, s 3(1); *Tarium Niryutait Marine Protected Area Regulations*, SOR/2010-190, s 6(b); *Bowie Seamount Marine Protected Area Regulations*, SOR/2008-124, s 3(c); *Gully Marine Protected Area Regulations*, SOR/2004-112, s 4(c).

²⁴ Communication from Fisheries and Oceans Canada, 2020.

²⁵ Communication from Fisheries and Oceans Canada, 2020. DFO has identified a shift in the process of MPA establishment, such that newer MPA regulations are more detailed in terms of the activities that are allowed through exceptions to the blanket prohibition. Therefore, within older MPAs, shipping may be allowed even if not explicitly exempted by the regulation, and the intent to allow shipping may be reflected in the Regulatory Impact Analysis Statement. DFO has indicated that this discrepancy may be addressed as MPA regulations are updated and harmonized.

²⁶ *Banc-des-Américains Marine Protected Area Regulations*, SOR/2019-50, s 6.

2. National Marine Conservation Areas, Canada National Marine Conservation Areas Act

The Canada National Marine Conservation Areas Act (CNMCA Act) has as an objective of establishing a national system of marine protected areas that represents each of Canada's 29 marine and Great Lakes regions.²⁷ The Act states that the purpose of NMCAs is to benefit present and future generations and ensure the protection of the areas' ecosystems.²⁸

However, the CNMCA Act does not address shipping within NMCAs, provide any additional protections for dumping and discharge from ships, or restrict shipping activities in any way. While the Act does authorize the Ministers of Environment and Transport to jointly introduce regulations on shipping within NMCAs, no such regulations currently exist.²⁹

This means that NMCAs are exposed to the same level of dumping and discharge from ships as unprotected areas of the ocean.

The CNMCA Act does prohibit disposal of any substances within the waters of an NMA, unless authorized by permit under the CNMCA Act or under the "disposal at sea" provisions of CEPA.³⁰ This is no different than the CEPA regulations that apply elsewhere in the ocean, which as noted above, do not apply to accidental dumping or from discharge arising from the "normal operations of a ship."³¹

As a result, **there are currently no provisions under the CNMCA Act or its regulations protecting NMCAs from dumping, as compared to unprotected areas of the ocean.**

²⁷ Canada National Marine Conservation Areas Act, SC 2002, c 18, Preamble.

²⁸ *Ibid*, s 4.

²⁹ *Ibid*, s 16(3).

³⁰ *Ibid*, s 14(1).

³¹ *R v MV Marathassa*, *supra* note 10; CEPA *supra* note 3, s 122(1) "disposal".



BRODIE GUY (CREATIVE COMMONS)

3. Marine National Wildlife Areas, Canada Wildlife Act

The Canada Wildlife Act was enacted to protect areas for wildlife and their habitat. There are two distinct types of MPAs that can be created under the Canada Wildlife Act: terrestrial national wildlife areas (NWAs) designated under the *Wildlife Area Regulations*, with marine components; and protected marine areas designated under their own regulation under the *Canada Wildlife Act*, also referred to as marine National Wildlife Areas (mNWAs). At the time of writing, there are several NWAs with marine components, and only one mNWA: the Scott Islands marine National Wildlife Area.

NWAs with a marine component are partially protected from shipping discharges because vessels are prohibited from operating within an NWA except with a permit.³² A permit is also required to carry out industrial activities within an NWA, which includes commercial shipping.³³ Thus ships may not transit an NWA without explicit approval, and restrictions on dumping or discharge could be included as conditions of any permit that is granted.

While the *Scott Islands Protected Marine Area Regulations* prohibit all activities that disturb, damage or destroy marine life, and also prohibit harmful dumping and discharges, these prohibitions do not apply to vessels navigating in accordance with the CSA.³⁴ **This means that the Scott Islands mNWA has the same level of protection from ship dumping as unprotected areas of the ocean.**

³² *Wildlife Area Regulations*, CRC, c 1609, s 3(1)(l): “no person shall... in any wildlife area ... (l) operate a conveyance — including a conveyance without a driver on board — other than an aircraft”; and the *Canada Wildlife Act* defines conveyance as a “vehicle, aircraft or water-borne craft...”

³³ *Ibid*, s 3(1)(q).

³⁴ *Scott Islands Protected Marine Area Regulations*, SOR/2018-119, ss 2(1)(a), 5(b).

