

# Analysis of Opportunities to Include the Concept of Blue Carbon in Mexican Public Policy

From the Standpoint of International Commitments, the National Legal Framework and Financial Mechanisms

## Executive summary



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## Abstract

This analysis was prepared to improve understanding of opportunities for including the concept of blue carbon in Mexican public policy. This work forms part of the trinational project (Canada, United States and Mexico) of the Commission for Environmental Cooperation (CEC) for 2015–2016: *North American Blue Carbon: Next Steps in Science for Policy*, which also seeks to improve communication and the exchange of information and lessons learned on this topic among the three countries, as well as improve the capacity for recovery of North American coastal zones. Based on the analysis performed, recommendations are offered that will help Mexico determine what strategies and which current policy tools can be used to improve the conservation and restoration of blue carbon-sequestering ecosystems, particularly mangroves.

Supported by the experience of the two participating institutions, this analysis is intended to be comprehensive and objective, and includes an in-depth examination of current opportunities—including a case study—with regard to three strategies: (i) defining how Mexico can take advantage of coastal carbon and include it in its policy, to contribute to the fulfillment of its international obligations acquired; (ii) deciding what legal instruments under the state and federal legal frameworks can include the concept of blue carbon; and (iii) determining the financial mechanisms that can support blue carbon initiatives in the country. Each strategy was addressed by defining its scope and the proposed potential actions that the federal government could undertake to protect ecosystems that capture and store blue carbon, as part of the national change mitigation and adaptation strategies.

## Executive Summary

Coastal wetlands are among the planet's most productive ecosystems, as they offer environmental services such as carbon sequestration, support for fisheries, protection of coasts, water purification and the conservation of biodiversity. According to recent studies, mangroves and salt marshes annually capture two to four times more carbon than any mature forest system and, compared to tropical forests, store between three and five times more carbon per equivalent area. Unlike tropical forests, in coastal ecosystems most of the carbon is stored in the soil and not in the surface vegetation. Looking at these environmental services and considering mangroves alone, the benefits provided to Mexico each year have been valued at more than US\$100,000 per hectare.<sup>1</sup>

However, coastal wetlands are increasingly under threat. Their destruction is due primarily to mismanaged human activities and driven by short-term economic gain, whose ecosystemic costs exceed the rate of natural heritage recovery, and which underestimate the value of the goods and services on which the country's economy is largely dependent. Although Mexico is taking measures to improve the protection of its coastal environment, the legal frameworks in general are outdated.

To strike a balance between conservation and development requires a consideration of political, social, economic and environmental factors that determine which development projects should be carried out, and which policies should be enacted and applied to support the conservation of the environment. The fact that these factors are approached in a public policy context will contribute to the sustainable management of natural systems that are highly valued in terms of the capture and storage of so-called blue carbon. In turn, this will give rise to the protection and sound management

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<sup>1</sup> See: <<http://thenaturalnumbers.org/mangroves.html>>.

of carbon sinks and help Mexico attain its ambitious objectives and international commitments with respect to climate change mitigation.

This analysis is intended to improve the understanding of opportunities available to include the concept of blue carbon in Mexican public policies. Recommendations are offered that can help Mexico determine what strategies and current policy tools can be used to improve the conservation and restoration of ecosystems that capture blue carbon, mangroves in particular.

The main strength of the international instruments relating to blue carbon is the protection of carbon sinks, as determined by the United Nations Framework Convention on Climate Change (UNFCCC), the Aichi Targets and the Paris Agreement. Mexico has the opportunity to adhere to these instruments with a view to conserving and restoring the ecosystems that house blue carbon, while fulfilling its binding international commitments.

Mexican law, on the other hand, addresses blue carbon issues from various standpoints, making it necessary to address the conservation of ecosystems that capture and store blue carbon from a comprehensive approach focusing on four strengths: i) the right of ownership granted to the federal government, as these ecosystems are located within the Federal Maritime Land Zone (*Zona Federal Marítimo Terrestre—Zofemat*); ii) the recognition of the payment of environmental services and offset mechanisms; iii) the recognition of these ecosystems as carbon sinks, and their conservation and restoration as potential mitigation matters accordingly, especially within protected natural areas, and iv) the recognition of mangroves as priority protection species.

We believe that today there is an immense opportunity to finance the conservation of coastal wetlands, if mitigation and adaptation strategies—carbon sequestration and coastal protection services, respectively, both within the National Climate Change Strategy (NCCS)—are linked with biodiversity strategies—the National Biodiversity Strategy—not only due to the importance and vulnerability of mangroves and seagrasses as priority species, but also due to their role as biodiversity aggregators. This comprehensive approach (mitigation, adaptation and biodiversity) is reflected in the actions of the 2015–2020 Strategic Plan by the Commission for Environmental Cooperation (CEC) of North America, defined and accepted by the environment ministries of the three countries.

However, there is still much uncertainty surrounding the factors that influence carbon capture and storage in these ecosystems and, therefore, in the regulatory frameworks for financial schemes to make the initiatives profitable, attractive to investors, and socially beneficial for communities. More and better scientific work is still needed to achieve a comparative basis or benchmark with regard to the coverage of these ecosystems in Mexico, and thus a better quantification of actual carbon reserves (in surface plant matter and the soil) and the country's true natural capital is needed. Once these data are available, it will be possible to include emissions from coastal degradation in the national emissions inventory, which will compel the government to regulate them and include their conservation as a mitigation and support strategy, enabling it to fulfill its international commitments. We understand that the best long-term scenario is the creation of a regulated emissions exchange system, similar to and supported by California's *Emissions Trading System* (ETS)—including blue carbon—with appropriate methodologies to quantify carbon in both surface vegetation and soil. Lastly, in the short term, this scientific work will support measurement, reporting and verification (MRV) efforts that facilitate the creation of new and more robust voluntary carbon markets, as well as transparency in the implementation of the national normative framework in this area.