

**Brief prepared for**  
**The Standing Committee of the House of Commons**  
**on Fisheries and Oceans (FOPO)**  
**Study: Marine Cargo Container Spills**  
March 24, 2022



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## **About the BC Marine Debris Working Group (BCMDW)**

Membership in the BCMDWG spans the coast from Haida Gwaii to Victoria and includes non-profit organizations with paid staff; purely voluntary organizations and corporations. Originally formed to co-ordinate the marine debris removal efforts of the members and share best practices, the group has grown in scope to include advocacy for the control of plastics from manufacturing through to end-of-life.

Our members have over a decade of experience working on the Province's most remote shores and devising cost-efficient methods for removing marine debris from foreshore and near-shore environments. We have formed relationships with local First Nations and service providers; we are intimately familiar with access points, hazards and working conditions; and we have built and trained a large body of volunteer support for these efforts. We maintain inventories of the supplies and equipment needed to work safely within the scant infrastructure of our province's most remote regions.

When the Zim Kingston spilled 104 containers into the ocean in October, 2021, we were ready to respond and contacted Incident Command directly after it was confirmed that the first container had been located. The events that have followed—or failed to follow—thereafter are a travesty that has polluted the coastline from Haida Gwaii to Tofino. It is reasonable to expect that this pollution will continue to accumulate as the containers now sitting on the relatively shallow continental shelf break up and release their contents.

We offer the following comments and recommendations in the hope that they will assist the Government in identifying and rectifying the gaps in our spill response capacity.

### **Container Spills and their Attendant Risks are on the Increase**

The number of shipping containers lost in the North Pacific Ocean has increased quite dramatically in recent years, with over 3000 lost over the winter months of 2020-2021, exceeding average annual losses of 568 (World Council of Shipping). The trend toward ever-larger ships capable of carrying more cargo may pencil out well in the boardroom, but modern container ships are in fact less resilient to the increasingly frequent, increasingly violent storms by virtue of both ship length and the height of cargo stacks.

COVID supply chain disruptions have created chaos in the world's ports that is not yet solved; the people stowing and securing that cargo are as stretched as health care workers. The sheer volume of backed up cargo may preclude the special handling and stowage procedures that are best practice for dangerous cargo. Mistakes may be made in securing the load; or the purely voluntary code of best practices published by the International Maritime Organization (IMO) may not be observed due to time constraints. Supply chain disruption has also created urgencies that may see more ships attempting to cross the Pacific during the winter months when storms are most frequent and violent.

A patchwork of international law governs the carriage of goods at sea, with most nations still adhering to the "Hague-Visby Rules", propounded in 1924, long before multi-modal containerized

shipping existed. Limits to the liability of the carrier offer no incentive to opt for safer loads. Efforts to update those rules have resulted in newer conventions to which Canada is not signatory; although the Marine Liability Act requires the Minister to reconsider signing on to the Hamburg Rules every 5 years after 2005, even those rules have been overtaken by a subsequent version, known as the Rotterdam Rules.

The increasing number of spills bears directly on how we hold polluters to account. We have already, in the few months since the Zim Kingston spill, encountered a situation where debris bearing all the hallmarks of a recent spill of pre-consumer goods may in fact be from a December 1, 2020 spill from the vessel ONE Apus, which lost 1816 containers several hundred miles northwest of Midway. It took nearly a year for that debris to begin showing up on US mainland shores; and discoveries by BCMDWG members working on the Zim spill this year may be the first reports of matching debris in Canada.

Of course, the Zim could have been carrying a shipment from the same shipper who lost cargo from the ONE Apus; the point is that under current regimes governing the shipment of goods, we have no way of knowing. The risk is that, as debris continues to accumulate, the agents for these polluters refuse to acknowledge responsibility because it is unclear which of them is responsible. And since Canada currently has no response plan or dedicated funding to deal with beached debris, the ocean and its inhabitants are left to pay the price, with BCMDWG members scrambling to find funding from private philanthropists to enable expensive and intricate removal operations.

