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## SUMMARY OF COMMENTS & RESPONSES DRAFT MEXICO FOREST PROTOCOL VERSION 2.0

Eight sets of comments were received during the public comment period for the Climate Action Reserve (Reserve) draft Mexico Forest Protocol Version 2.0. Staff from the Reserve provides summarized comments and responses to the comments below. The public comment period for the draft protocol was November 12, 2019 to January 31, 2020. In addition to the comments below, a number of editorial comments were submitted not listed below, which were likewise considered by the Reserve for the final version.

The comment letters can be viewed on the Reserve's website at <http://www.climateactionreserve.org/how/protocols/mexico-forest/dev/>.

### COMMENTS RECEIVED BY:

1. Centro de Investigación y Proyectos en Ambiente y Desarrollo (CIPAD)
2. National Forestry Commission (CONAFOR)
3. Fundación San Crisanto
4. Jesus Morales Bautista
5. Juan Carlos Leyva
6. Pronatura Mexico
7. Secretary of Environment of Mexico City (SEDEMA)
8. Soluciones Ambientales YAAX

## 1 Introduction

1. **COMMENT:** An objective of the protocol should be to harmonize the GHG accounting of the protocol with the methodologies used to quantify the mitigation benefits of the Nationally Determined Contributions (NDCs)- land use, land use change and forestry (LULUCF) (which correspond to the National Monitoring, Reporting, and Verification System for REDD+ which CONAFOR operates). This does not refer to using the same methodologies, since this is not possible due to the different scales (jurisdictional verse local) and the nature of the REDD+ activities. Harmonization refers to ensuring that the information that is produced through the protocol, allows for institutions (i.e. CONAFOR and INECC) to respond to the questions of the NDCs. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will continue to work with CONAFOR and INECC to ensure that the protocol is aligned with the goals of the NDCs and that project information will be available to support national level accounting.

### 1.2 Nested Projects in a Jurisdictional Framework

2. **COMMENT:** Accounting systems at the national level for increments in carbon stocks already exist. In the 6<sup>th</sup> National Communications and 2<sup>nd</sup> Biennial Update Report (BUR) to the UNFCCC exists a description about the methodologies used for the transitions that are related to the “+” of REDD+ in the national scale. In addition, in the coming 3<sup>rd</sup> BUR, more robust methodologies will be defined for the quantifying the increment in carbon forest stocks at the national level. **(CONAFOR)**

**RESPONSE:** Thank you for your comment.

3. **COMMENT:** A criteria of additionality should be formed by the additionality concept according to the NDC. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will continue to work with CONAFOR to ensure that the protocol is aligned with the goals of the NDCs, while maintaining the rigor and accounting principles of the Reserve.

4. **COMMENT:** The accreditation pathways are differentiated by the project and jurisdictional scales. However, this differentiation does not avoid all problems with accounting. It possibly avoids double counting, but it does not resolve problems of consistency. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will continue to work with CONAFOR and sub-national jurisdictions to ensure that the project level accounting supported by the Reserve’s protocol is aligned with jurisdictional level accounting as REDD+ programs are developed and implemented.

5. **COMMENT:** It’s necessary to harmonize the accounting of the increments with the 2<sup>nd</sup> goal of the NDC-LULUCF, with regards to the baseline concepts in the MFP and the baseline methodologies in the NDC-LULUCF. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will continue to work with CONAFOR to ensure that the protocol is aligned with the goals of the NDCs, while maintaining the rigor and accounting principles of the Reserve.

6. **COMMENT:** The project area does not need to be subtracted from the accounting of REDD at the jurisdictional level. The double accounting is avoided within the subset of the jurisdictional area (equal to the project area) since the accounting of activities is different (avoided emissions vs. "+"). **(CONAFOR)**

**RESPONSE:** Thank you for your comment. Section 1.2 highlights various protocol elements that may require reconsidering or revising in coordination with the governing bodies of jurisdictional systems as such systems are developed and implemented. As long as jurisdictional reference levels are designed only to account for emissions from deforestation, project-level crediting of enhancement activities facilitates reconciliation of project- and jurisdiction-level crediting since the carbon inventories associated with enhancement activities and the location of Project Areas are known.

7. **COMMENT:** Throughout the protocol, the jurisdictional programs are referred to as if they were to be established in the future, when they already exist (at least in their fundamental components). The fact that there hasn't been a Results Based Payment mechanism at the jurisdictional level, does not mean that some REDD+ elements have not already advanced. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will update references to jurisdictional programs to recognize advancements in the implementation of REDD+ in Mexico.

