

| | | |
|--|--|------------------------------|
| Project 9: Reducing Emissions from Goods Movement via Maritime Transportation in North America | | Operating Year(s): 2013–2014 |
| Planned Budget for two years: C\$250,000 Year 1: C\$150,000 Year 2: C\$100,000 | | |
| Strategic Priority/Objective: Climate Change–Low-Carbon Economy / Improved Comparability of Emissions Data, Methodologies and Inventories among the Three North American Partners | | |
| Project Summary This project will highlight technical approaches to limiting emissions from ships, with a focus on air pollution reduction technologies for nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter (PM). CEC partners will share information on technical analyses to assess impacts and benefits of controlling ship emissions of conventional pollutants (PM, SOx, NOx) needed by Mexico to establish an Emission Control Area (ECA) under the International Maritime Organization (IMO) International Convention for the Prevention of Pollution from Ships - Annex VI, or MARPOL Annex VI, such as information on air quality modeling and human health benefits analyses. CEC partners will also work collaboratively to identify North American trends in development and adoption of ship emission control technologies and best practices that reduce criteria air pollutants such as SOx, NOx and PMs. | | |
| Short-term Outcomes (at halfway point) <ul style="list-style-type: none">• Air quality modeling and computing tool to provide data under baseline and ECA scenarios.• Training for further development and updating the existing Mexican ship emission inventory. | | |
| Long-term Outcomes (by the end of the project) <ul style="list-style-type: none">• Environmental and socio-economic assessment for establishing an ECA in Mexico, and recommendations for implementation of MARPOL Annex VI in Mexico.• Framework for the ratification and implementation of MARPOL Annex VI and establishment of an ECA in Mexico. | | |
| Longer-term, environmental outcome (post project) <ul style="list-style-type: none">• Reduced criteria air contaminants emissions such as SOx, NOx and PMs from ships in North America through the adoption of best practices, technologies and policies. | | |
| Tasks necessary to reach the environmental outcome: 1) Air quality modeling and emission inventory support 2) Framework for the ratification and implementation of MARPOL Annex VI in Mexico | | |

| Task 1) Air quality modeling and emission inventory support | | | | |
|---|--|--|---------------|--|
| Subtask | Project outputs | How does the subtask/output move the project towards the environmental outcome | Timing | Budget (activities) |
| 1.1 In preparation for air quality modeling, add port equipment emissions to Mexican national emission inventory and collect existing port emissions data from the US and Canada. | Report on emissions from port equipment. | This subtask will provide key input to the national emission inventory. | Fall 2013 | Year 1: C\$13,000 |
| 1.2 Update the existing Mexican national ship emission inventory and collect existing ships emissions data from the US and Canada. | Training to support the further development and updating of the existing Mexican national ship emission inventory. | This task will support ship emission reporting in Mexico and the identification of indicators] for air quality modeling. | Fall 2013 | Year 1: C\$36,000 |
| 1.3 Conduct air quality modeling of ambient PM, NOx and ozone and deposition of PM and SOx for Mexico and surrounding areas under: 1) baseline scenario 2) ECA scenario | Report and maps on air quality and deposition modeling for both scenarios. | This subtask will provide key input to the environmental and socio-economic assessment (task 2.1). | Fall 2013 | Year 1: C\$49,000 Year 2: C\$41,000 |

| Task 2) Develop a framework for the ratification and implementation of MARPOL Annex VI in Mexico | | | | |
|---|---|--|----------------------|---|
| Subtask | Project outputs | How does the subtask/output move the project towards the environmental outcome | Timing | Budget (activities) |
| 2.1 Conduct an environmental and socio-economic assessment for establishing an ECA in Mexico and recommendations for implementation of MARPOL Annex VI in Mexico. | <p>The assessment will describe and compare costs and benefits in the economic, social and environmental aspects.</p> <p>Report of cost-benefit assessment, including costs of fuel refining capacity, fuel import and export, maritime infrastructure, and technology adoption, emission controls, health benefits and costs, etc.</p> | This assessment will provide the information needed to consider ratification of MARPOL Annex VI and the establishment of an ECA. | Spring and Fall 2014 | <p>Year 1: C\$52,000</p> <p>Year 2: C\$34,000</p> |
| 2.2 Develop a framework for the ratification and implementation of MARPOL Annex VI and establishment of an ECA in Mexico. | Identify information, procedures and policies required to implement MARPOL Annex VI and establish an ECA. | The framework will equip Mexico with the steps needed for the ratification of MARPOL Annex VI and establishment of an ECA. | Winter 2014–2015 | Year 2: C\$25,000 |

Explain how this project meets the selection criteria adopted by Council in the Strategic Plan (See below)

The goal of all projects funded by the CEC will be to support the efforts of the Parties to conserve, protect and/or enhance the North American environment. The following criteria will guide the Secretariat, Working Groups, Committees, and other appropriate officials of the Parties in considering cooperative activities for Council approval under operational plans. These selection criteria do not apply for activities to be funded through the NAPECA grant program.

