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**Panama Forest Protocol for  
Offset Credits of the Climate  
Action Reserve V1.0  
Workgroup Meeting 8:**

June 30, 2023

# Introduction



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**Amy Kessler**  
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**Claudia Jurado**  
Analytical Associate, Latin  
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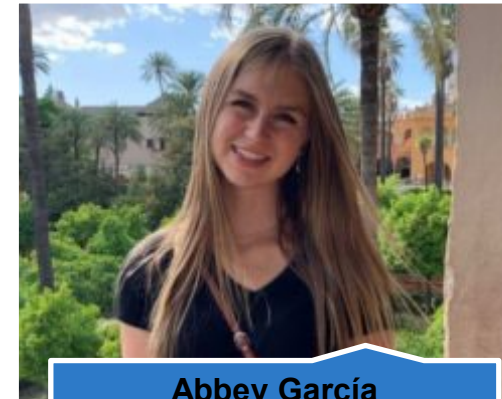
**Miguel López Delgado**  
Analytical Manager, Latin  
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**Jon Remucal**  
Associate Director of Nature  
Based Solutions



**Abbey García**  
Analytical Associate, Latin  
America

# Agenda

- 08:00-08:30 Registration and Welcome
- 09:00-09:30 Presentations, The Climate Action Reserve and overview process
- 09:30-10:00 Carbon Markets
- 10:00-11:00 Key considerations for protocol development
  1. Project Areas and Activity Areas
  2. Eligible Activities
- 11:00-11:15 Break
- 11:15-13:00 Cont. Key Considerations for Protocol Development
  1. Safeguards
  2. Land tenure
  3. Permanence
- 13:00-14:00 Lunch
- 14:00-15:30 Quantification and MRV and Quantification Tools
- 15:30-16:00 Questions, Comments and Next Steps

# Housekeeping

- Workgroup members have the opportunity to actively participate throughout the meeting
  - Ask that you keep yourselves muted unless / until would like to speak
- We will ask and take questions throughout the session
  - Please use the raise your hand function
- All other attendees/observers are in listen-only mode
- Observers are free to submit questions in the question box
- We will follow up via email to answer any questions not addressed during the meeting
- The slides and a recording of the presentation will be posted online

# Workgroup Members

Organization (Alphabetical)	Name
Asociación Nacional de Técnicos Forestales de Panamá - ANTEFORP	Jose Angel Rojas Gamboa
BAM	Juan Carlos Flores Del Castillo
Bioforestal Innovación Sustentable	Jesus Morales
BRET CONSULTORES	Teresa Tattersfield
CO2 Cero	Andrés Silva
Comarca Ngäbe-Buglé	César Bernal
Congreso General Guna	Jorge Andreve
Consultora de proyectos de Carbono Forestal	Adriana Abondado Pineda
Consultores Ecológicos Pnameños SA (CEPSA)	Ramon Alvarado
Earthshot Labs	Andrew Coates
Ecotopia Teak	Carlos Maestre
Fac. Ciencias Agropecuarias - Universidad de Panamá	Dimas Arcia
Fundación Natura	Diego Dipieri
Futuro Forestal	María Gallegos
Geo Forestal, S.A	Jacobo Melamed
Instituto Nacional de Investigaciones Forestales Agrícolas y Pecuarias	Geronimo Quiñonez Barraza
MiAmbiente	Verónica González
Ministry of the Environment, the Fight Against Climate Change, Quebec	Philippe Gregoire
Panama Teak & Forestry Inc	Itzel Ivon Rodriguez
South Pole	Maria Fernanda Buitrago Acevedo
Terra Global Capital	Gregory C. Ives
Universidad Tecnológica de Panama	Carlos Espinosa Peña
Wetlands International	Andrés Fraiz
World Resources Institute (WRI)	René Ibarra
World Resources Institute (WRI)	Alberto J. Ramirez

# Protocol Development Overview

- **GOAL:** To create a robust Panama Forest Protocol that provides best practices for GHG accounting to generate Climate Reserve Tonnes (CRTs)
- Ensure high quality carbon credits that guarantee the environmental and social integrity of the project.
- Align the protocol with the laws and regulations of Panama.
- Incentivize activities that increase carbon sequestration in the forestry sector.
- Generate co-benefits (social and environmental).
- Leverage lessons learned from the Reserve's US and Mexico Forest protocols
- Solicit and incorporate expert stakeholder feedback.

# Timeline



Steps	Details	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dic	Jan
<b>Formation of the Working Group</b>	kick-off meeting												
	Submit the SOI: February 10, 2023												
<b>Workgroup</b>	Meeting 1: Eligibility - Activities		2										
	Meeting 2: Land Tenure		15										
	Meeting 3: Activities			5									
	Meeting 4 : Environmental Safeguards			19									
	Meeting 5: Social Safeguards & Additionality				4								
	Meeting 6: Permanence				18								
	Meeting 7: Quantification + MRV					8							
	<b>Meeting 8: In-person Meeting</b>					<b>30</b>							
<b>Draft Protocol Development</b>													
<b>Work Group Review</b>													
<b>Public Comment Period</b>	Public Comment Period												
	Review of comments and update of the protocol												
<b>Approval by the Board of Directors of the Reserve</b>	January 2024												

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# THE CLIMATE ACTION RESERVE

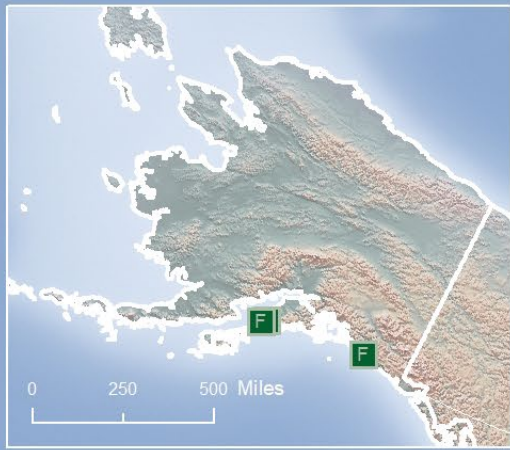
# Climate Action Reserve



- Mission: to develop, promote and support innovative, credible market-based climate change solutions that benefit economies, ecosystems and society
- **Develop high-quality, stakeholder-driven, standardized carbon offset** project protocols across North America and Latin America
- Accredited Offset Project Registry under the **California cap-and-trade program**
- Serve compliance and **voluntary carbon markets**
- **Reputation for integrity** and experience in providing best-in-class registry services for **offset markets**

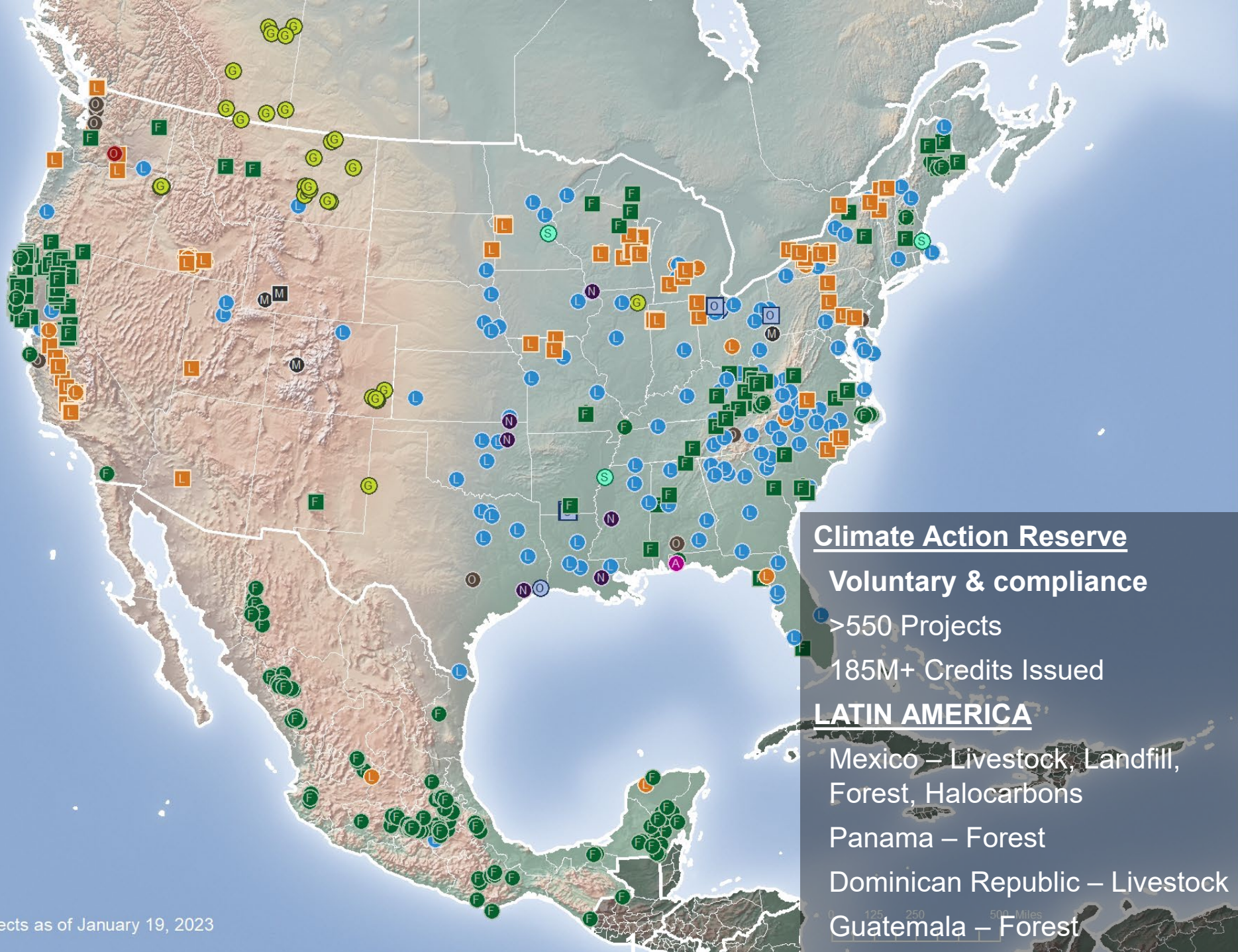


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- Adipic Acid
- Forest
- Forest (ARB)
- Grassland
- Landfill
- Livestock
- Livestock (ARB)
- M Mine Methane
- M Mine Methane (ARB)
- N Nitric Acid Production
- N Nitrogen Management
- O Organic Waste Composting
- O Organic Waste Digestion
- O Ozone Depleting Substances
- O Ozone Depleting Substances (ARB)
- S Soil Enrichment