## 2.3 Activity Areas and Management Actions

8. **COMMENT:** Activities in the Natural Protected Areas (ANP) in urban areas can include reforestation and large urban parks, and present management activities such as fire breaches, pruning, clearing, fire surveillance, among others. These activities can increase carbon stocks and have a cost, that if not for the management program would not be executed. These programs are supported by current expenditure budgets, which can change, so having a carbon project would allow additional income, which would enable the effective implementation of these activities. **(Soluciones Ambientales YAAX)**

**RESPONSE:** Additional activities that directly increase carbon stocks will be eligible within Natural Protected Areas. For example, Reforestation activities that are not required by law and comply with the definition of Reforestation activities are eligible within Natural Protected Areas. Restoration activities that pass the Performance Standard Test and Legal Requirements Test may also be eligible within Natural Protected Areas: in order to pass the Performance Standard Test, these areas will need to demonstrate that there are risks to the forest cover and/or the forest cover is in a degraded state that can be enhanced through project activities (i.e. planting trees and/or the removal of the causes of degradation to allow for natural regeneration). The Reserve has developed an analytical tool, the Forest Land Cover Risk Tool, that provides a standardized assessment of the risk of deforestation or the presence of degradation to Activity Areas.

9. **COMMENT:** For activities within ANPs, clarify what the "management plans" refer to when determining whether activities such as Agroforestry and Silvopastoral Systems are allowed if permitted "by the regulation and management plan of the protection area." Do these plans have to be approved by SEMARNAT? **(Pronatura)**

**RESPONSE:** The management plans refer to the government (i.e. SEMARNAT- CONANP) approved plans that establish what management activities are permitted and prohibited within the ANPs.

### 3.2.2 Private Property

10. **COMMENT:** Are multiple private landowners on the same land title eligible to participate as a Forest Owner? **(CONAFOR)**

**RESPONSE:** Multiple private landowners on the same land title may participate if all titleholders agree to participate in the Forest Project.

## 3.9 Social Safeguards

11. **COMMENT:** Add transparency as the fourth social safeguard requirement: transparency in the costs, benefits, and distribution of benefits. **(CONAFOR)**

**RESPONSE:** Transparency is a principal component of the social safeguard requirements of Free Prior and Informed Consent and Meeting Notification, Participation and Documentation. Prior to project submission, Forest Owners must hold an Assembly to discuss the concepts of the forest carbon project, anticipated costs and benefits, and hold a vote to approve the project. Provisions must be made to ensure non-Spanish speaking participants can understand the material and communicate during assemblies. Assemblies must be announced in a manner to ensure that the information reaches all community members, including vulnerable groups like women, *vecindados* and young people. Assemblies must be held at least once a year to discuss critical elements associated with project activities, including forestry activities, programmatic events (i.e. monitoring, reporting etc.), credits issues, benefit sharing arrangements, and finances; notification of the assemblies must take place in order to include as many people as possible, opportunities for members to share opinions must be provided, and assemblies must be documented and made publicly available.

12. **COMMENT:** Under the social safeguard requirement for notification, participation, and documentation, include the identification of environmental and social risks and means of mitigation or compensation. **(CONAFOR)**

**RESPONSE:** The MFP includes social (Section 3.9) and environmental (Section 3.10) safeguards that must be considered in the project design and implemented throughout the project life to help guarantee that the project will have positive environmental and social outcomes. The safeguards in the protocol are intended to respect internal governmental processes, customs, and rights of Forest Owners while ensuring projects are beneficial, both socially and environmentally. The safeguards were developed by identifying potential environmental and social risks of Forest Projects and to provide standardized methodologies for mitigating these risks.

### 3.10 Environmental Safeguards

- 13. COMMENT:** It would be advisable to indicate, if the Large Urban Forest projects in their urban reforestation activities have to have a commitment to favor the use of native species. **(Jesus Morales Bautista)**

**RESPONSE:** Activity Areas are identified as explicit areas to implement management actions and must be identified as one of the activities in Table 2.1 by meeting the associated definition at the Activity Area's initiation. Different management actions may be implemented within the Activity Area; however, the activity designation is based on the activity definition that is met at the Activity Area's start date. The Activity Area must comply with the environmental safeguards based on the activity designation. For example, an Activity Area designated as Large Urban Forestry may implement a variety of management actions, including reforestation; however, the activity designation remains Large Urban Forestry, and the Activity Area must comply with the environmental safeguards for Large Urban Forestry Activity Areas.