Restrictions on Dumping in Federal MPAs

Maritime Zone	Name of MPA	Designation type	Year established	Navigation explicitly permitted?	Prohibition on depositing, discharging or dumping	Other provisions related to dumping
Internal Waters	Basin Head	Oceans Act MPA	2005	Yes, but limited to direct transit in Zone 2	Yes	N/A
	Musquash Estuary	Oceans Act MPA	2006	Yes, in Zones 2A or 2B	Yes	N/A
	Banc-des-Américains/ American Bank	Oceans Act MPA	2019	Yes	No	Section 6 prohibits discharges of sewage or greywater for large vessels (>400 gross tonnage, or certified to carry more than 15 people)
Territorial Sea	Eastport	Oceans Act MPA	2005	No	Yes	N/A
	Gilbert Bay	Oceans Act MPA	2005	No	Yes	N/A
	Tarium Niryutait	Oceans Act MPA	2010	No	Yes	N/A
	Anguniaqvia niqiqyuam	Oceans Act MPA	2016	Yes, in accordance with CSA and the Arctic Waters Pollution Prevention Act	No	N/A
	Hecate Strait and Queen Charlotte Sound Glass Sponge Reefs	Oceans Act MPA	2017	Yes, in accordance with CSA, in adaptive and vertical management zones	No	N/A

Restrictions on Dumping in Federal MPAs (cont'd)

Maritime Zone	Name of MPA	Designation type	Year established	Navigation explicitly permitted?	Prohibition on depositing, discharging or dumping	Other provisions related to dumping
Territorial Sea and Exclusive Economic Zone	Gwaii Haanas	National Marine Conservation Area Reserve	2010	N/A (not restricted under Act)	Yes, prohibited without permit under CEPA	N/A
	St. Ann's Bank	Oceans Act MPA	2017	Yes	No	N/A
	Laurentian Channel	Oceans Act MPA	2019	Yes	No	N/A
Exclusive Economic Zone	Endeavour Hydrothermal Vents	Oceans Act MPA	2003	No, but MPA only protects subsoil, seabed and superjacent (i.e., immediately overlying) waters	Yes	N/A
	The Gully	Oceans Act MPA	2004	Yes, in accordance with CSA and International Maritime Organization requirements	Yes	N/A
	SGaan Kinglas/Bowie Seamount	Oceans Act MPA	2008	Yes, vessel travel in accordance with CSA and Coasting Trade Act	Yes	N/A
Internal Waters, Territorial Sea, Exclusive Economic Zone	Scott Islands	Protected Marine Area, Canada Wildlife Act	2018	Yes, in accordance with CSA	Yes, but does not apply to shipping in accordance with CSA	N/A
	Tuvaijuittuq (Interim)	Oceans Act Interim MPA (by Ministerial order)	2019	Yes, for foreign vessels	No	N/A

CONCLUSION

This analysis demonstrates that in the most important and most vulnerable marine ecosystems of Canada, which have been designated for special protection, dumping can continue as if the area were wholly unprotected. The impact of this weak regulatory framework is not just hypothetical: for example, WWF-Canada has found that more than 4 billion litres of wastewater are generated, and likely dumped, each year in Scott Islands mNWA.³⁵

Canada can and should put stricter laws in place prohibiting all harmful dumping within MPAs, including the most common discharges like sewage, greywater and scrubber washwater.

This should begin with those MPAs in internal waters and the territorial sea and can be done as part of the legal implementation of the MPA standards that Canada has promised (which were announced in 2019 but are not yet in place).³⁶

A prohibition on dumping must close existing legal loopholes that persist in the “disposal at sea” framework under CEPA, as well as in the majority of MPA regulations. This will require a comprehensive definition of dumping that goes beyond intentional disposals to include all forms of pollution that are part of the “normal operations” of a ship. Canada should strengthen its regulations for all areas of the ocean under the CSA, and provide strict prohibitions for those areas of the ocean that have been set aside for special protection. A straightforward way to implement these standards across all MPAs is by regulation under the Oceans Act and other MPA legislation. DFO, Parks Canada and Environment and Climate Change Canada can also look to the Banc-des-Américains MPA on the east coast as an example for how to begin.

³⁵ WWF-Canada, *supra* note 1 at 8.

³⁶ Government of Canada, News Release: Canada announces new standards for protecting our oceans (25 April 2019), online: <https://www.canada.ca/en/fisheries-oceans/news/2019/04/canada-announces-new-standards-for-protecting-our-oceans.html>



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