

MARINE POLLUTION BACKGROUND

WHAT IS MARINE POLLUTION?

Marine pollution (also called marine debris) is, “[a]ny persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment...” The Atlantic region is highly dependent on the resources and ecosystem services provided by the ocean and has a vested interest in protecting and maintaining a healthy marine environment. Marine pollution poses a significant threat to our region’s social, economic, and natural capital by threatening water quality, habitat, commercial fish stocks, the safety of marine navigation, and the natural beauty and safety of our coastal communities.

SOURCES AND TYPES OF MARINE POLLUTION

While many people may initially think of marine pollution in terms of waste from marine industries like fishing or shipping, the most significant source of marine pollution in fact comes from mismanaged land-based waste that is washed into the oceans. Globally, 80% of the pollution spoiling our oceans comes from land-based waste, and 2016 research by students of the Marine Affairs Program at Dalhousie University confirmed that this is also the case in the Halifax Harbour.

Data collected by the Ocean Conservancy shows cigarette butts topping the top ten list of items recovered from shoreline clean-ups, with plastic goods making up 83% of the remainder of the list. This waste profile directly aligns with the composition of litter observed year after year in Clean’s province-wide litter clean-up program, the Great Nova Scotia Pick-Me-Up. In 2016-17, the most common litter items recovered were (in decreasing order of prevalence): coffee cups (which are plastic-lined); cigarette butts (which contain in the plastic filters) and cigarette packaging; food wrappers; fast food packaging; plastic bags; fishing-related waste; cans; paper; plastic bottles; and Styrofoam.

The common feature of all of these products is that they are consumer products designed for only a single use before disposal.

THE THREATS POSED BY MARINE POLLUTION

Marine pollution has many negative impacts, including:

- Damage to marine and shoreline habitats;
- Harm to wildlife (including commercially important fish stocks), who can be maimed, suffocated, poisoned and killed;
- Threats to marine navigation when waste becomes caught up in vessel propulsion systems or clogs intakes;
- Transportation of invasive organisms such microbes, algae, invertebrates and other animals that can hitch a ride on floating plastics;
- Potential risk to human food chains through ingestion of microplastic particles; and



- Diminishment of local use and tourism revenues at sites marred by litter.

Plastics, and in particular single-use, disposable consumer plastics, account for a great deal of the above harms. The Ocean Conservancy estimates that the ocean may already contain more than 150 million metric tonnes of plastic. And it's been projected that by 2050, without any significant changes to our use of plastics as a society, there will be as much plastic by weight in the oceans as fish.¹

OUR VISION

At Clean, we embrace the principle of the circular economy: a system where waste in all forms is reduced, and products are optimally reused and recycled. Such a vision is necessary to help mitigate and adapt to the challenges of declining resources, growing populations, and a changing climate. This vision requires transformative change in how we purchase, use, and ultimately dispose of the goods we use every day.

Over three decades of cleaning up litter, we have seen how the best efforts of Nova Scotian citizens and governments cannot keep pace with the deluge of disposable, single-use plastics. While there is an element of personal responsibility at play in the problem of litter, it is short-sighted to focus solely, or even mostly, on the role of individual choice because this focus ignores the barriers that prevent people from properly disposing of their waste. These barriers include:

- Lack of sufficient and/or conveniently located waste collection infrastructure;
- Insufficient care of the waste collection infrastructure we do have (i.e., garbage bins that are allowed to overflow with waste and become crusted with filth and flies); and
- Lack of education and awareness of the actual harms caused by litter; many people fail to realize that it's so much more than an eye-sore.

But beyond these barriers, there are larger systemic issues at play. We live in a culture that elevates materialism and convenience. These values tend (inadvertently) to support a 'culture of disposability'.

Clean believes that, through collaboration with partners from all sectors, we can begin to shift our behaviours from 'waste-full' to 'waste-less'. To begin to dismantle the culture of disposability, we need to move beyond cleaning up litter to identifying and addressing its root causes. Critical to achieving this vision is the need for deep public engagement and education, a willingness in all sectors to experiment with new tools and innovations, and an acceptance that the transformation requires time, persistence, and resources.

THE CLEAN FOUNDATION

We are a registered charity that seeks to encourage sustainability by informing, enabling and inspiring Nova Scotians to respect the environment in all aspects of daily life. To learn more about us, please visit clean.ns.ca.

¹ The Ellen MacArthur Foundation. (2016). The New Plastics Economy: Rethinking the future of plastics. https://www.ellenmacarthurfoundation.org/assets/downloads/EllenMacArthurFoundation_TheNewPlasticsEconomy_15-3-16.pdf