**Climate Action Reserve**  
**Voluntary & compliance**

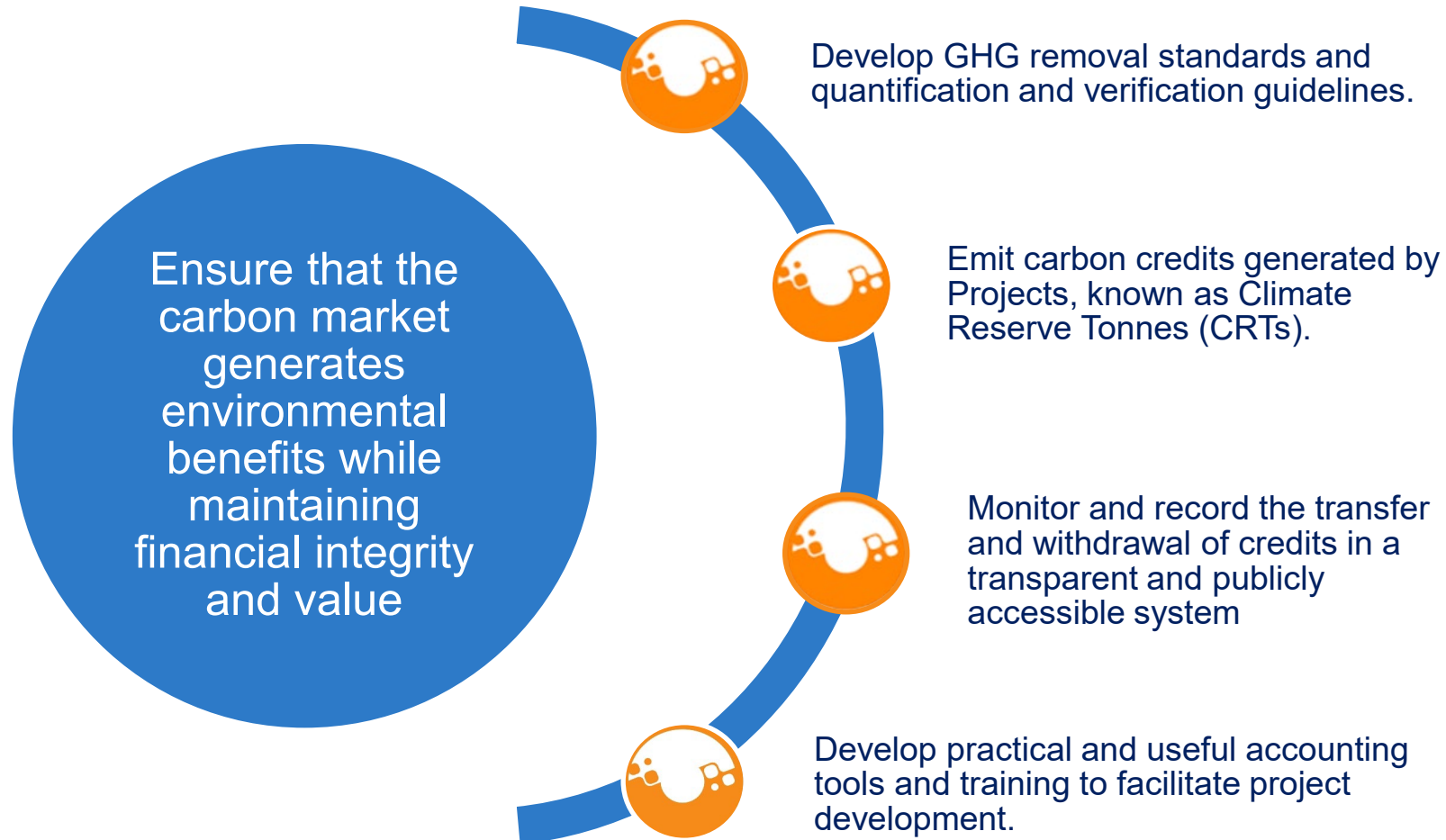
**>550 Projects**  
**185M+ Credits Issued**

**LATIN AMERICA**

Mexico – Livestock, Landfill, Forest, Halocarbons  
Panama – Forest  
Dominican Republic – Livestock  
Guatemala – Forest

Listed, Registered, Transitioned, & Completed Projects as of January 19, 2023

# The Climate Action Reserve



# Principles of the Reserve Program

All registered projects and credits issued by the Reserve must be:

ADDITIONAL	VERIFIED	REAL	PERMANENT	ENFORCEABLE
<ul style="list-style-type: none"><li>• Beyond common practices</li><li>• Beyond regulatory requirements</li></ul>	<ul style="list-style-type: none"><li>• Standardized eligibility criteria and quantification methodologies</li><li>• Independent third-party review.</li></ul>	<ul style="list-style-type: none"><li>• Conservative emissions accounting</li><li>• Prescriptive models and equations</li><li>• Uncertainty reduction</li></ul>	<ul style="list-style-type: none"><li>• Monitoring and reporting processes</li><li>• Any leakage or loss is quantified and compensated</li></ul>	<ul style="list-style-type: none"><li>• Processes to ensure program compliance</li><li>• Accountability mechanisms</li></ul>

- The Reserve seeks to be practical and ensures that projects do not have negative impacts
- The standards include social and environmental safeguards to ensure the participation and benefit of the participants

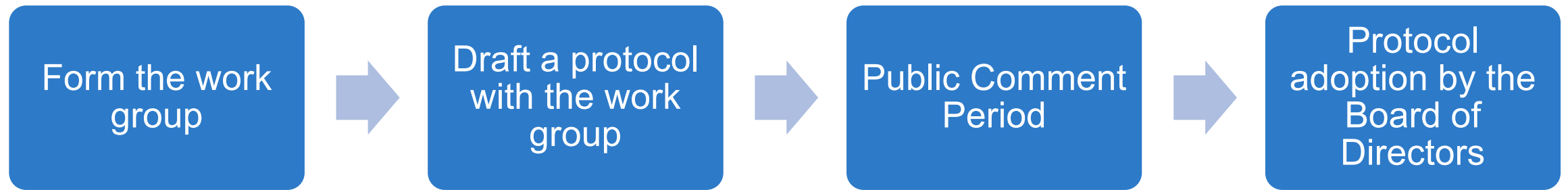
## Two elements:

- Determination of project eligibility and additionality using standardized criteria rather than project-specific assessments.
- Quantification of GHG reductions/removals through a baseline established under certain assumptions, emission factors and monitoring methods.

## Objectives:

- Minimize personal judgment in project assessment
- Reduce transaction costs for the project developer, minimize uncertainties for investors, and increase the transparency of the project when it is approved and verified

# Rigorous, Inclusive and Transparent Process for Protocol Development



**Inclusive Process:** A balanced multi-stakeholder working group is formed with industry and jurisdiction experts, government agencies, environmental organizations, and other stakeholders.

- Stakeholders that are not part of the working group can still participate in the process as “observers”.

**Transparent Process:** All work group meetings and webinars for the public comment period are recorded and posted on the website along with the drafts



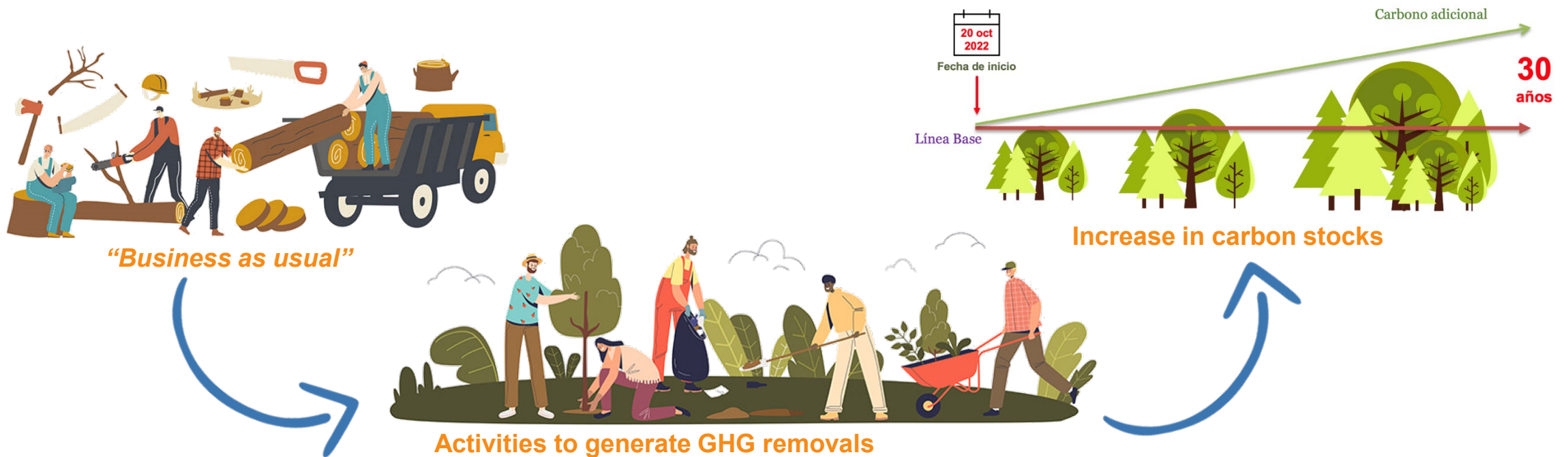
# CARBON MARKET



# What is an offset credit project?

An offset credit project is an activity or set of activities *that due to market incentives and on a permanent basis:*

- reduce GHG emissions,
- they increase the sequestration or storage of carbon removed from the atmosphere.