- 14. COMMENT:** ANPs within Urban Areas should be considered eligible since:
- Carbon stocks will be increased through activities supported by the carbon project such as planting trees
  - Native species will not be reduced during project implementation
  - There will be no monocultures or predominant species
  - Conversion of land cover will be prevented **(Soluciones Ambientales YAAX)**

**RESPONSE:** Thank you for your comment. Activities that directly increase carbon stocks and pass the performance standard test and legal requirements test will be eligible within Natural Protected Areas, including within urban areas.

The performance standard test for Large Urban Forestry activities, which includes large non-natural forests in urban areas, is based on analysis of historical canopy cover throughout the Activity Area. A trend for the Activity Area is developed by calculating a historical estimate of canopy cover and a recent estimate of canopy cover. If the historical canopy cover trend is decreasing, the Large Urban Forestry Activity Area passes the performance standard test. Activities are considered additional to the extent they produce GHG removals in excess of the Activity Area baseline.

Large natural forests within urban areas that do not have a harvest management plan may be able to implement Restoration activities. In order to pass the Performance Standard Test, Restoration activities will need to demonstrate that there are risks to the forest cover and/or the forest cover is in a degraded state that can be enhanced through project activities (i.e. planting trees and/or the removal of the causes of degradation to allow for natural regeneration). The Reserve has developed an analytical tool, the Forest Land Cover Risk Tool, that provides a standardized assessment of the risk of deforestation or the presence of degradation to Activity Areas.

- 15. COMMENT:** Include the sub-reservoirs of dead wood: lying dead wood, woody debris, and stumps. **(CONAFOR)**

**RESPONSE:** Accurate measurements of lying dead wood are difficult and costly to obtain and to verify. Moreover, changes in this reservoir between the baseline and project

scenarios are likely minimal and unlikely to have a significant effect on total quantified GHG removals. It is most often conservative to not include them.

### 3.12 Additionality

- 16. COMMENT:** ANPs have management plans that allow the removal, reforestation, and thinning of trees, however, because the necessary resources are not available, these actions are not carried out. The implementation of a carbon project in the ANP will generate income to promote additional activities to those carried out.

There is a risk to forest carbon stocks in the ANP due to the change of land use by illegal human settlements, impact of human activities, such as cultural activities, ecotourism, hiking, extraction of vegetation, fauna, and other natural resources. A forest carbon project will incentivize forest conservation.

The execution of activities proposed in ANP management programs is subject to be adjusted at any time, depending on the institutional capacities, priorities, and feasibility, and economic, human and material resources available for execution. A forest carbon project will provide ongoing economic resources needed to implement activities that address the risks to forest cover and increase carbon stocks. **(Soluciones Ambientales YAAX)**

**RESPONSE:** Thank you for your comment. Activities that directly increase carbon stocks and pass the performance standard test and legal requirements test will be eligible within Natural Protected Areas.

- 17. COMMENT:** Literature submitted to support the justification of including natural protected areas and problems that exist within protected areas and ANPs in Mexico City.
- There is a presence of irregular human settlements and landcover change within protected areas, including Cuajimalpa de Morelos, Magdalena Contreras, Álvaro Obregón, Tlalpan, Xochimilco, Tláhuac, Milpa Alta, Iztapalapa y Gustavo A. Madero, ecological park of Tlalpan, covering transition zones between urban and rural, agricultural and forestry areas
  - If the loss of the protected land continues, it is feasible that the sustainability of the city is put at risk, since it could reduce the production of ecosystem resources and services, the recharge capacity of the city's aquifer could be further affected and would increase environmental pollution and the effects of climate change.
  - The forest area lost annually in the protected areas of Mexico City is estimated to be between 240 and 180 hectares per year.
  - In the analysis carried out by the Office of the Environmental and Territorial Organization of the D.F., projections show the forest cover of Mexico City is clearly decreasing.
  - The main motivation for modifying the original declaration of the Ecological Park of Mexico City is the presence of buildings and homes that have grown out of control, or planning affecting forest lands, thereby having anarchic growth and the depredation of natural resources.
  - The main environmental problems in protected areas and ANPs are the change in land use, solid waste deposits from the construction industry and illegal logging. As an area of opportunity to counteract the aforementioned problems, one must:
    - Prevent the proliferation of irregular human settlements and discourage the expansion of urban development. Make the actions of demolition, removal of

materials and cleaning within protected areas more efficient through access to functional technological tools, machinery and vehicles adapted for this purpose.

