



Long-term Impact Assessment

of CEC's Work on Forest Carbon (2013–2017)





US Forest Service

Background

The forests of North America play an important role in the global greenhouse gas balance by removing carbon dioxide from the atmosphere, storing it as “forest carbon” in forest ecosystems. Between 2013 and 2017, the Commission for Environmental Cooperation (CEC) invested C\$770,000 in two 2-year projects focused on generating scientific information to improve our understanding of the role of land cover, land cover change, and forestry in the North American carbon cycle and identify opportunities for improved land management and climate change mitigation activities and their impacts on greenhouse gas (GHG) balances.¹

In 2020, the CEC commissioned a report to assess the outcomes and long-term impacts of these two forest carbon projects. This report concludes that both projects were highly successful and produced a legacy of articles and knowledge, including reports, articles and datasets; tested carbon budget models in different landscapes; developed tools and methods for combining diverse datasets; and explored the GHG emissions and removals for various forest sector mitigation scenarios. This work also allowed experts from Canada, Mexico and the United States to work together to expand their perspectives, learn new tools and contribute to the advancement of scientific knowledge beyond what they could have achieved as individuals or as individual country teams. As for the longer-term impacts or influence of CEC’s forest carbon work, a number of interviews with governmental and nongovernmental experts highlighted that these projects did contribute in some way to advancing scientific knowledge and possible shifts in policy.

1. The projects were: *Integrated Modeling and Assessment of North American Forest Carbon Dynamics and Climate Change Mitigation Options*, 2013-2015, two-year budget = C\$410,000; and *Integrated Modeling and Assessment of Climate Change Mitigation Options in the North American Forest Sector*, 2015-2017, two-year budget = C\$360,000.

Long-term Influence

The assessment of CEC's 2013–2017 forest carbon work, which draws from CEC's strategic and operational plans, published and internal project documents, published scientific articles and expert interviews, highlights the projects' long-term influence as follows:

Did the projects contribute to the CEC's environmental priorities and strategic objectives?

The two forest carbon projects contributed substantially to addressing the CEC's environmental priorities and strategic objectives, "Climate Change-Low Carbon Economy" and "Climate Change Mitigation and Adaptation," for the 2010–2020 period. The projects improved comparability of emissions data, methodologies and inventories among the three North American partners as evident from the products and advances in methods and tools. The projects also contributed to advances in knowledge, producing a suite of reports, methods, tools and results of mitigation scenarios. They contributed significantly to advances in understanding the need for regionally distinct approaches to forest sector mitigation options to ensure reductions in GHG emissions; and, finally, they enabled strengthened engagement of information-sharing between experts in the three countries.

Have the projects succeeded in improving the three countries' understanding of the current and future role of forest ecosystems in the North American carbon budget?

The advances in scientific knowledge and tools from the projects have definitely contributed to understanding of the current and future role of forest ecosystems in the North American carbon budget. The projects produced knowledge about forest ecosystems, disturbances and potential mitigation options that can be used to improve forest management practices to both reduce emissions and increase sinks. The contributions, in terms of the spatially explicit facet of mitigation options, were identified as particularly significant.

To what extent have the projects stimulated improved management of these forest ecosystems by identifying the best available approaches to reduce emissions and/or protect current carbon storage and sequestration?

The ability of scientific advances to influence policy and on-the-ground practice can take years and thus it is very challenging to link the outcomes of the projects directly to changes in policy. However, a number of interview responses highlighted examples of where the advancements in methods and knowledge generated from these projects have helped build on the scientific foundation which in turn has contributed to better policies and mitigation portfolios.

How have agencies used the information produced through the projects?

Agencies and experts in all three countries have continued to use at least some of the information and tools produced through the implementation of these projects. Participants have continued to use the actual land cover data and maps and have applied the methods and tools. They have also used the information learned about the need for a portfolio of mitigation options to explore these issues further in different geographic areas.

To what extent have experts replicated similar efforts at the subnational, national or international level?

Similar efforts are being replicated in other contexts, including in Canada, at the state level in the United States through partnerships between not-for-profit agencies and state governments, in Mexico, and in other countries, including in Central and South America.



Recommendations for the CEC

Based on the conclusions and lessons learned of the impact assessment carried out for these projects, including the input of interviewees, the following points emerged as priority recommendations for future CEC projects and operational plans:

- The CEC objective of supporting trilateral expert engagement and knowledge sharing is one of the greatest benefits of these projects. Given the evident importance attached to capacity building and knowledge sharing by the CEC, it would be useful to ensure that these components are embedded as requirements in CEC projects.
- The CEC should continue to identify priority environmental challenges and support targeted projects that enable experts from the three countries to collaborate to advance knowledge and develop policy options that address those challenges. One important area identified by interviewees was to have more focus on the links between climate change mitigation and adaptation policy, to ensure synergy between CEC work in the two areas.
- Two-year timeframes for CEC projects of this nature are too short to enable substantial progress toward longer-term impact, especially for projects where the advancement of scientific knowledge and its translation into policy is a long-term process. Thus, the CEC may wish to consider longer-term projects that match the timeframes of the five-year strategic plans. In all cases, it is important to ensure that timelines are realistic for the results expected.
- Project management and logistic and communication support from the CEC Secretariat are essential for project success. The CEC should ensure that it retains sufficient administrative capacity and staffing levels to provide the required institutional support and project management structures for optimal project impact.
- The CEC should ensure that a suitable amount from its overall budget, or from individual project budgets, is set aside to finalize, edit, translate, and publish project outputs, such as reports, that are not quite finished by project end. Funds could also be set aside to undertake widespread communication of the findings post-project. This would ensure that project results end up in the public domain and that investments by the CEC and project partners are leveraged to maximal effect and have the greatest long-term impact.
- Communication of scientific research and other complex topics requires a broad suite of communication tools and venues. The CEC should ensure adequate support for the creation of user-friendly, non-technical briefs and infographics to communicate complex findings. Both during and after projects, the CEC should continue to leverage its position to support project teams in finding opportunities to present their results to high-level officials and forums to elevate project findings and maximize impact on policy.
- The CEC should ensure it maintains the legacy of project results, ensuring all technical reports are available on its website and that clear links to the reports are provided on project description pages to facilitate retrieval of materials. Links to relevant or resultant scientific articles will also help highlight project findings.