# Climate Reserve Tones (CRTs)

GHG removals and reductions registered in the Reserve system

1 CRT = 1 metric ton of CO<sub>2</sub>e reduced or removed

Each CRT has a unique identification number and one year of establishment (vintage)

Can be purchase/sold on the international voluntary market

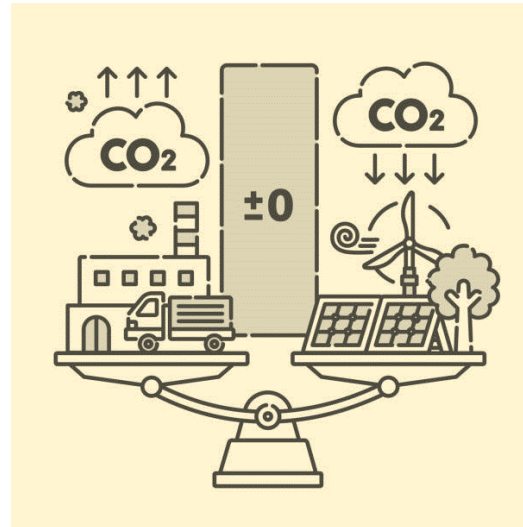
1 bond = 1 ton of CO<sub>2</sub>e = 3,944 km driven



# What are carbon markets?

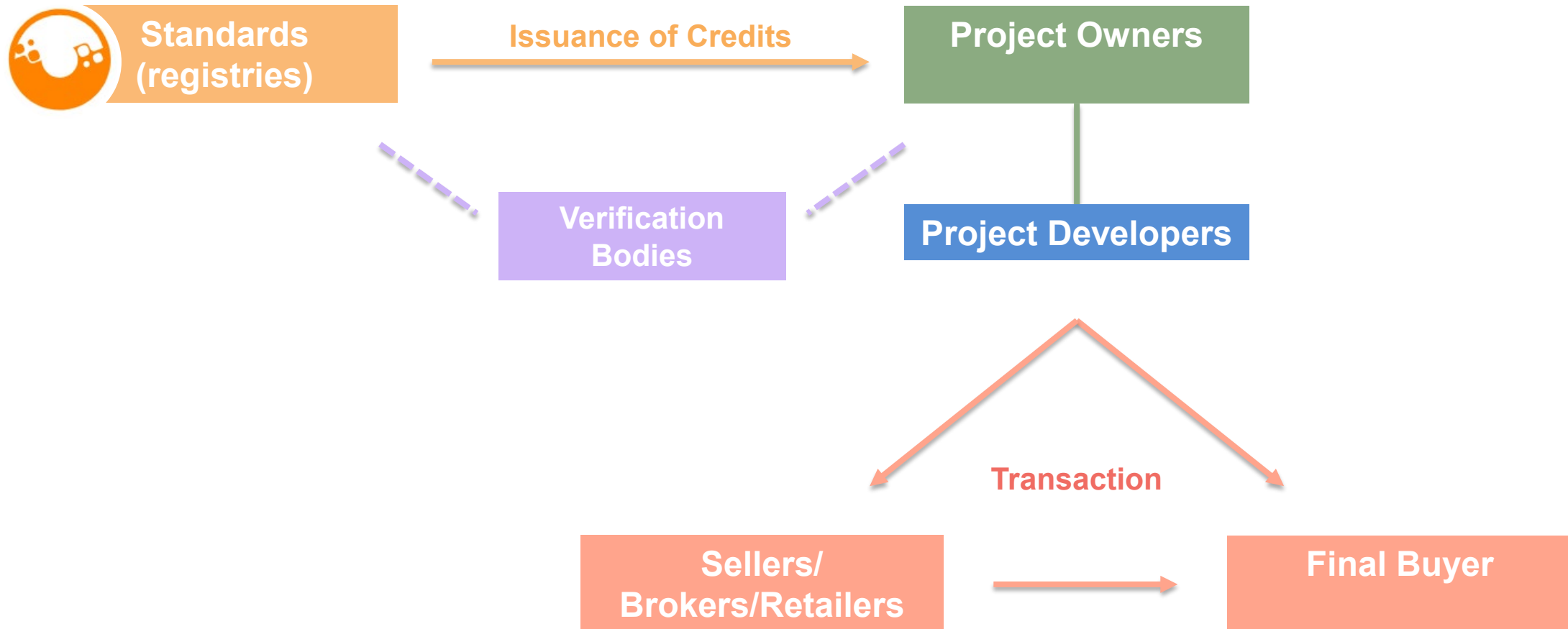
- Carbon markets are trading systems in which carbon credits (generated by unregulated sectors) are sold and bought
  - Each carbon credit is equivalent to 1 ton of CO<sub>2</sub>e reduced or removed from the atmosphere

Buyers are those who emit GHG into the atmosphere and want to **offset their carbon footprint**



Sellers are those who manage to reduce or remove CO<sub>2</sub> emissions from the atmosphere. For example, forest owners carry out additional actions to promote tree growth.

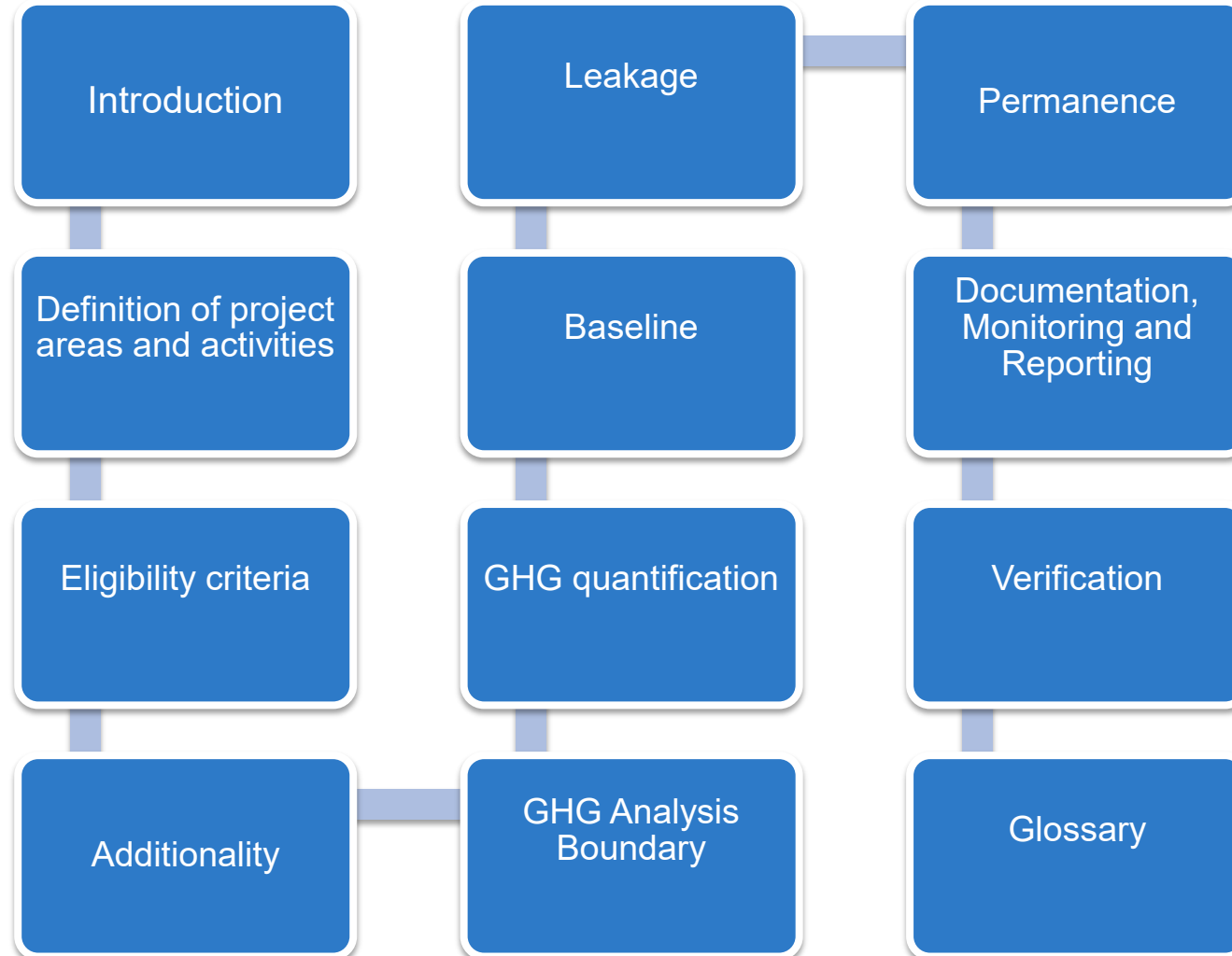
# Carbon Market Actors



# The Role of Carbon Project Protocols

- Set the requirements and quantification methodologies for generating **carbon credits** that can be sold on voluntary or regulated carbon markets
- Provide **confidence to buyers** as **high-quality carbon credits** are purchased.
- Address **GHG accounting principles** (for example, additionality)
- Present the quantification **methodologies** for GHG inventory