- There are still processes to improve, such as the way to restore the natural environmental cycles of the areas affected by changes in land use and gravel deposits; although the regulated standard has sufficient elements for the correct execution of the actions ordered by the environmental authority, operationally, the standards are not complied with.
- The statistical records indicate that the protected areas and ANPs of Mexico City, from 2010 to 2017 had on average 1,389 fire events per year, with 1.35 hectares affected by fire event, and a total 1,909 hectares on average affected.
- Trends in the physical expansion of the city reveal that Mexico City continues to demand land and that its occupation has occurred mainly in the southern periphery, which is where there is still land available for the advancement of urban development.
- According to the maps, the trend of loss of forest cover from 1986 to 2010 is observed in protected areas. **(SEDEMA)**

**RESPONSE:** Thank you for your comment. Activities that directly increase carbon stocks and pass the performance standard test and legal requirements test will be eligible within Natural Protected Areas, including within urban areas, as discussed in the response to Comment #14 to Section 3.10 Environmental Safeguards above.

### 3.12.2 Performance Standard Test

- 18. COMMENT:** The proposed tool considers timber exploitation and does not consider other risks. Therefore, it is recommended that there is a tool for the performance standard test that is oriented to ANP in urban areas since the conditions and characteristics are different because they are under pressure due to the urban development. **(Soluciones Ambientales YAAX)**

**RESPONSE:** Thank you for your comment. The Reserve will take into consideration urban pressures for the assessment of risks of deforestation and degradation used for the performance standard test of Restoration activities. The performance standard test for Large Urban Forestry activities, which includes large non-natural forests in urban areas, is based on analysis of historical canopy cover throughout the Activity Area. Historical canopy cover is used as a means to evaluate the historical presence of deforestation and the ongoing risk of deforestation caused by urban pressures.

- 19. COMMENT:** Tool to assess risk: How people use the forest resources and how they view the forest value in the short term are indicators of deforestation risk. There are variables that objectively can demonstrate how agriculture and livestock displace forestry activity in a region (for example number of people employed by type of activity). That is, when the forest resources have stopped representing a real option for the local people, this demonstrates that the forest is at risk. **PROPOSAL:** Include in the risk evaluation tool a question that evaluates the current contribution and the future perspective that the forest owner has about the way their forest resources will contribute to their financial income. **(Juan Carlos Leyva)**

**RESPONSE:** The Forest Land Cover Risk Tool, used as the performance standard test for Restoration activities, is a standardized method for assessing the risk of deforestation and

degradation. The assessment of the drivers of deforestation and degradation within the tool incorporates the valuation of a forest compared to alternative land use options by assessing the presence of different types of land use in the region and/or incentives to convert to other types of land use such as agriculture and urban development. For example, the presence of nearby markets may serve as an incentive to convert forest land to agriculture. The tool additionally assesses the Activity Area's biophysical characteristics to determine whether the Activity Area would be suitable for alternative land use options. This serves as a standardized means of evaluating the current and future prospective value of the forest compared to viable alternatives in order to determine the potential risk of deforestation.

### 3.13 Accreditation Period

**20. COMMENT:** Why is the baseline valid for a period of 30 years? **(CONAFOR)**

**RESPONSE:** The baseline is valid for a period of 30 years since this is the maximum length of time ejidos and communities may sign the Project Implementation Agreement due to the limitations imposed by the National Agrarian Law in Mexico. Forest Owners may renew the crediting period upon completion of the first crediting period

**21. COMMENT:** Specify how the crediting period may be renewed. **(CONAFOR)**

**RESPONSE:** Projects that have met all Monitoring, Reporting and Verification requirements and maintained legal compliance throughout their first crediting period, can extend the crediting period for another 30-year period using the baseline developed for the initial crediting period. The renewal process consists of a review of project compliance and approval by the Reserve during the first Reporting Period of their new crediting period.

### 3.15 Project Implementation Agreement

**22. COMMENT:** Require that the requirements included in the Project Implementation Agreement be explained during the general assembly as part of the Free Prior and Informed Consent social safeguard requirement. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. As part of the social safeguards, the Project Implementation Agreement must be explained and approved by the general assembly prior to its execution.

## 4 GHG Assessment Boundary

**23. COMMENT:** For consistency with the jurisdictional level, litter and duff can result in a significant omission of this sub-pool. **(CONAFOR)**

**RESPONSE:** Accurate measurements of litter and duff are difficult and costly to obtain and verify. Moreover, changes in this reservoir between the baseline and project scenarios are likely minimal and unlikely to have a significant effect on total quantified GHG removals. It is most often conservative to not include them.