The nature of goods being shipped and the risks they pose for the environment has also changed dramatically since carriage at sea rules were developed. Of particular concern is the shipment of hazardous chemicals, such as the potassium amyloxanthate spilled from the Zim Kingston. This is one of a class of chemicals that can spontaneously combust in the presence of water and may have been responsible for the extensive fire damage to the cargo. Canada's inability to respond effectively to such fires was exposed by the incident: had it not been for two Maersk salvage tugs that happened to be in port in Victoria agreeing to respond to the fire, it might well have destroyed the ship and cargo while releasing toxic gasses. This fate befell the containership X-Press Pearl last June, in what has been described as Sri Lanka's worst environmental disaster.

### **Environmental Impacts**

Potassium amyloxanthate dissolves in water and is highly toxic to aquatic life. It decomposes into other toxic compounds, including acutely poisonous hydrogen sulphide. The location of the containers holding the chemical (if in fact they are still 'holding' it) is unknown. Were these containers to have fetched up in near-shore waters, the contents could have devastated local marine life. Actual impacts from this spill are presently unknown.

The most evident and lasting impact of the Zim Kingston spill is the expanded polystyrene (EPS) foam that now litters all of the beaches involved. EPS is used extensively in packaging and breaks down very rapidly in the foreshore environment. By the second week post-spill, when BCMDWG members were allowed onto the beaches, it was already degraded to the size of crumbs—bright, white crumbs clearly resulting from the spill, covering the beaches as if a heavy hailstorm had just

passed. These crumbs are readily mistaken by wildlife for food, and can result in death from starvation or strangulation of the digestive tract. Fish, seabirds and marine mammals are all potentially impacted by EPS pollution. EPS crumbs cannot practically be removed and will refloat on every tide, exposing more marine life. As they age, they will adsorb pollutants from the seawater and become vectors for the delivery of all manner of chemical pollution to the marine organisms that contact or ingest them.

Many of the brightly-coloured plastic items spilled will be of particular interest to seabirds, which seem to respond to colour as an indicator of food value. Such items are preferentially fed to chicks and result in death by starvation.

Other items found from the spill to date, such as plastic bags, are frequently found in the stomachs of sea turtles, cetaceans and pinnipeds. Plastic strapping, cords, lengths of fabric and similar items pose a risk of entanglement.

### **Response Time and Cleanup Efficacy**

BCMDWG members could have had response teams on the beaches within 24-48 hours, because we know the access points, the people and the infrastructure available to support such a response. Prompt response prevents refloatation and wide dispersal—which is why we have such a problem on our hands today. “Polluter pays” should not mean that the pollution problem is left to grow in scale while the polluter hires the contractor of its choice and waits for that contractor to learn the terrain and find the resources needed. We were left for 10 days to fend off willing volunteers while Incident Command was established and the consultant tried to figure out how to respond.

During this time, it is apparent that a number of people ignored our warnings and went out to the beaches under extremely dangerous conditions. This could well have complicated and delayed the response even further, had anyone been injured. It is important, during heli-lift operations, to know who may be in the area and ensure their protection from operations. No road closures were established and although BC Parks did eventually post park closures, many of the affected beaches are not parks and are easily accessed by road. Setting up control points to prevent untrained or ill-equipped people from getting to the beaches should have been an early priority.

Consultation with First Nations is a requirement of the Incident Command system and some was undertaken, according to Coast Guard. Unfortunately, Quatsino Chief Tom Nelson, on whose territory the containers grounded, was not among those consulted until well into the response planning. When the consultant, Amix, finally contacted BCMDWG members to say, ‘you can send in your volunteers now’, it was only as a result of personal relationships that we were aware that Quatsino members had not yet been contracted for the work, which unfortunately delayed the response further while they sorted that.

When, on November 5, BCMDWG attended the site with 19 highly-trained members equipped for cleanup and heli-lifting, it appeared that no provision had been made to transport us by helicopter to the sites still requiring cleanup; and no supplies of lift bags had been set aside for us (thankfully,

we had brought our own). We were directed to hike to a beach that had already been cleaned and asked to “pick up the small stuff”. EPS crumbs were all that was present on arrival.