# What does a Carbon Project Protocol include?



# What is a forest carbon project?

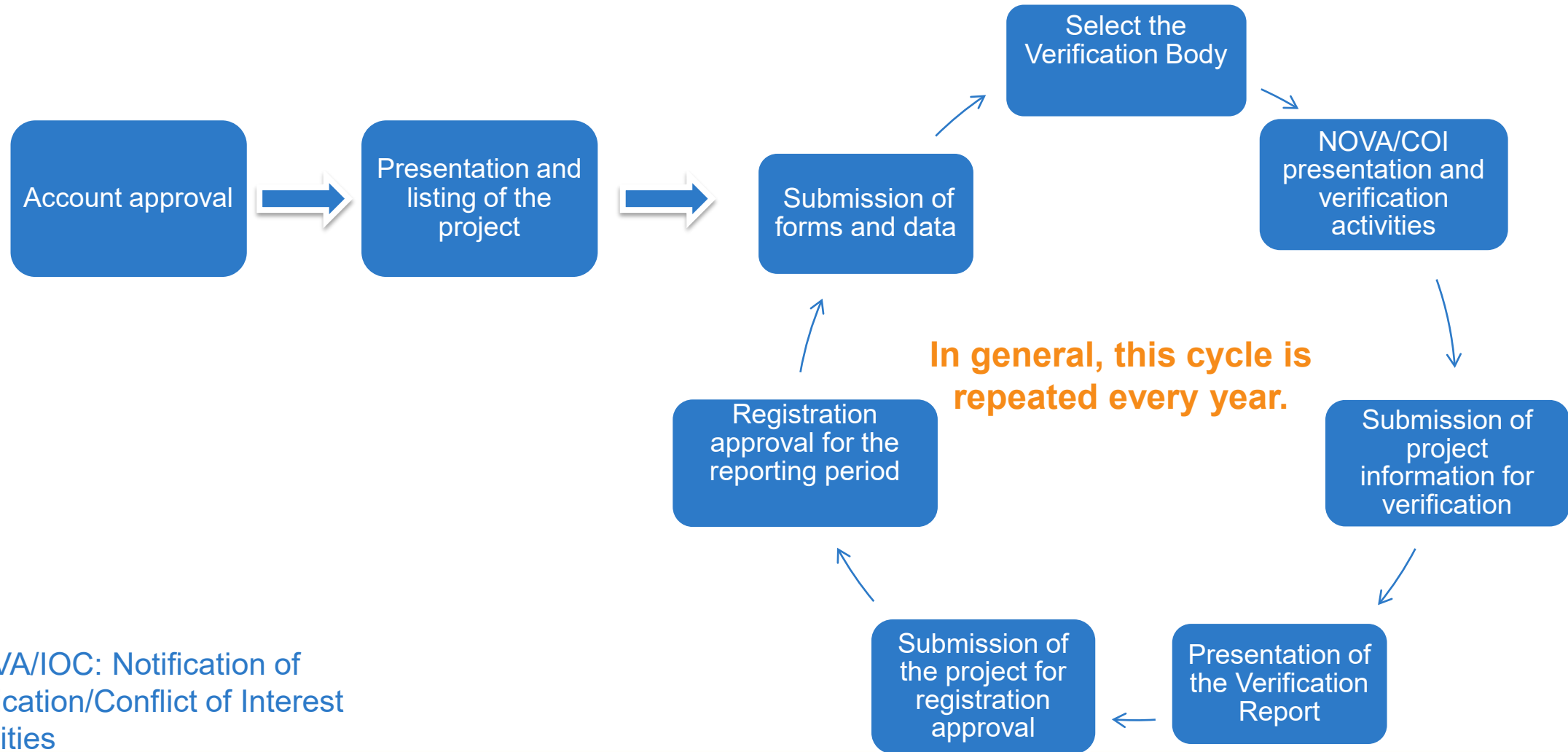


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Projects that are carried out in forest ecosystems where the carbon trees can be measured to generate carbon credits (verified and issued in a registry), which can be sold on the carbon market (voluntary or regulated).



# The Life Cycle of a Project



\*NOVA/IOC: Notification of Verification/Conflict of Interest Activities





**Eligibility**

# **PROTOCOL DEVELOPMENT CONSIDERATIONS**

# Land tenure summary

## Eligible owners:

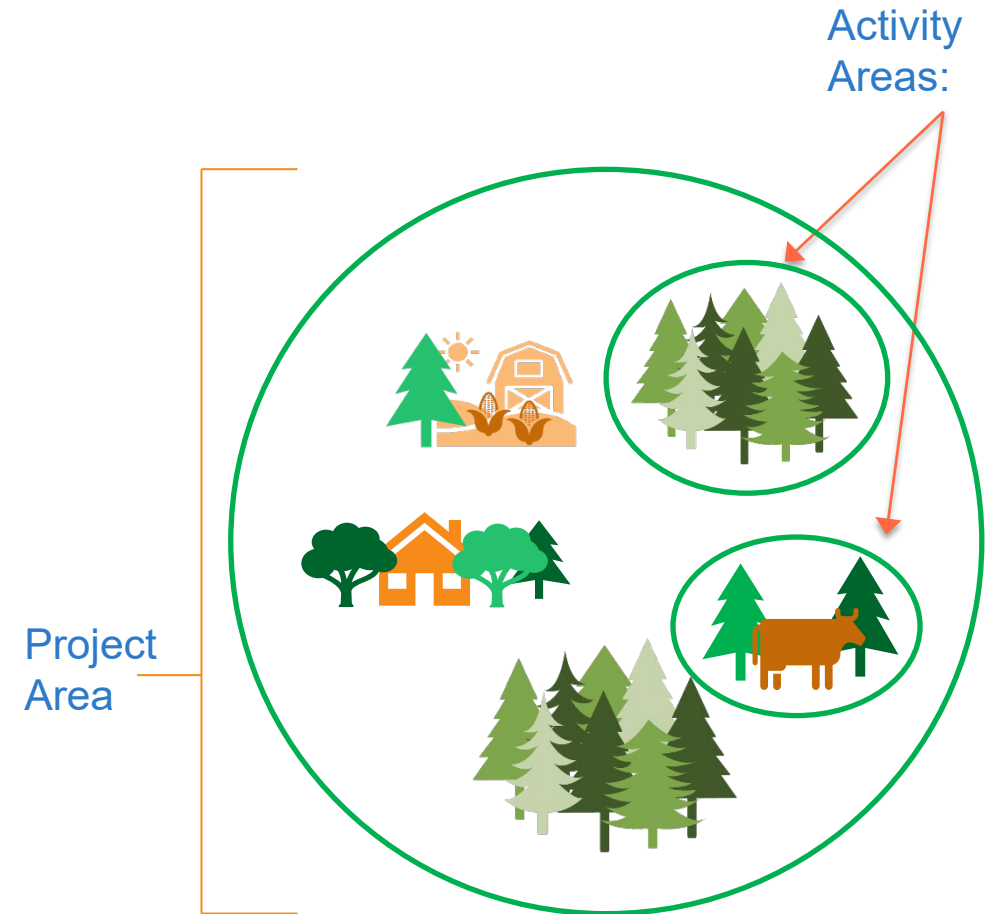
- Private Lands: with titles registered with the Public Registry.

## Lack of legislative clarity:

- State Lands
- Collectively titled lands
  - Indigenous territories or comarcas
  - Collective lands
- For these properties, we are still evaluating options with MiAMBIENTE.

# Project Area and Activity Area

- **Project Area:** Includes the entire area within a property
- **Activity Area:** Specific areas where the defined activities that lead to a quantifiable increase in carbon stocks are carried out
- **Purpose:**
  - Allows for the inclusion of multiple activities within one Project
  - Can reduce administrative and project development costs for activities
  - Activities that are traditionally not economically viable can be incentivized
  - Allows for different levels of monitoring:
    - Project area: monitoring of leakage
    - Activity area: quantification of carbon stocks/removals



# Additional considerations

- For comarcas, consider two options:
  - Establish the Project Area at the county level.
  - Establish the Project Area at the regional level and evaluate adjustments to leakage analysis and/or deductions.