**24. COMMENT:** With respect to the belowground carbon for mangroves, which disproportionately exceeds the aboveground carbon, we would recommend that soil carbon be included. Same as the aboveground carbon, soil carbon is susceptible to reversals due to fires or changes in the hydraulic system, at the same time, it can increase due to



management activities such as maintaining firebreaks, and reestablishing hydraulic cycles to avoid the salinization of soil. There have been developments in methodologies to quantify soil carbon; projects can complete a standardized analysis of the organic carbon concentration in soil plots and using services offered by investigative centers and universities in order to obtain a baseline and later grow the measurements through growth estimates from vertical soil accrual. We recognize that the development of the Protocol to include carbon soil for mangroves involves a large amount of work, but we are very anxious for these advancements in the “Standardize GHG Accounting for Soil Organic Carbon Accrual on Non-Forest Lands: Challenges and Opportunities” (<http://www.climateactionreserve.org/how/protocols/soil-enrichment/>) to be included in order to incorporate carbon soil for mangroves. **(Fundación San Crisanto)**

**RESPONSE:** Thank you for your comment. The Reserve will evaluate the potential to include soil carbon for a future update.

**25. COMMENT:** Specify how harvested wood products might be included. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. Long-term wood products are not included as creditable data supporting long-term sequestration of harvested wood products is lacking. This may be modified in the future as data related to the fate of harvested wood products is developed. The Reserve will evaluate such potential for a future update.

**26. COMMENT:** Different uses of wood involve a definitive removal of CO<sub>2</sub>e, for example, construction, long-term furniture, or wood used as fuel in heat generation and electric power. When it is shown that a project (totally or partially) has a provision that ensures the permanence of carbon stored in wood products or its use displacing emissions, these removals/reductions should be included within the quantification of the project SSRs. **(Juan Carlos Leyva)**

**RESPONSE:** Thank you for your comment. Long-term wood products are not included as creditable data supporting long-term sequestration of harvested wood products is lacking. This may be modified in the future as data related to the fate of harvested wood products is developed. The Reserve will evaluate such potential for a future update.

## 5 Quantifying Net GHG Removals and CRTs

**27. COMMENT:** Mobile combustion for site preparation activities is a secondary effect. The total balance of CO<sub>2</sub>e removals cannot be directly accounted for within the framework of the NCD- LULUCF (specific goal 2). The mobile combustion emissions are accounted for in other sectors per IPCC, 2006. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will continue to work with CONAFOR to ensure that the protocol is aligned with the goals of the NDCs and that project information will be available to support national level accounting. Mobile combustion emissions are accounted for as secondary effects of reforestation activities where mechanical equipment, i.e., brush raking or mastication, is used for the removal of competing vegetation.

## 5.2.1 Consideration of Legal Constraints

**28. COMMENT:** The federal law significantly restricts harvesting nationwide in natural protected areas, along streams and other water bodies, on slopes greater than 45 degrees, above 3,000 meters, in mangroves and cloud forests, among others. But even though harvesting is significantly restricted in these areas, it is generally not restricted 100% and it was previously stated that these areas can be included in Activity Areas. For example, along streams only restricted thinning can potentially be approved. The current language would affect the continued inclusion of these areas in Activity Areas. **(CIPAD)**

**RESPONSE:** Thank you for your comment. Improved Forest Management activities are limited to areas that have a forest management program for harvesting approved by SEMARNAT. Forested areas that do not have a forest management program approved by SEMARNAT may be eligible to implement Restoration activities if they pass the performance standard test and legal requirement test. In order to pass the performance standard test, Restoration activities will need to demonstrate that there are risks to the forest cover and/or the forest cover is in a degraded state that can be enhanced through project activities. The Reserve has developed an analytical tool, the Forest Land Cover Risk Tool, that provides a standardized assessment of the risk of deforestation or the presence of degradation to Activity Areas.

## 5.5.3.1 Developing the Baseline of Harvested Wood Products

**29. COMMENT:** A recommendation could be included so that the activity area of the project coincides with the limits and extension of the harvest areas of the timber harvest program authorized by SEMARNAT to facilitate the analysis of secondary effects. **(Jesus Morales Bautista)**

**RESPONSE:** Improved Forest Management Activity Areas are limited to the areas under a forest management program approved by SEMARNAT for commercial harvesting. However, Forest Owners are not required to include the entire area under the forest management program within the Activity Area. Forest Owners may decide which areas to include within the Activity Area, while maintaining compliance with the Environmental Safeguards and quantification of secondary effects.

**30. COMMENT:** Allow specific factors to be used for converting the volume of a tree to biomass instead of 0.53 for conifer and 0.75 for latifolia. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve will evaluate the availability of specific factors for converting volume of a tree to biomass.

