

EXECUTIVE SUMMARY

LEGAL ANALYSIS OF THE OWNERSHIP AND USE REGIME OF MANGROVES, SEAGRASS AND MACROALGAE IN MEXICO, IN CONNECTION TO THEIR CAPACITY TO GENERATE BLUE CARBON OFFSETS.

This analysis was prepared as part of the following project:

Examining cross-border, nature-based market solutions to protect blue carbon coastal ecosystems in the Californias

INSTITUTE OF THE AMERICAS

JULY 2022

Due to the dire consequences of climate change caused by the increase in emissions of greenhouse gases (GHG), countries around the world have pledged to reduce their atmospheric pollution through the legally binding international treaty known as the Paris Agreement, as part of the United Nations Framework Convention on Climate Change. Carbon markets, both voluntary and compliance, are a tool to promote GHG emission abatement by allocating resources to the lowest-cost solutions and projects, in such a way that carbon credits, or offsets generated by these projects, are traded and claimed by entities that cannot reduce their own emissions.

To comply with the commitments acquired through the Paris Agreement, it is fundamental that each nation establishes a reliable legal framework with effective and efficient law enforcement, to allow for the verification and enforcement of the measures meant to protect ecosystems and biodiversity. Such a legal framework involves not only the regulation of an emissions trading system—if it exists—but also what is needed to provide legal certainty to the carbon credits and compensation mechanisms, destined to protect carbon dioxide (CO₂) sequestering ecosystems.

In this sense, Mexico, a signatory of the Paris Agreement, has made significant strides in building and developing a legal and regulatory framework for a pilot Cap and Trade program (*or Sistema de Comercio de Emisiones*). It also has solid environmental laws, regulations and norms in place that provide proper protection to ecosystems, as well as public policies that acknowledge the challenges that climate change and the destruction of nature represents. However, Mexico still has a way to go to achieve the efficient and timely enforcement of its norms for the protection of the environment.

This study is meant to undertake an in-depth analysis of the legal and regulatory framework of coastal and marine ecosystems in Mexico and their relation to international and potential future domestic carbon markets, including the legal status of such habitats, with the ultimate objective of shedding

light on what is missing legally for Mexico to monetize carbon sequestered by them—as a means to finance further habitat restoration, biodiversity conservation, and climate mitigation.

As the world makes efforts to combat climate change, knowledge surrounding coastal and marine ecosystems (mainly mangroves, seagrasses, salt wetlands, and macroalgae forests) has increased substantially. Carbon sequestered by coastal and marine ecosystems, and wetlands, is known as *blue carbon*, and it has taken center stage in climate action efforts. Such habitats, even though they cover less than 0.5% of the marine areas of the Earth, effectively capture and store carbon in a much greater magnitude than terrestrial ecosystems. In particular, blue carbon ecosystems capture an equivalent amount of carbon per year as almost half of the emissions produced by the global transportation sector.¹

Mexico is between the fourth and the fifth country with most mangrove coverage in the world. These coastal ecosystems and vegetation are protected and regulated mainly by the General Law of Environmental Equilibrium and Protection (“LGEEPA”, published 1988), the General Wildlife Law (“LGVS”, DOF 2000), among others. The Ministry of Environment and Natural Resources (“SEMARNAT”), together with other agencies, is responsible for protecting and regulating all human activity within sensitive ecosystems, and especially regarding endangered species, the latter under the norm (NOM) NOM-059-SEMARNAT-2010 such as mangroves, seagrass, and macroalgae. Therefore, these species are subject to a specific legal status and a special protection- and use- regime.

In general terms, under the LGEEPA, the exploitation of protected species of flora and fauna will require the previous and express authorization of SEMARNAT and other corresponding authorities, and must be done exclusively through the prior establishment of Management Units for Conservation of Wildlife (Unidades de Manejo para la Conservación de Vida Silvestre), otherwise known as an “UMA”. The latter are created on properties and areas that operate according to a pre-approved management plan, with permanent supervision of conditions of habitat and species.