# Potential Activities

- To facilitate adaptation of the protocol, include only those activities that result in carbon increases (i.e. removals/sequestration) are considered.
- "Activities" are discrete management actions that increase carbon sequestration in forests and forest products above the baseline.
- Potential activities include:
  - Agroforestry and Silvopastoral Systems
  - Improved Forest Management
  - Reforestation
  - Restoration
  - Urban Forests



# Definition of Activities: Agroforestry and Silvopastoral Systems

Activity Area	Description
Agroforestry and Silvopastoral Systems	<ul style="list-style-type: none"><li>• Agroforestry is the intentional integration of trees into non-tree crop and animal farming systems.</li><li>• The main human activity is agriculture and/or livestock</li><li>• Land cover is defined as agriculture or grassland</li><li>• Trees are planted or natural regeneration is promoted</li><li>• Trees may exist amongst, or adjacent to the cultivated crops and grazing areas, and may be harvested as allowed by law.</li></ul>

# Definition of Activities

Activity Area	Description	Criteria
Reforestation	Direct planting of native tree seedlings or site preparation activities that result in forest regeneration of native species, resulting in enhanced carbon sequestration.	<ul style="list-style-type: none"><li>• Can occur on landscapes that have been out of forest cover for the past 5 years</li><li>• OR have recently been impacted by a natural disturbance that has reduced the canopy cover to less than 50%.</li><li>• Can occur within protected areas.</li></ul>

# Definition of Activities

Activity Area	Description	Criteria
Restoration	<ul style="list-style-type: none"><li>• Restoration is a set of actions applied to increase carbon stocks and canopy cover on degraded natural forests.</li><li>• Actions may be direct and include tree planting, authorized thinning for disease and infestation, or other silviculture action to increase forest cover.</li><li>• Actions may also be indirect and focused on reducing ongoing actions that led to degraded forest conditions, thereby enabling natural forest succession to enhance carbon stocks.</li></ul>	<ul style="list-style-type: none"><li>• Restoration is an eligible activity in any natural forest, including protected areas, that does not have an authorized Forest Management Program for commercial timber harvest and/or where commercial harvesting is prohibited due to a law, regulation, or norm.</li><li>• Actions implemented may not contradict any regulation or management plan governing the Activity Area.</li></ul>

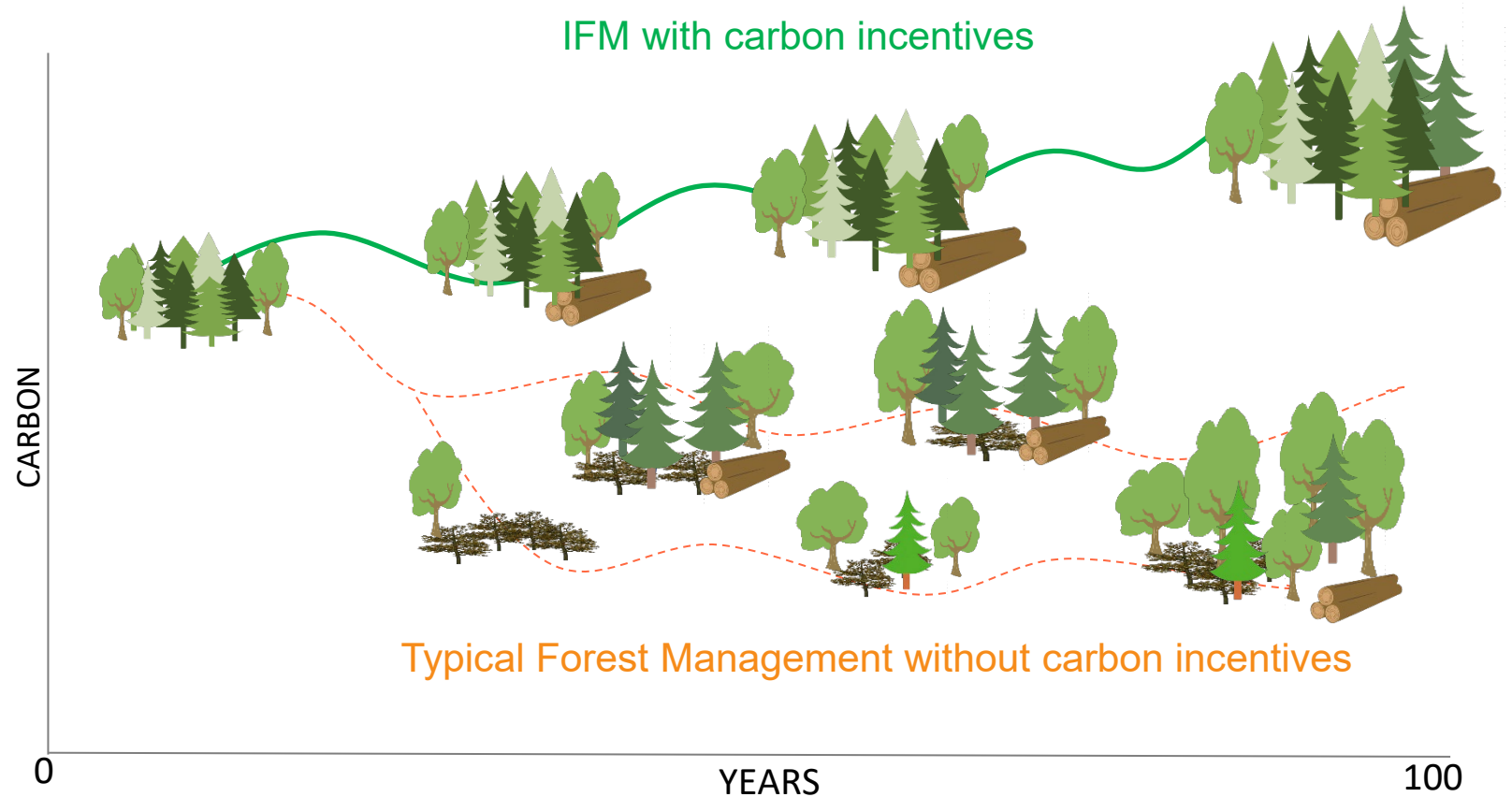


# Definition of Activities

Activity Area	Description	
Small Urban Forests	<ul style="list-style-type: none"><li>The direct planting and management for increased forest cover within urban areas.</li></ul>	<ul style="list-style-type: none"><li>Can only occur on lands zoned as urban.</li><li>Include urban areas less than 10 contiguous hectares with a minimum 10% canopy cover and can include the planting of street trees.</li></ul>
Large Urban Forests		<ul style="list-style-type: none"><li>Can only occur on lands zoned as urban.</li><li>Occur on urban landscapes that are at least 10 contiguous hectares with a minimum of 10% canopy cover.</li></ul>

# Definition of Activities: Improved Forest Management

- Economic returns are important drivers for forest management.
- Carbon finance provides an incentive to invest in tree thinning to maintain healthy and growing trees and defer timber revenue until forests grow in maturity and productivity.



# Definition of Activities

Activity Area	Description	Criteria
Improved Forest Management	<p>A set of management actions that enhance sequestration and resiliency of sequestered carbon in forest landscapes under harvest management plans.</p> <p>Activities that lead to carbon enhancements in managed forests, may include, but are not limited to, the following actions:</p> <ul style="list-style-type: none"><li>▪ Increase the harvest rotation age towards optimum rotation age.</li><li>▪ Harvest selection while thinning to retain the best genotypes and phenotypes to improve the rate of sequestration.</li><li>▪ Control stocking to manage competition, and the related effects on forest growth and resiliency.</li><li>▪ Increase stocking in understocked areas within the managed forest.</li><li>▪ Reduction of litter and surface fuels in fire-prone ecosystems to enhance resiliency.</li></ul>	<p>The primary land cover is forest, which may be present in varying densities and sizes, and the forest has a forest management program authorized for MiAMBIENTE with the purpose of commercial timber harvest.</p>



**Environmental Safeguards**

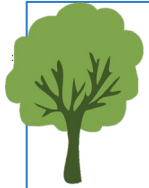
# **PROTOCOL DEVELOPMENT CONSIDERATIONS**

# Environmental Safeguards



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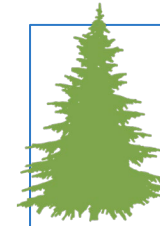
In order to ensure that all projects have environmental benefits beyond carbon and support the ecosystem services provided by natural forests, projects must:



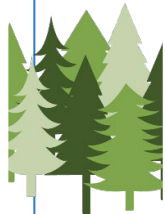
ES1 Maintain or increase carbon stocks



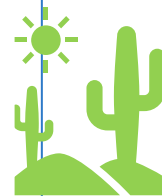
ES2 & ES3 Use a variety of native species



ES5 Implement sustainable harvesting practices



ES4 Maintenance or increase of tree canopy cover throughout the Project Area



ES6 Maintain natural soil cover

# Environmental Safeguards



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Environmental Safeguard	Applicable Activities	Guidance
ES1 Maintenance of forest carbon stocks	All	<p>Activity Areas must maintain or increase standing live and dead carbon stocks over the project life, as determined by a running 10-year average of carbon stocks within the Activity Areas.</p> <p>Exceptions may be granted for cases of natural disturbances or silviculture activities aimed at reducing an imminent risk of disease or pest infestation.</p>
ES6 Maintenance of natural land cover	Reforestation	<p>Forest Projects should take into consideration the effects of project activities on ecological processes; where project activities result in the conversion of natural land cover, the Forest Owner must provide justification to be approved by the Reserve.</p>

# Environmental Safeguards

Environmental Safeguard	Applicable Activities	Guidance
ES2 Native Species	IFM, Restoration, Reforestation	<ul style="list-style-type: none"> <li>• Demonstrate progress towards achieving 95% native species within the AAs, as measured by average trees/ha.</li> <li>• Exceptions for climate change strategies indicated/approved by MiAMBIENTE.                             <ul style="list-style-type: none"> <li>• For IFM and Restoration: must be met within 50 years.</li> <li>• For Reforestation: must be met immediately following the establishment of a new forest stand.</li> </ul> </li> </ul>
	Large Urban Forestry	<ul style="list-style-type: none"> <li>• May not reduce the percent of native species throughout the project life.</li> </ul>
	Agroforestry and Silvopastoral	<ul style="list-style-type: none"> <li>• For Agroforestry and Silvopastoral AAs in excess of 30% tree canopy cover, the tree composition must comply with 80% native species as measured by trees/ha and determined on any 5 ha within the AA.</li> <li>• Agroforestry AA's must meet this requirement at the AA's start date.</li> </ul>

