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# Mexico Forest Protocol V3.1 Public Kickoff Meeting

November 2022

# Housekeeping

- All attendees are in listen-only mode
- Please submit your questions in the GoToWebinar question box and we'll try to answer them at the end, time permitting
- We will follow up via email to answer any questions not addressed during the meeting
- The slides (in Spanish and English) and a recording of the presentation will be posted online

# Agenda

1. Climate Action Reserve
2. Background
3. Process and timeline for update
  - **Note: the deadline to submit the Statement of Interest for the Workgroup is November 14th**
4. Review considerations for the update
  - Mangrove Soil Carbon
  - Secondary Effects
5. Questions, comments, & next steps

# Climate Action Reserve



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NGO founded in 2001



21 offset protocols: México,  
USA, & Canada



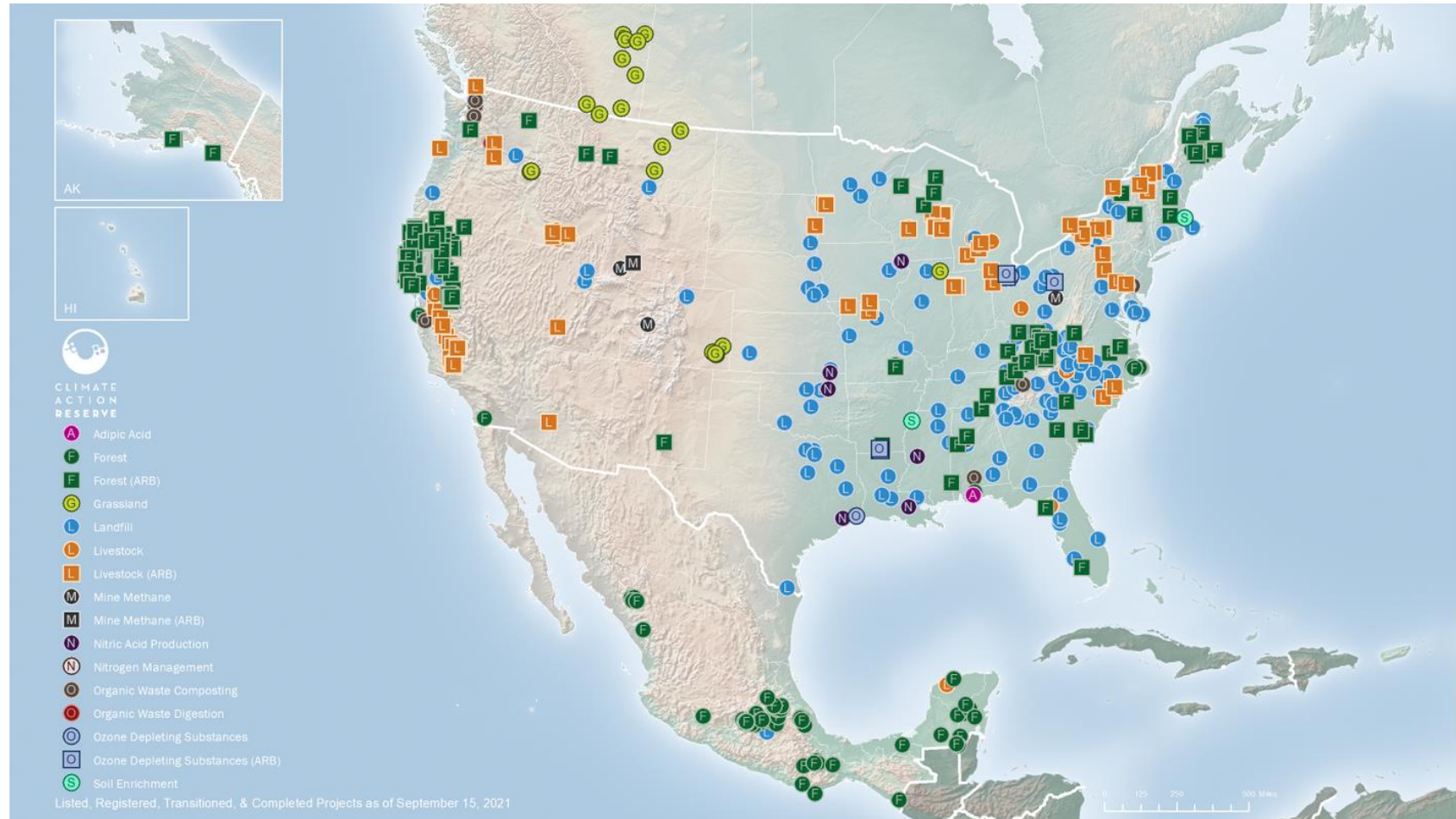
>550 Projects & 175M+ credits  
issued



Mission to promote market-  
based solutions



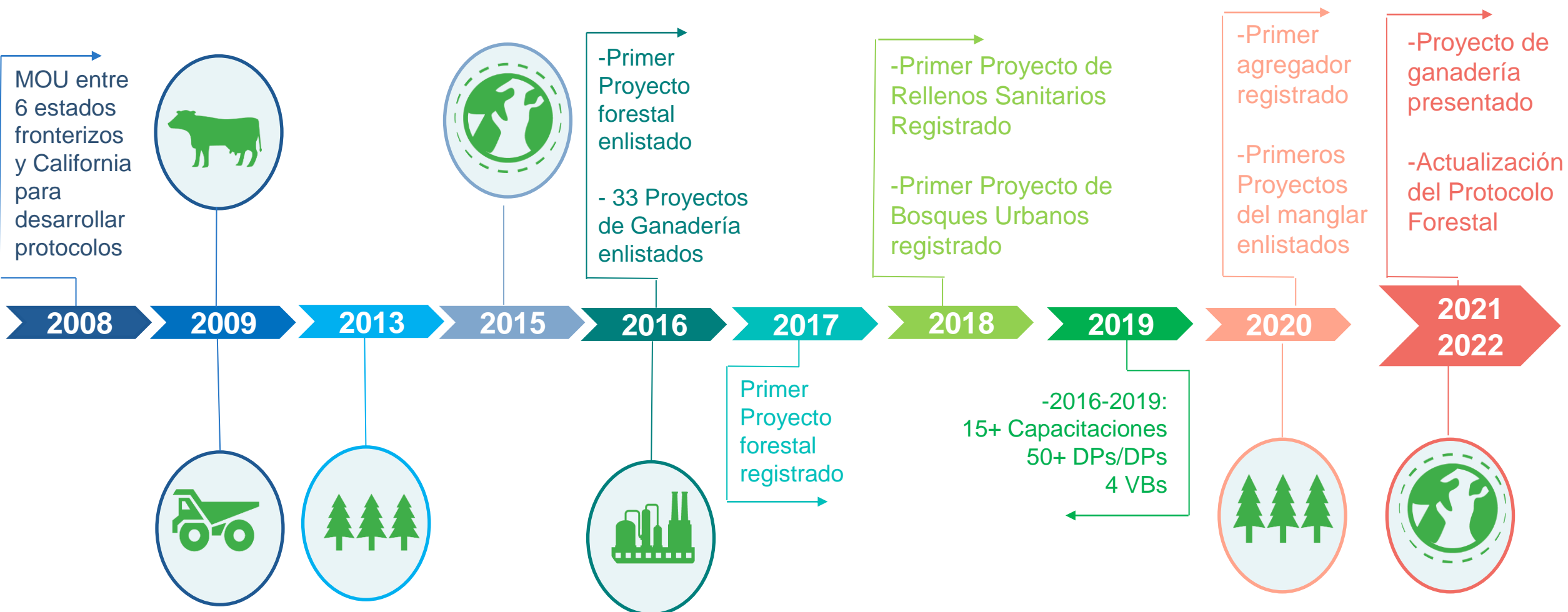
Ensure that the carbon market  
has environmental benefits  
and maintains financial  
integrity and value



# Reserve Program in Mexico



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# Reserve Projects in Mexico



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**CRTs Registered in Mexico**

1+ Millon CRTs

**Projects listed in Mexico**

(listed means submitted officially on the Reserve software)

**Landfill: 1**  
**Forest: 189**  
**Livestock: 2**  
**Halocarbons: -**  
**Boiler Efficiency: -**



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- Bosques
- Rellenos sanitarios
- Ganadería (Metano)

Proyectos Listados, Registrados, en Transición y Completados a septiembre de 2021