Because we know the terrain, we divided into teams and chose to attend known collecting beaches, having secured Amix’s agreement to fly out any debris so collected. We bagged and cached about 10 lift bags, approximately 15 cubic metres, in the few hours we were able to work on account of high tides. Ongoing efforts by Epic Exeo have resulted in a total removal of some 24 debris bags as a purely volunteer effort. Overflights in recent days have established that this is merely the tiniest fraction of the debris remaining in hard-to-access pocket beaches and on islands and coves throughout the northwest Island and Scott Islands.

Setting priorities for the process of cleanup was also fraught: the contractor’s choice to empty the stranded container first, rather than gather the material that was already circulating on the tides, reflected greater consideration for the appearance of cleanup (removing that container) than for the actual danger that the circulating material poses for wildlife.

Most of the recovered material went straight to landfill, because the landfill staff had no warning that unsorted material was arriving. As a result, tonnes of EPS packaging, ordinarily not allowed in the landfill, is now buried there, together with many more tonnes of salvageable items from the spill. This is work we could have done and fully expected to do; but the contractor insisted there was no point.



Tens of thousands of boxes like these were landfilled whole, while others shed their packaging on the beaches where it quickly broke down.



Ongoing cleanup efforts by persons unknown have been discovered in subsequent cleanup and monitoring efforts by Epic Exeo. These have been in some cases counterproductive, with partially-filled debris bags left in the intertidal zone where they will soon become buried or wash out to sea again. Still others have been filled and secured to shore, but in places from which heli-lifting will not be possible. We have heard of cleanup teams being dispatched by helicopter to beaches with only ordinary garbage bags, with the intention of bringing them back inside the helicopter. This is a breathtakingly expensive and inefficient way of going about beach cleanup.

Photo: fresh EPS foam crumb coats all of the impacted beaches—which now include the majority of the WCVI, Haida Gwaii and probably the Central Coast.

## **Jurisdictional Gaps and Communications Issues**

### *Federal Jurisdiction*

Coast Guard has no authority to require that the ship owner contract with knowledgeable, local groups. It has no legislated mandatory response time to enforce; and so, was left with trying to persuade Amix to avail itself of local resources. It was apparently without an up-to-date contact list for First Nations and had no means of assuring that members contracted for the work were properly trained.

End points for remediation work of this nature are, understandably, set on a case-by-case basis through Incident Command. We, the members of the public most closely involved in the work and anxious to plan appropriately for the summer season's regular work, have no idea what constitutes an end-point for the polluter's efforts. We know that there is some ongoing monitoring, because a member met someone on the trail who volunteered that he is a monitor. We know that someone is periodically working at collection, because we've seen their caches of debris. This information should all be public knowledge, but we have been unable to get answers to our questions from Coast Guard. We have filed an Access to Information request to try to ascertain what is in place to deal with what may well be decades of pollution impacts.

No information regarding funding available to finance future cleanup work has been forthcoming. To date, BCMDWG efforts have provided volunteer labour, with costs being reimbursed on a case-by-case basis due to Epic Exeo's Ashley Tapp's continued efforts to monitor and clean impacted beaches while maintaining a relationship with Amix. This could end at any time.

#### *Provincial jurisdiction*

We are not privy to any issues that may have arisen as between the Province and the Federal government in addressing this spill, except to observe that BC Parks is poorly resourced for the job of maintaining the West Coast parks under its jurisdiction and certainly had no dedicated staff to respond to the requirements of Incident Command. From the viewpoint of jurisdiction, container spills engage both the province and the federal government, in that foreshores, the seabed under provincial jurisdiction, fish and marine mammals and ocean health are all potentially impacted by a container spill. Work to create and manage an effective response regime must engage the Province of British Columbia.

#### *First Nations' Jurisdiction*

Similarly, First Nations' territorial stewardship jurisdiction is engaged. First Nations' communities, reserve lands and culturally significant areas are disproportionately represented in the remote outer shores of Vancouver Island, the Central Coast and Haida Gwaii and it is unthinkable that a response regime should be created without their full involvement. It is clear from this spill experience that issues of communication and jurisdiction arose as between Quatsino First Nation and Coast Guard, in that Quatsino's territorial stewardship ought to have earned it an immediate seat on Incident Command and assurances that their members would be trained, equipped and paid as a first priority for the cleanup work. We understand that none of the Nuuchahnulth Nations was represented on Incident Command, either.