# Environmental Safeguards

Environmental Safeguard	Applicable Activities	Guidance
ES3 Composition of Native Species	IFM, Restoration, Reforestation	<ul style="list-style-type: none"> <li>• Must demonstrate progress towards meeting the composition of native species.                             <ul style="list-style-type: none"> <li>• For IFM and Restoration: must be met within 50 years.</li> <li>• For Reforestation: must be met immediately following the establishment of a new forest stand.</li> </ul> </li> <li>• There are exceptions for ecological reasons approved by MiAMBIENTE.</li> </ul>
	Large Urban Forestry	<ul style="list-style-type: none"> <li>• If a single species comprises more than the proportion indicated, the proportion of the dominant species may not be intentionally increased throughout the project life.</li> </ul>
	Agroforestry and Silvopastoral	<ul style="list-style-type: none"> <li>• For Agroforestry and Silvopastoral AAs in excess of 30% tree canopy cover, as determined on any 5 ha within the AA, the composition of native species shall meet the requirements within 25 years of the start date.</li> </ul>



# Composition of Native Species

Project Activity Areas*	Native Species Composition Requirements (Trees per Hectare)
Up to 10 hectares	Up to 100% can be in one species.
>10 to ≤50 hectares	Up to 90% can be in one species.
>50 to ≤100 hectares	No more than 80% can be in one species. The balance must be made up of at least two other species.
>100 to ≤1,000 hectares	No more than 70% can be in one species. The balance must be made up of at least two other species.
Greater than 1,000 hectares	No more than 60% can be in one species. The balance must be made up of at least three other species.

\*The area is determined by the sum of hectares in each Activity Area.

# Environmental Safeguards

Environmental Safeguard	Applicable Activities	Guidance
ES4 Maintenance or increase of tree canopy cover throughout the Project Area	IFM, Restoration, Reforestation, Agroforestry, Silvopastoral	<ul style="list-style-type: none"><li>• Tree canopy cover throughout the PA must not decrease as a result of human activities over the project life relative to the start date.</li><li>• If a decline in tree canopy cover in excess of 5% is detected, as measured through remote sensing, the project must rectify the loss through reforestation in the subsequent 6 RPs.</li><li>• There are exceptions for natural disturbances or activities planned by governmental agencies.</li></ul>

# Environmental Safeguards

Environmental Safeguard	Applicable Activities	Guidance
ES5 Sustainable harvesting practices	IFM	<ul style="list-style-type: none"><li>• Where harvest occurs within the AAs in a contiguous area larger than 5 ha, a tree, or group of trees, representative of the age cohort that was harvested, can be no further than 100 m from other trees, either within the harvest area or outside of the harvest area in order to provide refugia for plants and animals.</li><li>• Should these retained trees fall due to wind events, the fallen trees may be harvested. Retained trees may not be felled intentionally until the regenerated stand reaches 10-years of age.</li><li>• Exceptions, related to safety, ecological, or other rationale, to this requirement may be granted if the request is made to the Reserve in writing prior to the exception occurring.</li></ul>

# Environmental Safeguards

Environmental Safeguard	Applicable Activities	Guidance
ES7 Soil disturbance during site preparation for tree planting	All	<ul style="list-style-type: none"> <li>• Site preparation using deep ripping is prohibited from affecting more than 1% of an AA in any year as determined by the area encompassed by the channels produced by a single ripper.</li> <li>• Such channels are defined by the width of the ripper tine used, plus 0.5 meter on each side.</li> <li>• In cases where deep ripping does exceed 1% of an AA in a given year, crediting for any increases in forest carbon stocks will be suspended for the number of RPs equivalent to the proportion of the AA affected, rounded up to the nearest percentage point.</li> <li>• For example, if deep ripping on a 100-hectare AA is performed over a combined channel length of 22,000 meters using a ripper with a tine width of 0.1 meter, resulting in 2.4% of the AA being affected, crediting would be suspended for the AA for three RPs , including the RP during which deep ripping occurred.</li> </ul>



**Social Safeguards**

# **PROTOCOL DEVELOPMENT CONSIDERATIONS**

In order to ensure all provides provide social benefits, projects must:

## Free, prior and informed consent

- Have one or a series of congress where project issues are discussed before the vote
- Have a vote to approve the project
- In Panama, it is regulated in Law No. 37 del 2016

## Notification, Participation and Documentation

- Describe how assemblies are announced
- Have spaces for participation
- Publicly document Congress Resolutions

## Project governance

- Identify a project coordinator to represent the community with the verifiers and the Reserve

# Social Safeguards: Free, Prior, and Informed Consent

## Free, Prior, and Informed Consent

- Prior to project registration, **Forest Owners must hold a General Congress to comply with FPIC.**
- Provisions must be made to ensure **non-Spanish speaking participants can understand the material** and communicate during assemblies.
- The **congress** must be announced in a manner to ensure that the information reaches all community members, including vulnerable groups like women and young people.
- The **General Congress Resolutions and General Congress or meeting Proofs** and proof of the (through photographs or signatures) must be included in the Project Report.
- **The general congresses** must adhere to proper notification, participation, and documentation requirements in the section on Notification, Participation, and Documentation below.

# Social Safeguards: FPIC

Social Safeguard	Description
SS1 Forest Carbon Project Concepts	<p>The rationale behind the participation in a forest carbon project must be discussed prior to the initial approval of the Forest Project. Presentations must address the following topics:</p> <ul style="list-style-type: none"><li>• <b>Climate change associated</b> with GHGs</li><li>• <b>Role of forests in mitigating</b> climate change</li><li>• <b>Opportunities (economic and environmental)</b> for participation in carbon project</li><li>• <b>Methods to enhance forest carbon stocks</b></li><li>• <b>Requirements</b> associated with the project, including additionality and permanence</li><li>• Importance of maintenance of <b>native biodiversity</b></li><li>• <b>General project costs</b> and how project design may affect project profitability</li></ul>



# Social Safeguards: FPIC

Social Safeguard	Description
SS2 Anticipated Costs	<p><b>Anticipated costs must be discussed and documented prior to project registration, including:</b></p> <ul style="list-style-type: none"><li>• Site preparation</li><li>• Provision of and planting of forest seedlings</li><li>• Inventory and monitoring</li><li>• Project governance</li><li>• Project verification</li><li>• Changes in land use and access to resources</li><li>• Administrative costs for the Forest Project</li><li>• Division of costs between the project developer, Forest Owner, and other parties involved</li><li>• Division of labor required by parties involved</li></ul>
SS3 Anticipated Benefits	<p><b>Anticipated economic benefits must be discussed and documented prior to project registration, including:</b></p> <ul style="list-style-type: none"><li>• Local environmental benefits, i.e. biodiversity, water quality, soil conservation, and recreation</li><li>• Economic benefits associated with carbon, along with sources for estimated carbon prices</li><li>• Distribution of benefits to the community, including anticipated timing of distributions, and division of benefit payments to other actors, including project developers, aggregators, and other parties involved</li><li>• Credit pricing information and where it was sourced</li></ul>

# Social Safeguards: FPIC

Social Safeguard	Description
SS4 Credit Sales and Use of Funds	<p>All credit sales and use of funds generated by <b>the project must be discussed and documented in resolutions prior to each reporting</b> period, including:</p> <ul style="list-style-type: none"><li>• How decisions will be made regarding the use of funds generated by the project</li><li>• The dynamics that determine market prices of voluntary carbon credits and sources used</li><li>• Credit pricing information and where it was sourced</li><li>• If the project has previously sold credits, the extent of any negotiations and all considered offers and credit pricing</li><li>• If the project has previously sold credits, purchase agreements and related contracts must be presented on and made available to community members</li><li>• If the project has previously sold credits, how the funds from those credits were used</li></ul>
SS5 Project Approval	<p>After the topics to comply with SS1-SS4 have been presented in an Assembly, the project must be approved prior to project registration through:</p> <ul style="list-style-type: none"><li>• Established formal and/or traditional authorities</li><li>• An Assembly Act with consensus (&gt;50%) of all present community members in favor</li></ul>

# Social Safeguards: FPIC

Social Safeguard	Description
SS6 Project Developer Approval & SS7 Aggregate Approval	<p>When working with a separate project developer or joining an aggregate, the decision must be approved through:</p> <ul style="list-style-type: none"><li>• Established formal and/or traditional authorities</li><li>• An Assembly Act with consensus (&gt;50%) of all present community members in favor</li><li>• A contract that determines the scope of project developer/aggregator services, the terms of payments, and the division of costs and benefits must be made available.<ul style="list-style-type: none"><li>• Contracts must clearly establish the rights to CRTs and future credit payments, as well as terms for contract renewal, renegotiation, or termination, including measures to reassess the terms of contract on an ongoing basis or in the event of noncompliance with the terms of the contract.</li><li>• The contract will be maintained as a confidential document on the Reserve registry.</li><li>• For aggregates, the contract cannot define terms for a landowner beyond 6 years without requiring a new vote.</li></ul></li></ul>

# Social Safeguards: Notification, Participation & Documentation



CLIMATE  
ACTION  
RESERVE

## Notification, Participation, and Documentation

General congresses (at least once a year) are held to discuss critical elements associated with project activities. Assemblies must prove that vulnerable groups are included. Each congress must include the following items on the agenda:

- Forestry activities (management actions, environmental issues, grievances, other concerns/opportunities)
- Programmatic events (MRV)
- Credits issued
- Benefit-sharing arrangements
- Finances

In addition to community Assemblies, community participation in the project development and verification processes is critical to ensure the longevity of the Forest Project.