- **V1.0: published in 2013**
  - Workgroup and public comment period
- **V1.1-V1.5: published from 2016 to 2017**
  - Errata and Clarifications V1.5: August 2019
- **V2.0: published in 2020**
  - Workgroup and public comment period
  - Key updates:
    - Activities allowed to differentiate between areas under forest use and areas without it
    - Additionality requirements for areas without forest use
    - Secondary Effects for improved forest management activities
    - The inclusion of a non-intensive monitoring and quantification methodology for certain urban, agroforestry and silvopastoral activities
  - Errata and Clarifications V2.0: August 2021

# Background Continued

- V3.0 published in October 2022
  - Workgroup and public comment period
  - Key updates:
    - Updated definitions for Improved Forest Management, Silvopastoral, and Agroforestry activities
    - Social Safeguards modified to be more transparent and inclusive
    - Additionality criteria updated including the modification of the Performance Standard Test tool to include mangroves
    - Option to extend the commitment period to 100 years for Ejidos and Communities
    - Stratification option included in Activity Areas
    - Updated Buffer Pool contribution with project specific criteria



# Process and Timeline for Update

Step	Details	Oct	Nov	Dec	Jan	Feb
<b>Workgroup Formation</b>	Presentation of SOI: Oct 25-Nov 14th					
	Kickoff meeting					
<b>Workgroup Meetings</b>	November-December, time TBD					
<b>Protocol development</b>	Drafting and revisions					
<b>Public comment period</b>	January 2022					
	Public Comment Period Webinar					
	Comments revision and Protocol update					
<b>Protocol Published</b>	February 2022					

# Workgroup Formation

- Stakeholder participation & feedback is critical to protocol development
- The Reserve assembles an intensive multi-stakeholder workgroup to advise protocol development and produce rigorous, well-vetted, and credible protocols
  - Strive for balanced representation from industry, project developers, environmental NGOs, verification bodies, independent consultants, academia, and government bodies
  - Interested stakeholders invited to submit Statement of Interest (SOI) forms
    - **Deadline for submitting SOI is November 14th**
    - **SOIs can be downloaded here:** <https://www.climateactionreserve.org/wp-content/uploads/2022/11/MFP-Workgroup-Statement-of-Interest-Form-V3.1-English.docx>
    - Requires commitment to ~2-3 workgroup meetings plus additional protocol reviews, familiarity with the feedstocks, technologies, and/or end uses for which the protocol is being developed, and solid understanding of project-based GHG accounting

# Workgroup Process and Expectations for Workgroup Members

## Process

- Reserve staff identify and solicit feedback on specific protocol criteria
- Reserve staff schedule and hold meetings (~2-3)
- Reserve staff produce draft protocol for review
- Reserve staff revise protocol based on feedback

## Expectations

- Review, comment on and provide recommendations on specific protocol criteria
- Participate in meetings via webinar
- Provide written comments on draft protocol



Considerations for Update

# QUANTIFICATION OF SOIL CARBON FOR MANGROVES

# Section 5.1.2: Increase of Carbon in Restoration and Reforestation Activity Areas for Mangroves

- Two options for calculating soil carbon in the Activity Area:
- Field sampling of soils within the Activity Area to measure changes to soil organic carbon over time.
- Appendix D includes standardized methodology
- Multiply the rate of carbon sequestration in organic soil by the hectares of AA
- 

$$\Delta AC_{SOC} = \sum_{AA} R_{SOC,AA} \times A_{AA}$$

# Section 5.1.2: Increase of Carbon in Restoration and Reforestation Activity Areas for Mangroves

- Two options for calculating soil carbon in the Activity Area:
- The application of a default sequestration rate based on the location of the Activity Area multiplied by the mangrove canopy cover as a percentage of AA per hectare of AA

$$\Delta AC_{SOC} = \sum_{AA} R_{SOC,AA} \times CC_{y,AA} \times A_{AA}$$

**Table 5.1 Default rates for soil carbon by region**

Region	Default sequestration rate (tCO <sub>2</sub> e/ha/yr)
North Pacific	9.2
Central Pacific	5.5
South Pacific	24.6
Gulf of México	16.9
Yucatán Peninsula	12.8



# Section 5.1.2: Increase of Carbon in Restoration and Reforestation Activity Areas for Mangroves

- **Consideration for the final version:** Use the most conservative values of the error range for default sequestration rates