## 6 Ensuring the Permanence of Credited GHG Removals

**31. COMMENT:** The vast majority of forests in Mexico have biological cycles no greater than 60 years, with the highest growth rate from 20 to 30 years. With a 100-year permanence period, or its weighted adjustment ( $n / 100$ ), the efficient productivity use is discouraged of the site, since there is a considerable period of years where the terrain does not capture more carbon. **(Juan Carlos Leyva)**

**RESPONSE:** Crediting is based on how the forest as a whole is managed rather than a particular forest stand. While a particular forest stand may reach its maturity within 60 years, Improved Forest Management activities may manage a forest as a whole so that the forest growth is maximized over a 100-year time period or longer.

## 7.2 Monitoring Guidance for Social Safeguards

**32. COMMENT:** Require that the presentations of concepts to comply with the social safeguards be culturally appropriate. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The safeguards in the protocol are intended to respect internal governmental processes, customs, and rights of Forest Owners while ensuring projects are beneficial, both socially and environmentally. Prior to project submission, Forest Owners must hold an Assembly to discuss the concepts to comply with the social safeguard of Free, Prior, and Informed Consent. Provisions must be made to ensure non-Spanish speaking participants can understand the material and communicate during assemblies. Assemblies must be announced in a manner to ensure that the information reaches all community members, including vulnerable groups like women, *avecindados*, and young people.

**33. COMMENT:** Specify the duration for the term of the Project Coordinator. **(CONAFOR)**

**RESPONSE:** Per the social safeguards, the length of the term for the Project Coordinator must be defined by the community or ejido and specified in the Project Report. The Project Report must identify whether the position of the Project Coordinator can be renewed and, if so, for how many terms. The safeguards in the protocol are intended to respect internal governmental processes, customs, and rights of Forest Owners while ensuring projects are beneficial.

### 8.2.3 Desk Verifications

**34. COMMENT:** In order for reported data through a desk verification to be considered acceptable, the forest carbon change must be positive and be within an 8% increase from the previous year in terms of CO<sub>2</sub>e. The tolerance bounds of 8% forest carbon change may be high for some ecosystems in Mexico. Recommend that this may be adjusted based on the type of ecosystem. In addition, specify how harvesting may affect the percent forest carbon change. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. Annual fluctuations in carbon stocks and carbon stock change may vary depending on the forest type, harvesting levels, region etc. Rather than the standardized 8% threshold, the Reserve will require verifiers to compare changes in reported carbon stocks and carbon stock increment to previously reported carbon stocks and increment to assess whether reported changes are justified, taking into consideration harvest fluctuations, forest conditions, updates to plot inventories and growth as projected through CALC BOSK from one reporting period to the next.

### 8.4.1.2 Measurement Specifics for Verifiers for Sequential Sampling

**35. COMMENT:** The accuracy requirement of +/- 10 cm for each 10 m of height for tools used to determine distance measurements for tree heights is considered to be low for the diversity of ecosystems of Mexico and the topographic conditions. **(CONAFOR)**

**RESPONSE:** Verifiers should measure to the nearest 1/10<sup>th</sup> of a cm for DBH and nearest 1/10<sup>th</sup> of a meter for heights (if using a hypsometer). The accuracy of the tools is a recommendation rather than a requirement.

### Glossary

**36. COMMENT:** Add carbon markets and confidence interval to the glossary. **(Pronatura)**

**RESPONSE:** Thank you for your comment.

### Appendix B Inventory Methodology

**37. COMMENT:** In mangroves, the age of the forest is not determined by the radial increment of the tree trunks, for example, if the nutrient availability is low, the mangrove forests invest less energy in growing the biomass of tree trunks and increases the root biomass and cover volume. Thus, trees with 2.5-5 cm DBH and more than 5 years old should be incorporated in the measurement of the tree biomass using the canopy volume and DBH (which is generally between 2.5 and 5 cm). We would recommend that the Reserve consider including mangroves of bush and chaparral type, since this kind of mangrove is dominant in the Yucatan Peninsula and the Pacific North of the country. The Ejido Siscal, in the Yucatan, has close to 1000 hectares of mangrove forest and wishes to aggregate with the Ejido Ursulo Galvan and San Crisanto projects, but close to 79% of the mangrove cover is bush cover. We think that one could measure the forest growth and issue credits under the MFP if the mangrove chaparral areas were included in Activity Areas where the canopy volume is measured, in addition to the other variables. The growth rates can be determined through the annual diameter increment or annual canopy volume increment. **(Fundación San Crisanto)**