- **How does the project contribute to achieving Council's strategic objectives as described within the current Strategic Plan, or as related to other priorities subsequently confirmed by Council?**

This work addresses several of the objectives in the 2010–2015 Strategic Plan, as follows:

4.1 Health Communities and Ecosystems, 1. Improved environmental health of vulnerable communities in North America: This project will further reduce the risks to vulnerable populations in North America by leading to measures to reduce conventional pollutant emissions.

4.2 Climate Change – Low-Carbon Economy, 1. Improved comparability of emissions data, methodologies and inventories among the three North American partners and 2. Strengthened engagement of experts and information-sharing: This work will enhance the information on the potential reduction of climate-forcing pollutant emissions from ships, on pollutant inventories, and it will strengthen information sharing among experts.

- **Are the proposed objectives North American in scope? In other words, how are the proposed results relevant to protecting the environment in North America? (For example, what would Council members announce to the press at the successful completion of this project?)**

Undertaking such initiatives could lead to strategic results for the Parties, including:

- A common approach to reducing maritime shipping emissions in North America;
- Better public health and environmental protection from conventional and climate-forcing pollutants in North America.
- **What are the specific, clear and tangible results that will be achieved and how will progress toward each result be measured over time? Identify performance measures to be used to indicate success at reaching all outcomes and/or performance.**

The results of task 1 include technical reports on air quality modeling, cost-benefits, and health-benefit assessment results, and a report outlining an implementation and ratification approach for Mexico for MARPOL Annex VI and establishment of an ECA. Performance measures to be used include quality assurance and control practices association with modeling and assessments, a timeline for output completion, documentation of data collection efforts and regular reporting on expenditures and progress.

- **Explain why the CEC is the most effective vehicle for the Parties to undertake the project, considering:**
 - **The value-added of doing it under the CEC cooperative program**

This project builds on the work underway to implement the North American ECA for US and Canada, which will serve as a driver for promoting clean fuels and technologies in the maritime transport sector along the entire length of the North American East and West Coasts.

- **Any other public, private or social organizations that work on such activities**
- **Opportunities to cooperate and/or leverage resources with such organizations**

- **Does the project propose a clear timeline for implementation of the activities, including a target end-date for CEC's involvement? Where applicable, describe how the work will continue after CEC involvement ends.**

As this is new work under the CEC, the only envisioned target end-date for CEC involvement is at the end of the current two-year project funding cycle in 2015. Should the work successfully support Mexico's decision to ratify MARPOL Annex VI and establish an ECA, this portion of the work would continue within Mexico. The current US-Canada ECA will also continue beyond 2015.

- **Where applicable, identify with reasonable specificity:**
 - **Linkages with other relevant CEC projects, past or present, in order to create synergies, capitalize on experience, or avoid duplication**

As this is new work under the CEC, there is no duplication. Synergies with other transportation efforts will be maximized as the projects are implemented. For example, several stakeholder groups from other CEC transportation efforts may be involved.

- **The target audience, as well as its receptivity and capacity to use the information that may be produced as a result of the project**

There is a keen interest from the three Parties as well as from various stakeholders to undertake this work. The main beneficiaries of this project are policy makers in Party countries seeking information about opportunities to reduce criteria air pollutants such as SO_x, NO_x and PMs emissions from ships. Stakeholders benefitting from the project may also include private and public sector entities engaged in maritime shipping and technologies and community and environmental health protection. The share of the public that is impacted by shipping emissions is another target audience.

- **The beneficiaries of capacity building activities that the project may include**

This work will provide an opportunity for capacity building in Mexico to enable generation of the technical information and implementation approaches needed for MARPOL Annex VI and an ECA.

- **The relevant stakeholders, with particular attention to communities, academia, NGOs and industry, and their involvement and contribution to a successful outcome**

At this early stage of the work, the main stakeholders are the governments. Over the longer-term, communities, NGOs, and industry will be involved.