Regarding ownership of coastal and marine areas, the Mexican Constitution declares the direct dominium of the Nation over all natural resources (e.g. minerals, water, oil and gas) as well as marine and coastal ecosystems—where vegetation that sequesters and stores blue carbon exists. It also established that the benefit, use, and exploitation of such ecosystems by all federal, state and municipal governments and their entities, as well as private actors, has to be made through what is called an “Acuerdo de Destino” (AD) or concessions, respectively. ADs are the legal mechanism through which the federal government grants the use and exploitation of national assets to federal, state and municipal governments and their agencies, and concessions, on the other hand, to private entities and individuals. Therefore, when public or private entities or individuals pretend to exploit sensitive areas and natural resources listed in NOM-059 as protected or endangered species, additional to the need of an AD or a Federal concession, they further need to request to be granted an UMA. Currently, there are already a number of concessions granted and UMAs registered for the exploitation of non-listed mangrove species, yet none are relate to the issuance of blue carbon credits.

¹ Consulted in: https://www.gob.mx/cms/uploads/attachment/file/249455/Carbono_azul.pdf

According to the Mexican Constitution and the LGEEPA, coastal and marine ecosystems are formed by the oceans, beaches, riverbanks, deltas, islands, reefs, marine dunes, and estuaries—which are all considered as national lands of federal jurisdiction. The area described as ZOFEMAT (Federal Maritime and Land zone) is of particular relevance, as it encompasses the 20-meter area between private and communal properties, and the beaches and the ocean or riverbanks (of public property), measured from the highest tide.

Due to their nature, most mangrove forests in Mexico, if not all, are located inside the ZOFEMAT; ergo these mangroves belong to the nation of Mexico. However, it is also relevant to highlight that ZOFEMAT areas can be granted through ADs and/or concessions, so this legal mechanism will play an important role in the definition of the rights to exploit or monetize blue carbon in the future, particularly as conflicts exist regarding possession and ownership of lands in some parts of Mexico. Given the above, the study considers that, by definition, the nation of Mexico through the federal government owns all potential carbon credits—and the right to monetize them—derived from sequestered and stored carbon from coastal and marine ecosystems.

However, currently there is still no specific reference to blue carbon or to its ownership in the Mexican legal framework beyond the definition made by SEMARNAT's 2020-2024 *Sectoral Program* (simply stating that blue carbon is the organic carbon sequestered by marine vegetation such as mangroves, marshes and seagrasses).² Blue carbon is also mentioned in the recently published SEMARNAT's 2021-2024 *Special Program for Climate Change*, that states that restoring and preserving mangrove and seagrass habitats can boost mitigation and adaptation strategies. In addition, the protection of blue carbon ecosystems has been highlighted in Mexico's Nationally Determined Contributions (NDC), in support of the Paris Agreement.

The Mexican federal authorities, and more specifically SEMARNAT, who is in charge of the implementation and enforcement of environmental laws and regulations that may eventually govern a potential blue carbon market (as it already regulates the pilot emissions trading program), have a big task ahead in order to properly regulate the development of such market. To date, however, SEMARNAT has made some progress, and is now in consultations with different key private and civil society stakeholders.

In this sense, stemming from the analysis undertaken, the study considers that it is essential that the Mexican government makes an explicit acknowledgement of the sovereign right that the nation of Mexico has over blue carbon itself and the aquatic plant species through which it is produced. Additionally, there is also a need to create a legal mechanism in Mexico through which state and municipal agencies, as well as the private sector and local communities, can eventually participate in a future blue carbon market. It will also be relevant to determine how to deal with existing situations in which certain private parties in Mexico are already exercising some type of land use right on marine and coastal ecosystems that sequester and store CO₂, specifically mangroves, seaweeds and macroalgae. This, considering the imminent trading of blue carbon offsets that is now occurring by corporations, organizations, and private individuals in Mexico—without the government's approval and in the absence of the proper regulatory framework.

² Consulted in: https://www.dof.gob.mx/nota_detalle.php?codigo=5596232&fecha=07/07/2020