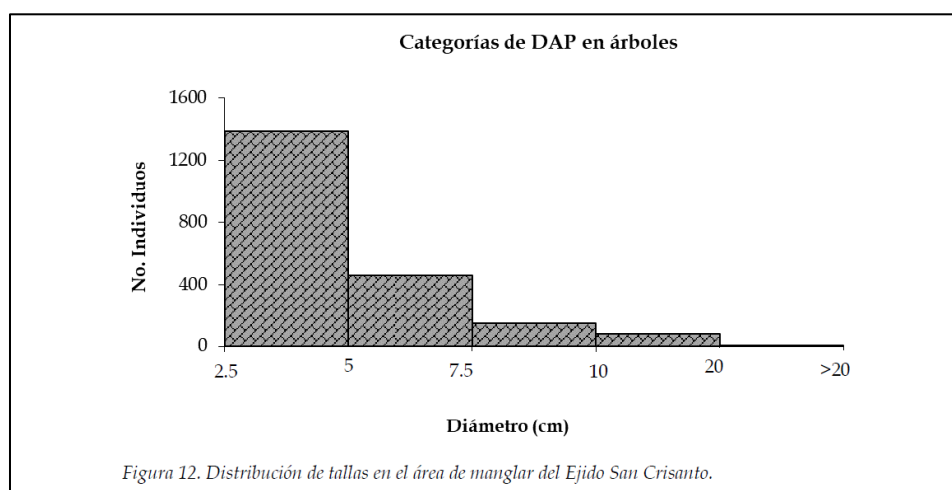


Figure 1. Distribution of diameter measurements of 15-year old mangrove trees of San Crisanto. Mangroves with 2.5 cm DBH are considered adult.

Annex 1. Measurement of mangrove areal biomass (Kauffman et al., 2013)

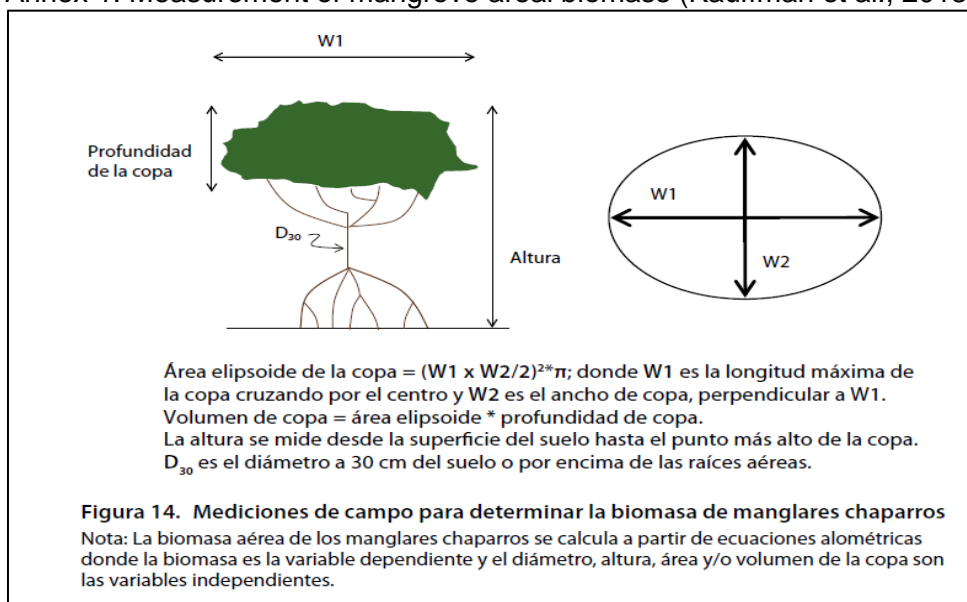


Tabla 4. Ecuaciones alométricas para estimar la biomasa de manglares chaparros

Ecuación	R <sup>2</sup>	N	D <sub>MAX</sub>	Localidad	Referencia
<i>Rhizophora mangle</i>					
$\ln B = 2,528 + (1,129 (\ln D_{30}^{-2}) + (0,156 * \ln \text{Vol copa})$	0,94	52		Florida, EUA	Ross et al. 2001
$B = 125,9571 D_{30}^{-2} * H^{0,8557}$	0,99	26	15,4	Puerto Rico	Cintrón y Shaeffer -Novelli, 1984
<i>Avicennia germinans</i>					
$\ln B = 2,134 + (0,895 (\ln D_{30}^{-2}) + (0,184 * \ln \text{Vol copa})$	0,99	21		Florida, EUA	Ross et al. 2001
$B = 200,4 D_{30}^{-2,1}$	0,82	45	4	Guyana Francesa	Fromard et al. 1998
B= biomasa (g), D <sub>30</sub> = diámetro del tronco a 30 cm del suelo (cm), H= altura (m), Vol = volumen de la copa (cm <sup>3</sup> )					