# Social Safeguards: Notification, Participation & Documentation

Social Safeguard	Description
SS8 Proper Notification	<ul style="list-style-type: none"><li>• Describe how notices of Assemblies take place in order to include as many people as possible</li></ul>
SS9 Participation	<ul style="list-style-type: none"><li>• Assemblies must provide a sign-in sheet so that attendance can be monitored</li><li>• Opportunities for all community/comarca members to share opinions, both in writing and orally</li><li>• Describe how members of the community/comarca are incorporated in the design, development, and ongoing MRV of the Forest Project</li></ul>
SS10 Assembly Documentation	<ul style="list-style-type: none"><li>• A Resolution must document the discussions associated with each required item on the agenda</li><li>• Describe how Congress will be publicly available as part of the project record</li></ul>

# Social Safeguards: Project Governance

## Project Governance

Forest carbon projects require an organizational structure that will endure for long periods of time. A Project Coordinator must be selected by the community/congress to represent the Forest Owner with the project developer, verifiers, and Reserve staff.

The Project Coordinator is responsible for:

- Ensuring all project-related documentation is in order and up to date
- Ensuring General congress include the required elements above and providing the corresponding act
- Organizing logistics with verifiers and Reserve staff

# Social Safeguards: Project Governance

Social Safeguard	Description
SS11 Identification of a Project Coordinator	<ul style="list-style-type: none"><li>• A description of the nomination process and the selection/election process must be documented</li><li>• PC must be approved with a &gt;50% vote of the community present</li><li>• For communities, must be a member</li></ul>
SS12 Role and Participation of the PC	<ul style="list-style-type: none"><li>• The PC should be included as the Account Manager for the Forest Owner account on the registry</li><li>• The PC should be included in all communications regarding the project</li><li>• The PC should be included in all project MRV processes</li></ul>
SS13 Term of a PC & SS14 Replacing a PC	<ul style="list-style-type: none"><li>• The length of the term of PC must be defined</li><li>• Must identify whether the position of PC can be renewed and, if so, for how many terms</li><li>• To address potential disputes associated with the PC and/or Forest Project, a dispute resolution process and process to replace the PC from the position must be documented</li></ul>



**Additionality**

# PROTOCOL DEVELOPMENT CONSIDERATIONS



A forest project is considered additional if it would not have been implemented without carbon market incentives.

- Forest Project must comply with the following :



## **Legal requirement test:**

- Carbon generated beyond legal regulations.
- Attestation of Voluntary Implementation.



## **Performance standard test:**

- It is based on evidence that there is a risk of forest cover loss and carbon inventories
- Carbon that is above baseline is considered additional
- Different methodologies for each type of activity

# Performance standard test: Forest Management Activity Areas

- Reforestation activities, by definition, must take place in :
  - Lands that are not in forest cover on the Activity Area on the start date
  - Lands that have not been in forest cover within the past 5-years
  - Or have recently experienced a natural disturbance that reduced live tree stocking below 50% live canopy cover.
- Activities that comply with this definition of Reforestation automatically satisfy **the performance standard test**

# Small Urban Forestry, Agroforestry, and Silvopastoral Activity Areas

- Due to the inherent risk of deforestation and degradation, they automatically satisfy the Performance Standard Test.
- Activities are considered additional to the extent they produce GHG removals in excess of the Activity Area baseline

# Performance standard test: Large Urban Forestry Activity 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
  - The trend analysis should use at least two historical estimates that are at least 10 years apart, and with the earliest year no earlier than 1990
  - The protocol has a standardized methodology for estimating canopy cover from remotely sensed data
  - If historical images are not available, more recent images may be used, subject to Reserve approval.

If the historical trend of canopy cover is decreasing, it passes the performance standard test.

# Performance Standard Test: Restoration Activity Areas

- Is based on evidence that risks to forest inventories: The assessment of risk is based on an analysis of drivers of deforestation and degradation that may impact the land
- **Forest cover risk tool:**
  - Sub-section 1: Examines **legal restrictions** that may reduce the risk of deforestation
  - Sub-section 2: Establishes the **risk of deforestation** due to the presence of agricultural activities, biophysical characteristics, urban development, and economic pressures
    - If an Activity Area demonstrates that there is sufficient risk of deforestation, it may pass without completing the third section.
  - Sub-section 3: Assesses **the presence of degradation**
    - It must demonstrate the loss of canopy cover through the use of remote sensing data.
    - The protocol has a standardized methodology for estimating canopy cover from remote sensing data.
    - If the historical trend of canopy cover is decreasing by at least 10% over a 10-year period, it passes the performance standard test.

# Restoration PST Tool



CLIMATE  
ACTION  
RESERVE

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R		
1	<b>Sección 1 - Protección a largo y corto plazo</b>																			
2	1.1	¿El Área de Actividad está bajo algún esquema de protección a largo plazo que <b>NO</b> permita el aprovechamiento comercial (por ej., Parque Nacional, Veda Forestal)?							\$	?										
3	1.2	¿El Área de Actividad está bajo algún esquema de protección temporal que <b>NO</b> permita el aprovechamiento comercial (por ej., Programa de Pago por Servicios Ambientales de CONAFOR)?							\$	?										
6	<b>Sección 2 - Riesgo de cambio de uso de suelo de forestal a no forestal (crecimiento urbano y actividades agropecuarias)</b>																			
8	2.1	Favor de estimar el tamaño de la población, según el tiempo correspondiente que tardaría una persona en llegar del camino más cercano al Área de Actividad al poblado identificado.						0 - 15 Minutos	16 - 60 Minutos	61 - 120 Minutos	> 2 horas									
9								100,000 - 249,999	2,500 - 29,999	100,000 - 249,999	100,000 - 249,999	100,000 - 249,999								
11	2.2	¿Las actividades agropecuarias que se llevan a cabo fuera del AA (considerando un radio de 1 km del límite geográfico definido) son con fines de subsistencia o comerciales?						Comercial	?											
12	2.3	Si las actividades agropecuarias son con FINES COMERCIALES, ¿el precio del producto principal ha incrementado, mantenido igual o disminuido en el último año?						Mantenido igual	?											
13	2.4	¿Las actividades agropecuarias que se llevan a cabo fuera de las AA (considerando un radio de 1 km del límite geográfico definido y dentro del predio del Dueño Forestal) reciben subsidios del gobierno para llevar a cabo actividades agrícolas o pecuarias?						No	?											
14	2.5	¿Cómo se caracteriza la pendiente en el Área de Actividad?						Medio	?											
17	Favor de continuar con el cuestionario																			
13	<b>Sección 3 - Análisis de Degradación a partir de la Cobertura de Copa</b>																			
21	3.1	¿Cuál es el estimado del promedio de cobertura de copa (porcentual) calculado con una imagen satelital <b>HISTORICA</b> ? (Ver Apéndice C del						30	%	?										
23	3.2	¿Cuál es el año de la imagen histórica?						2000												
25	3.3	¿Cuál es el estimado del promedio (porcentual) de cobertura de copa calculado con una imagen satelital <b>ACTUAL</b> ? (Ver Apéndice C del PF)						50	%											
27	3.4	¿Cuál es el año de la imagen más reciente?						2020												
29	Cambio porcentual						-22%													
31	El Área de Actividad pasa la Prueba del Estándar de Desempeño																			
		Instrucciones		Ingreso de Datos_General				Ingreso de Datos_Manglar												

# Improved Forest Management Activity Areas

- Forest Management Plans (FMP):
  - These are documents approved by MiAMBIENTE that allow timber harvesting.
- For commercial FMPs:
  - Are there differences between FMPs for private and public lands?
  - In non-protected areas, only 70% of annual growth can be harvested? Is it standardized for all FMPs?



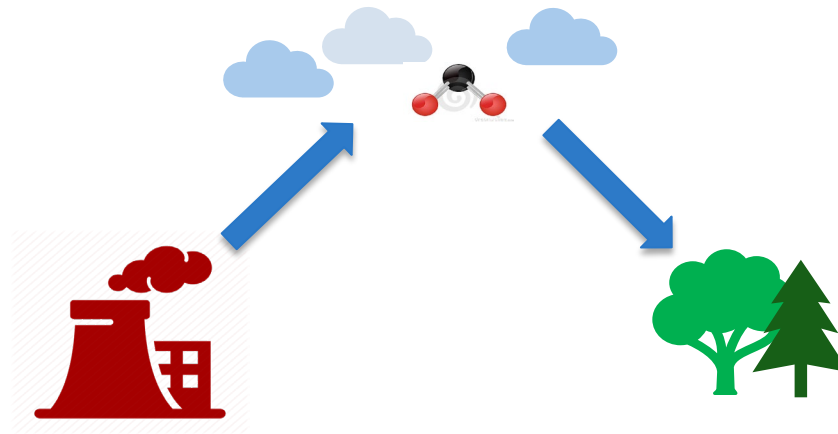
Permanence

# PROTOCOL DEVELOPMENT CONSIDERATIONS



## Forest Projects must meet the permanence standards:

- The climate benefit of the project must be "permanent," which is defined by a 100-year period for Forest Projects.
- A CRT credit is issued for each ton of CO<sub>2</sub>e that is removed from the atmosphere for a 100-year period.