#### *Local Government Jurisdiction*

Finally communication with the Regional District and its landfill operators was unquestionably poor. Landfill rules were broken to accommodate the collected debris and no effort whatsoever was made to sort for salvage: this is something that would have been expensive for Amix to undertake, but could have been organized on a cost-recovery basis by BCMDWG. An effective spill response must be integrated with regional governments and communities.

### **Improving Polluter Accountability**

**Improving accountability must begin with creating a regime to which the polluter will be held to account.** Canada has no spill response regime for dealing with container spills. It has no geographic or other plans to guide prioritization of cleanup efforts—for example, prioritizing removal of material prone to refloatation within a fixed response time.

So far as we are aware, there is no policy regarding cleanup end-points. The fact that the vast majority of the containers sank cannot be considered the end of the story: this was also the case following the ONE Apus spill and more than one year later, debris continues to wash ashore. It is

wholly unreasonable to expect that sunken containers will remain intact. We will likely be facing ongoing plastic and other pollution for years to come. It is probable that the insurance available from the Zim Kingston will be inadequate to cover all of the demands created by this spill over time; and we are aware of no mechanism for funding future response efforts.

If Canada is to create a regime that stipulates end-points and response times, it must also ensure that its policy or regulatory goals are reasonably attainable; and that requires that there be a work force to accomplish those goals.

There are clear parallels here with the oil spill response regime, with the same key shortfall: Canada has no plan or infrastructure for managing the large labour force required to respond effectively to spills of any kind. The job of recruiting, training, equipping, mobilizing, accommodating, supervising and paying the hundreds to thousands of people required for effective spill response cannot be left entirely to post-spill response planning.

In the case of oil spills, the industry was required to establish and maintain certain response assets, now maintained by the Western Canada Marine Response Corporation. In addition, Canada established the Ship Source Oil Pollution Fund by imposing a tax on the volume of oil being shipped through its ports, to deal with the potential for response costs to exceed insurance available from the polluter. This approach was taken because it was clear that the response capacity stipulated in international agreements could fall far short of actual cleanup costs.

While the situation is similar for the case of container spills, there is also one important difference: containership traffic engages far too many operators, most of whom have no domestic assets or interests in Canada, for a similar response regime to be put into practical effect. Where relatively few oil companies could be easily taxed on the volume of oil being shipped through the country to our ports, and required to co-operate in the establishment of response assets, it is impractical to suggest that containership operators might do the same. However, the vast number of containers being shipped does give rise to the potential for a very small levy per container, imposed and collected at the ports, to quickly create a substantial response fund that could be administered by a Joint Spill Response Task Force composed of dedicated federal, provincial and First Nations staff.



## Recommendations:

1) In co-operation with the Ministers of Environment and Transportation, the Minister of Fisheries, Oceans and the Canadian Coast Guard should pursue work at:

- The International Maritime Organization (IMO), to bring the major shipping nations to the table to either sign and ratify the Rotterdam Rules or create new containership Rules that take into account the volume and risk of modern container traffic;
- The IMO, to require ships' manifests to more accurately identify goods being carried and to require them to be made available to the Port Authority and Joint Spill Response Task Force in advance of entry to the Port;
- The IMO, to provide for locating devices to be incorporated in containers;
- United Nations Environment Programme (UNEP), to ban the use of expanded polystyrene foam in packaging for marine transport;
- UNEP and IMO, to review and update the rules relating to the marine transport of hazardous chemicals and in particular, those chemicals that are reactive with water and prone to combust.

2) Establish a levy per container shipped through Canadian ports and create a fund to respond to container spills. Ensure that the fund is structured to support immediate response efforts.

3) Establish and fund a Joint Spill Response Task Force composed of federal, provincial and First Nations representatives and task it to:

- create the geographic response plans required to respond effectively to container spills on all coastlines;
- set policy for response objectives and timelines;
- recruit, train, equip and drill a work force capable of responding to spills in the regions most likely to be impacted; and
- develop the infrastructure required to respond to spills in a timely manner.



4) Retain, without delay, the services of salvage tugs capable of emergency response for vessels of the size and cargoes of the character that are actually passing through our ports.