**RESPONSE:** Thank you for your comment. The Reserve will modify the language to state that the 5cm DBH minimum is a recommendation, but that projects may include trees with smaller diameters if the Forest Owner determines that the benefits of including smaller trees will outweigh the added costs. Forest Owners will need to clarify the adjusted minimum DBH in the Project Report, and verifiers will likewise need to include trees of all sampled sizes in the verification.

The Reserve will additionally consider applying the canopy cover methodology to mangrove forests for a future update.

**38. COMMENT:** The 5cm minimum DHB requirement is considered to be high for the dry ecosystems of Mexico, where the contribution of trees with smaller diameters is significant. (CONAFOR)

**RESPONSE:** Thank you for your comment. The Reserve will modify the language to state that the 5cm DBH minimum is a recommendation, but that projects may include trees with smaller diameters if the Forest Owner determines that the benefits of including smaller trees will outweigh the added costs. Forest Owners will need to clarify the adjusted minimum DBH in the Project Report, and verifiers will likewise have to include smaller trees as well in their verification if included in the project inventory.

- 39. COMMENT:** We suggest that the requirement that a minimum of 30 sample plots must be sampled in each Activity Area be eliminated. In the case of a single project with multiple activity areas or an aggregation of projects with multiple projects and activity areas, it is possible that a single activity area could be relatively small with a relatively uniform biomass distribution such that meeting the corresponding target sampling error at the 90% confidence level would require fewer than 30 sample plots. In this case, the additional minimum requirement of 30 sampling plots could result in significant additional inventory costs with a relatively insignificant increase in sampling precision. **(CIPAD)**

**RESPONSE:** Thank you for your comment. The Reserve conducted further analysis on the impact of the minimum 30 sampling plot requirement on small projects and will remove the requirement. The confidence requirement will be used to ensure that the sampling size adequately represents the population for all Activity Areas.

- 40. COMMENT:** Specify whether updating the forest inventory changes the Activity Area baseline. **(CONAFOR)**

**RESPONSE:** The baseline represents the Activity Area's forest carbon inventory at the Start Date. Once the baseline is calculated, the baseline does not change throughout project life. The forest carbon inventory must be updated in order to calculate the end-of-Reporting Period carbon stocks each Reporting Period (i.e. on an annual basis). The end-of Reporting Period carbon stocks is then used to calculate the growth in forest carbon inventory or the number of tCO<sub>2</sub>e removed in a given Reporting Period.

## **Appendix C Quantifying Carbon Stocks in Activity Areas: Canopy Cover Quantification Methodology**

- 41. COMMENT:** For Activity Areas that use the canopy cover quantification methodology with remote sensing imagery, provide guidance for ecosystems with seasonal change (deciduous forests or subcaducifolias). **(CONAFOR)**

**RESPONSE:** The image should be dated within 12 months of the Activity Area start date and should be from a month where foliage is present and visible (spring or summer). Contact Reserve staff if no image is available.

- 42. COMMENT:** The confidence estimate for average canopy cover for each Assessment Area of +/- 5% at 1 Standard Error is considered to be low for the diverse forest ecosystems. **(CONAFOR)**

**RESPONSE:** Thank you for your comment. The Reserve is completing additional testing to determine the adequacy of the confidence estimate of +/- 5% at 1 Standard Error. Using a confidence estimate at one Standard Error allows Forest Owners to complete the sampling

with iTree Canopy, which is a free online tool, since iTree Canopy shows the confidence estimate at one Standard Error.

## Appendix E Aggregation

- 43. COMMENT:** Small land producers with 20 to 25 ha (or smaller) can come together under legal organizations for the purpose of forest management, grouped together up to 3000 to 3500 ha. However, the current aggregation guidance requires that each small land producer be counted as a separate project. The development, management, registry, and verification of each property as an individual project is complicated and costly, which inhibits the development of these projects. **(Juan Carlos Leyva)**

**RESPONSE:** Thank you for your comment. Since forest carbon stocks may be secured for a future period of time through a Project Implementation Agreement (PIA) in order to comply with the permanence requirement of 100-years, credits must be issued directly to the Forest Owner that signs the PIA and that has title to the forest carbon stocks. The Forest Owner is recognized as the legal entity on the land title.