Project: Building Community Solutions for Marine Litter

1. **Two-year budget: C$700,000**

2. **Short statement on the need identified (including current status), the project objective and the outcomes (achievable by June 2019) to address it**:
Marine litter is a global problem that affects economies, coastal environments, ecosystems and human health. This project aims to address the lack of trilateral, intergovernmental coordination that could effectively prevent and reduce land-based sources of litter from entering the marine environment through a community-driven, stakeholder-based, solutions-focused approach. To achieve this, the project will work with local stakeholders, including youth and Indigenous communities, to:

   1) describe the marine litter issue at pilot sites within shared-border watersheds;
   2) identify/implement feasible solutions to address local challenges;
   3) communicate results and provide recommendations to decision makers.

   Through this stakeholder-based approach at the selected pilot shared-border watershed sites, the project will help improve local assessment, decision-making and networking processes for implementing and monitoring local initiatives. The approach will use a trash-free waters framework, adapted to local and national circumstances, which uses stakeholder engagement to focus on reducing and preventing land-based sources of marine-litter from entering waterways. The aim is to build capacity through awareness and engagement, via a coordinated multi-jurisdictional approach, to develop lasting solutions for local stakeholders and their communities. The case studies will be shared with federal decision-makers and interested communities for them to replicate, and be communicated through public outreach across North America to raise public awareness of community-based solutions for marine litter.

3. **Explain how the project can achieve more impact by working trinationally, and why the CEC is the most effective vehicle to undertake this work:**
Marine litter in border waterways is a transboundary issue involving many governments and diverse stakeholders that can benefit from improved coordination and action. This project contributes to the CEC strategic plan to: support the establishment of collaborative networks, with youth and indigenous communities, so as to share knowledge and experience; undertake conservation efforts to protect and restore ecosystems; identify beneficial practices; and increase awareness, engagement and capacity in communities. The CEC is an effective vehicle to undertake this work because there is not an existing intergovernmental mechanism either to address marine litter from a continental perspective or the movement of trash between the member countries and their common waterways. This problem affects shared waterways, but also has broader impacts on the world's ocean economy, fisheries, maritime transport, human health and the environment. In 2010, Canada, Mexico and the United States together contributed about 384,726 tons of land-based plastic waste into the world’s oceans; this statistic makes

North America a significant contributor of land-based marine debris, and left unchecked, this amount is estimated to increase exponentially in the near future (Jambeck et al. 2015).

4. **Describe how the project may capitalize on, or advance, the relationship between ecosystems, job creation, gender impacts, and income generation:**
Marine litter is the result of human activities through the direct or indirect deposit of waste in the aquatic environment. This upsets the sensitive balance of ocean and coastal ecosystems that threatens livelihoods by directly affecting fishing industries, tourism, national economies, and trade. This project heightens awareness about the relationship between land-based activities and the environment. The proposed work also identifies relevant, applicable low-cost, low-tech solutions to reduce and prevent marine litter, which in turn could provide opportunities to: improve local waste management; lessen impacts related to tourism (aesthetics) and to livelihoods and trade dependent on fishing; and improve ocean/coastal ecosystems.

5. **Describe how the project complements or avoids duplication with other national or international work:**
This proposed project is complementary to the work undertaken by local, regional, national and international efforts to address this transboundary issue. These activities, at best, operate piecemeal across the countries and this project provides an opportunity for a coordinated effort in North America that will improve comparability of sites and the adoption of a standard approach that can be taken up by others. This project is the first North American project that uses a transferable and standard community-based approach to find solutions for marine litter in border watersheds.

6. **Describe opportunities for inclusion of traditional ecological knowledge (TEK), if applicable, and how these opportunities are incorporated into the project:**
This project has a citizen-science characterization component that could include the sharing of TEK by indigenous communities in the specified watersheds. Specifically, TEK could inform a greater understanding of watershed characteristics (e.g., water flows, flora/fauna, history of pollution, etc.) that are part of implementing solutions to the marine litter problem.

7. **Describe opportunities for youth engagement, if applicable, and how these opportunities are incorporated into the project:**
This project has a citizen-science component that includes youth (e.g., schools, Scouts, environmental clubs, etc.) in the specified watersheds. Youth will be trained as citizen scientists, to collect marine litter data that will inform the project process and ultimate implementation activities. This project recognizes that youth are excellent ambassadors for the environment and a fitting demographic to advocate for upstream source reduction and a shift from "throw-away" to "reduce/reuse" cultures. Effective youth engagement both generates creativity and inspires communities. Youth will be involved throughout the entire project and, as a result, will gain awareness of the issue and become empowered to address local and shared border challenges.

8. List significant involvement of other levels of government, Indigenous groups, local communities, experts, private sector, civil society and others, as applicable:

In addition to a trilateral approach, this project will involve at least two shared watersheds (e.g., Salish Sea, Gulf of California/Tijuana River Watershed, Rio Grande/Río Bravo Watershed/Gulf of Mexico, St. Lawrence River/Great Lakes Watershed) that involve multiple stakeholders, such as local and state/provincial governments (Semarnat, US EPA, ECCC), indigenous groups, local communities, local and national experts, NGOs, public institutions, members of the public, and the private sector. The success and sustainability of this project depends upon the active coordination among these stakeholders to identify and implement relevant marine litter solutions, as well as to provide recommendations to decision makers.

9. Identify relevant committee members and their federal agencies in each country committed to developing this project, and implementing it, if approved:

Canada: Sarah DaSilva, Jacinthe Séguin—Environment and Climate Change Canada
Mexico: Salomón Díaz Mondragón—Semarnat
United States: Andrew Horan, Janice Sims, Bob Benson, Margaret McCauley—US Environmental Protection Agency

10. List the objectives and activities to be conducted to achieve measurable results:

Objectives	Main activities to achieve objectives	Measurable results
Understand the status of marine litter at selected pilot sites in at least two shared watersheds, for use as a basis for identifying local solutions	**Activity 1** Conduct a study at each pilot site within the watershed to identify main sources, composition and areas of accumulation of marine litter	The key sources of marine litter in the selected pilot sites are known to help inform local litter reduction efforts
Local citizens are engaged in local marine litter issues through community networks at selected pilot sites	**Activity 2** Identify relevant stakeholders, including youth groups, and local and indigenous communities, to establish a network of citizen scientists to implement a common method for data collection among all of the identified communities	A network of citizen scientists in each of the specified watersheds is actively collecting data on marine litter to help inform marine litter reduction solutions

Objectives	Main activities to achieve objectives	Measurable results
Communities have the capacity and the tools to develop community-based marine litter reduction and prevention solutions	**Activity 3** In each pilot site, develop a stakeholder advisory team and convene stakeholder meetings to prioritize actions that reduce marine litter	Projects that will be implemented by stakeholders in specified watershed areas
Communities have implemented marine litter prevention and reduction solutions, and public awareness of community-based solutions to marine litter is raised through outreach	**Activity 4** Implement the low-tech, low-cost solutions in the pilot sites through sustained collaboration with stakeholders, and summarize and share process and pilot projects, identify lessons learned and challenges to improve the approach while highlighting successes	Completion of low-tech, low-cost solutions that reduce marine litter in the specified watershed areas