

Building Community Solutions to Marine Litter



Project Overview

Every year, about 8 million metric tons of plastic waste enters the ocean from land.¹ This litter, most of which consists of single-use plastic, can enter the ocean through inadequate waste management, littering, or illegal dumping in communities located in coastal areas and inland watersheds. To put an end to marine litter, we need to engage locally with communities to reduce land-based litter and stop it from reaching waterways and the ocean.

In 2017–2019, the Commission for Environmental Cooperation (CEC) implemented a project to build community solutions to marine litter in the **Tijuana River** and **Salish Sea watersheds**, two ecologically rich, economically important transboundary areas.



Tijuana River watershed



Salish Sea watershed

Working with local organizations, the CEC coordinated multi-jurisdictional engagement and capacity building with local communities in the Salish Sea and Tijuana River watersheds to design and implement low-cost and low-technology solutions to address local marine litter issues. In doing so, the CEC created new local knowledge and networks to strengthen future marine litter reduction initiatives in those regions.

By facilitating cooperation between Environment and Climate Change Canada, the Mexican Ministry of Environment and Natural Resources, and the United States Environmental Protection Agency, the CEC is uniquely positioned to work on marine litter in transboundary areas, as it provides an intergovernmental mechanism to address marine litter in shared waterways. This project demonstrates that community actions that complement national-level initiatives and build on binational engagement can help reduce marine litter in shared watersheds.

Local Solutions to a Global Problem

Stopping litter from entering the oceans involves many levels of government and diverse stakeholders, and can be most effectively addressed through collaborative action, especially when working in transboundary watersheds. This approach recognizes that local action is essential to solving marine litter, and can be replicated in all communities in North America.

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1. J. R. Jambeck, R. Geyer, C. Wilcox, T. R. Siegler, M. Perryman, A. Andrady, R. Narayan, K. L. Law. 2015. *Plastic waste inputs from land into the ocean*. *Science*, 347 (6223): 768

Reducing Marine Litter Through Local Action:

The Approach



1 Describe the local marine litter portrait

2 Identify and engage local marine litter stakeholders

3 Convene stakeholders to identify solutions to the local marine litter problem

4 Design and implement low-cost and low-technology solutions to the local marine litter problem

5 Share and replicate successes in marine litter reduction



The Approach

1 Describe the local marine litter portrait

Collect and compile information about efforts to combat marine litter, local laws and solid waste programs, studies that have been conducted in the area, information on sources and types of marine litter in the community, and any other knowledge that can inform the discussion when stakeholders come together.

2 Identify and engage local marine litter stakeholders

Stakeholders are the people, communities and organizations that are affected by marine litter, can act to reduce it, or have an interest in solving the problem. Identify stakeholder “champions” to lead the process and sustain the initiative after the wider group of stakeholders have been engaged and the initial work is done.

3 Convene stakeholders to identify solutions to local marine litter

Host a workshop to present the initiative, describe the local land-based litter problem, identify local issues and challenges to reducing marine litter, examine existing initiatives and their successes, discuss opportunities, and prioritize possible solutions. This workshop will help build a local collaborative network of people focused on preventing marine litter.

4 Design and implement low-cost and low-technology solutions to local marine litter

From the list of possible solutions developed at the workshop, identify those that are low-cost, low-technology, and realistically achievable in the local context. For each solution, develop an implementation plan with the lead stakeholders that will be implementing the solution. Apply the solution for a specified time period or in a pilot area. Assess the results of this pilot implementation and adjust your approach to support the goal of reducing litter before you expand your solution to a longer period or wider area.

5 Share and replicate successes in marine litter reduction

Evaluate the progress of each marine litter reduction solution throughout its implementation and share the results with the community. Document your successes and challenges to help other communities reduce marine litter.

Building Community Solutions to Marine Litter



Getting Stakeholders Involved

The stakeholders convened in the Salish Sea and the Tijuana River watersheds included representatives from local, provincial, state and national governments, industry, nonprofit organizations, and youth groups, indigenous leaders and academics. Together, they discussed the local marine litter problem, shared information and experiences, and identified low-technology and low-cost litter reduction actions to implement in each watershed.

How to Tackle Marine Litter

There are many ways to address marine litter. In the Salish Sea and the Tijuana River watersheds, the stakeholders focused on these two approaches:

1. **Reducing litter** by promoting behavioral changes through education campaigns and investigating sources of litter.
2. **Preventing litter** from entering waterways and reaching the ocean by designing physical barriers.

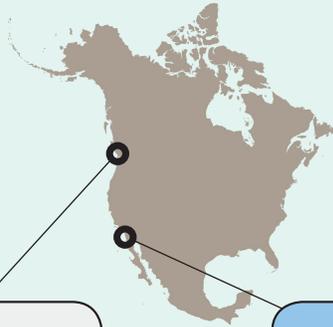
Citizen science events were organized in public spaces near shorelines to raise awareness of the issue and collect data to inform decision-making. At the sites where these events took place in each watershed, single-use plastic items and cigarette butts were the most common types of litter found. Through this project, coordination and capacity building contributed to strengthening local efforts and networks on both sides of the border, which will help future marine litter reduction initiatives in each region.



The Marine Litter Problem

Marine litter, including plastics and microplastics, is now found in every marine environment, from the polar regions to the deep ocean, and in all levels of marine life, from zooplankton to fish, seabirds, whales, and even seafood. Marine litter has significant impacts on ecosystems and economic activity. Plastic or other littered items can entangle or be ingested by wildlife, and affect the tourism and fishing industries, among others. Plastics are persistent and can break down into small pieces that accumulate in the environment and enter the food chain. Most marine litter comes from consumer products, often single-use items, reaching the ocean from watersheds.





Actions in the Salish Sea watershed:

- Communities: Metro Vancouver, British Columbia and Whatcom County, Washington
- Identifying plastic fragments in public parks adjacent to shores to better understand the local marine litter and its sources.
- Studying litter found in stormwater drains and analyzing the effectiveness of storm drain filters.

Actions in the Tijuana River watershed:

- Communities: Imperial Beach, California, and Tijuana and Rosarito, Baja California
- Educating students, industry and the wider public on the marine litter issue to make local communities an active part of litter reduction.
- Gathering information on the type of litter that flows into the United States from Mexico to improve barriers and solid waste management in the border area.

Find out more information at www.cec.org/marinelitter



Commission for Environmental Cooperation

This brochure was prepared for the Commission for Environmental Cooperation (CEC) as part of the 2017–2018 project “Building Community Solutions for Marine Litter”, implemented in partnership with Environment and Climate Change Canada, Mexico’s *Secretaría de Medio Ambiente y Recursos Naturales* (Ministry of Environment and Natural Resources), and the U.S. Environmental Protection Agency. The CEC facilitates collaboration and public participation to foster conservation, protection and enhancement of the North American environment for the benefit of present and future generations, in the context of increasing economic, trade, and social links among Canada, Mexico, and the United States. To date, the CEC has published over 400 reports, maps, tools and resources related to the North American environment, all accessible at www.cec.org.



Photos in this brochure courtesy of CEC, US National Oceanic and Atmospheric Administration, Wildcoast and OceanWise.