Tabla 5.1 5.1 Default rates for soil carbon by region

Region	Default sequestration rate(tCO <sub>2</sub> e/ha/yr)
North Pacific	8.4
Central Pacific	5.5
South Pacific	22.8
Gulf of México	14.7
Yucatán Peninsula	11.7

# Appendix D Inventory Methodology for Soil Carbon Quantification through Field Sampling for Mangrove Restoration and Reforestation



- Projects that choose to take direct samples of soils in Activity Areas focused on the restoration or reforestation of mangroves must use the standardized inventory method:
- Direct sampling will be used as the basis for estimating changes in soil organic carbon (OSC) levels sampled over the life of the project.
- Exception: Projects can initially use the default values until the second soil measurement is taken and the sequestration rate can be determined.
- OSC is estimated from sampled inventories based on the calculation of carbon density from bulk density and COS content (%Corg) as well as soil depth.
- Confidence deductions will be applied to estimates of changes in carbon stocks on an increasing basis as the statistical uncertainty associated with sampling increases.
-

# Appendix D Metodología de Inventario para Cuantificación de Carbono en Suelo mediante Muestra en Campo para Restauración y Reforestación de Manglares

General steps for quantifying a soil carbon inventory based on field sampling, excerpted from The Blue Carbon Initiative's Coastal Blue Carbon Handbook:

1. Determine soil depth
2. Obtaining Soil Cores
3. Sampling a Soil Core
4. Record and store samples
5. Perform Laboratory Analysis
6. Determine dry bulk density
7. Determine organic carbon content
8. Calculate total soil carbon stocks
9. Calculate the confidence statistic

The location of the plots should be based on the methodology used to measure living and dead trees with a core of soil taken at the center of each plot.

Sample analyses must be performed by a laboratory that has demonstrated proficiency by having participated in the North American Proficiency Testing Program and in particular the voluntary Performance Evaluation Program.

The soil inventory must be updated at least every 6 years with all the data of all the plots replaced at the time of a new sampling in the field.



Considerations for Update

# MANGROVE REFORESTATION OR RESTORATION SECONDARY EFFECTS

# Secondary Effects from Methane and Nitrous Oxide Emissions

- Reforestation and restoration of mangrove may result in changes to methane and nitrous oxide emissions
- Although such changes vary based on specific site conditions, we are considering applying a conservative standardized approach:
  - Assume no methane or nitrous oxide emissions occur under the baseline while accounting for such emissions under the project.
  - For methane, the emissions rate applied is based on the assumption that methane emissions equate to 16%, on a ton of CO<sub>2</sub>e basis, of total carbon sequestration occurring in Activity Area soils each year.
    - Based on the average rate of methane emissions per ton of carbon sequestered in mangrove ecosystem soils for the latitudinal bands in which Mexico’s mangrove sites are located, as reported by Rosentreter, J. A., Maher, D. T., Erler, D. V., Murray, R. H., & Eyre, B. D. (2018). Methane emissions partially offset “blue carbon” burial in mangroves. *Science Advances* 4(6).
    - Results adjusted to reflect the standard global warming potential of 28 for methane used under the Reserve’s protocols at the time of protocol adoption.

# Secondary Effects from Methane and Nitrous Oxide Emissions

- Nitrous oxide emissions varies based on levels of salinity.
- Potential default values to consider (Smith et al 1983):

	Open water			Non-seagrass		
Salinity	>18 ppt	>5-18 ppt	other	>18 ppt	>5-18 ppt	other
tN <sub>2</sub> O/ha/yr	0.000157	0.00033	0.00053	0.000487	0.000754	0.000864
tCO <sub>2</sub> e/ha/yr	0.046786	0.09834	0.15794	0.145126	0.224692	0.257472



# Allochthonous Carbon

- How should carbon originating from outside of the project area, i.e. allochthonous carbon, that flows into the project area be accounted for?
  - Question: is the project scenario significantly different from the baseline?
  - Workgroup to review in greater detail

- ***For interested stakeholders:***
  - **Submit a Statement of Interest to become a workgroup member by November 14<sup>th</sup>**
  - Send us an email to receive updates as an observer
  - Email us feedback anytime
- ***For Reserve:***
  - Form workgroup
  - Start drafting!!
  - First workgroup meeting in November, potentially Nov 17<sup>th</sup> or 21<sup>st</sup> (via webinar)



# QUESTIONS OR COMMENTS?

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