# Ensuring the Permanence of Accredited GHG Removals

The Reserve requires Forest Projects to ensure that the carbon associated with credited GHG removals remains **stored for at least 100 years**. The protocol establishes multiple procedures to ensure that credited GHG removals meet permanence obligations:

1. A legal contract, known as a **Project Implementation Agreement**, signed by the Forest Owner and the Reserve, that establishes the obligations of each party in the event of a reversal.
2. In the case of Comarcas and collective lands, a **Resolution with a formal commitment approved by the Comarca** to maintain credited carbon stocks for a period of 100 years aligned with their Comarca or collective land processes and legal standards.
3. An insurance mechanism, known as the **Buffer Pool**, based on the project's risk profile.
4. An **incentive approach that redistributes the dividends from the buffer pool** to projects that demonstrate continued compliance and maintenance of sequestered carbon stocks over time.

# Section 3: Project Implementation Agreement (PIA)

The Project Implementation Agreement (PIA) is the contractual agreement between the Forest Owner and the Reserve:

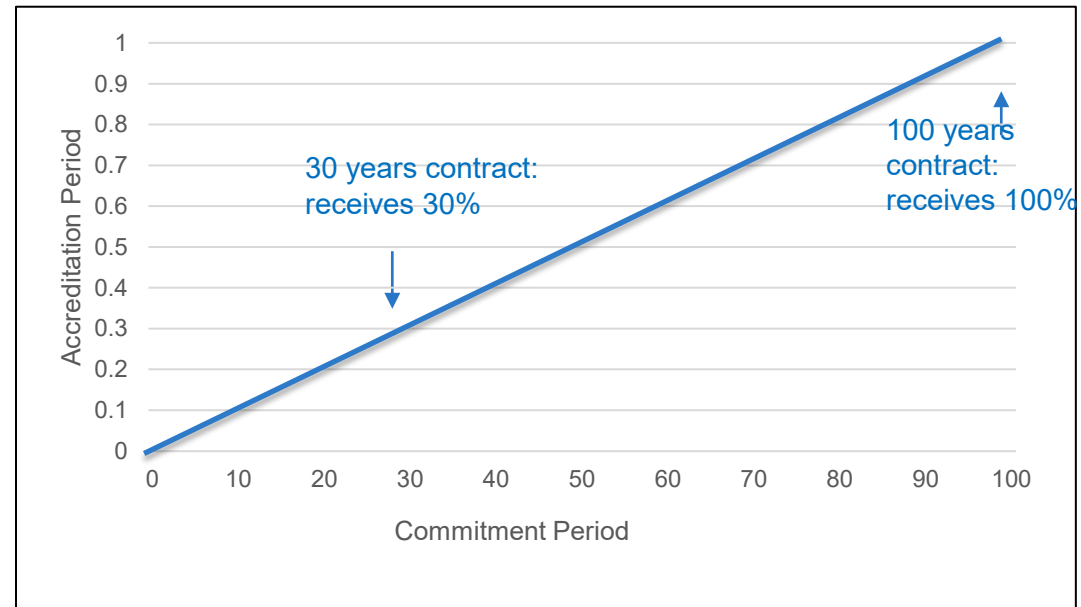
- The PIA establishes the Forest Owner's obligations to comply with the protocol's requirements.
- The Forest Owner can define the commitment period between 30 and 100 years.
  - The PIA can be renewed annually
  - The number of credits is stipulated according to the commitment period length.



# Accounting Ton/Year and the Emission of CRTs

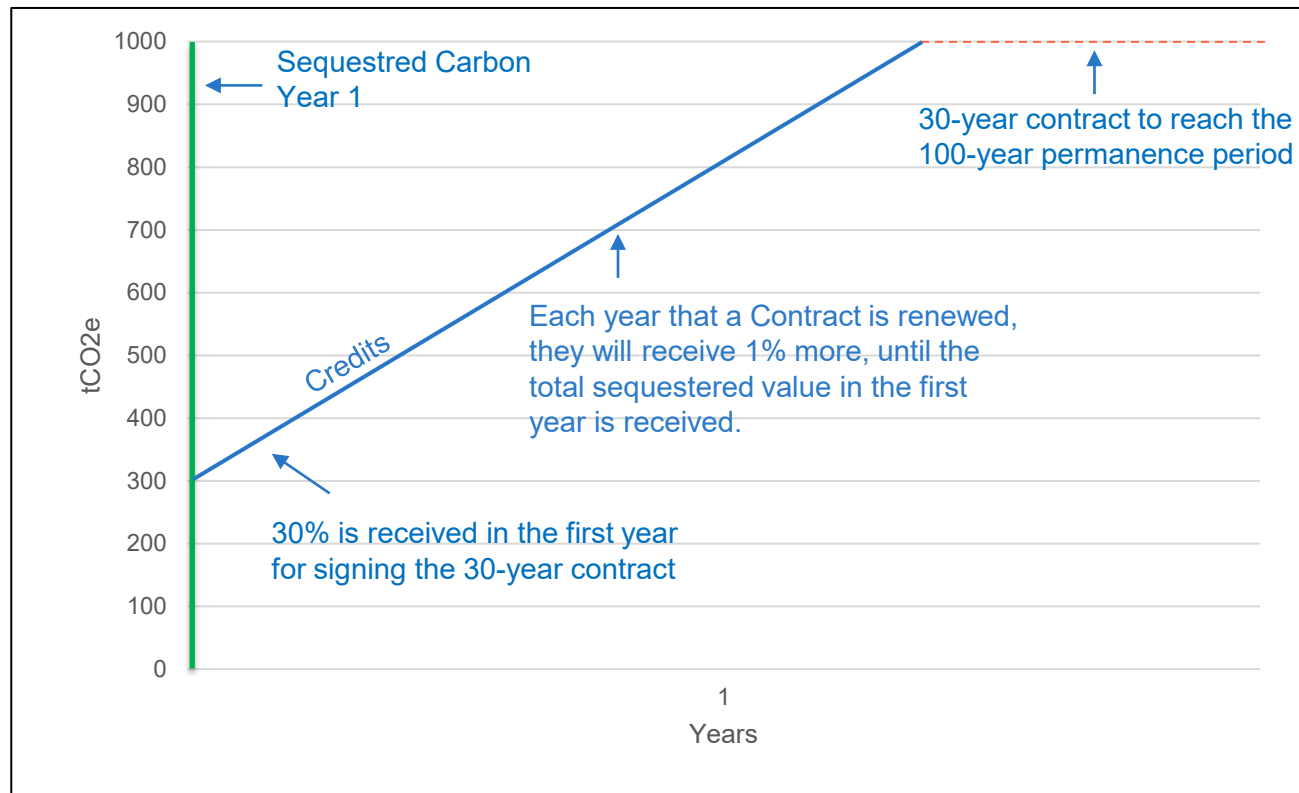
Time commitment periods less than 100 years will receive a fraction of the total credit:

- Protocol uses ton/year accounting to ensure permanence
- For each additional ton of CO<sub>2</sub>e, the crediting will be equivalent to the portion of the commitment period relative to the 100-year permanence period



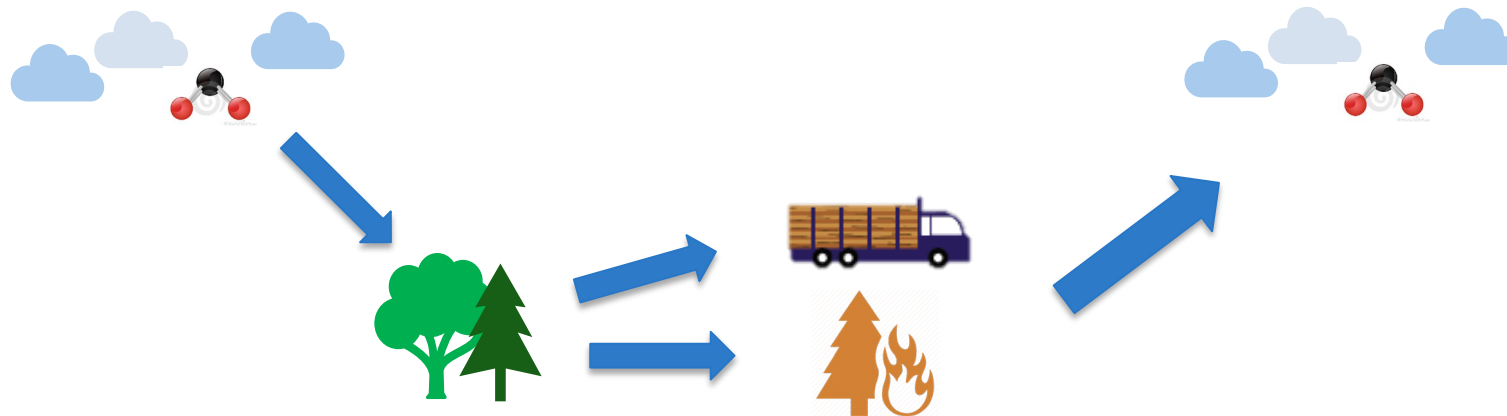
# Accounting Ton/Year and Emission of CRTs

Tons secured in a short-term period will have additional annual emissions over time, which is an additional incentive to achieve long-term permanence:



This process is repeated each year when additional carbon is sequestered.

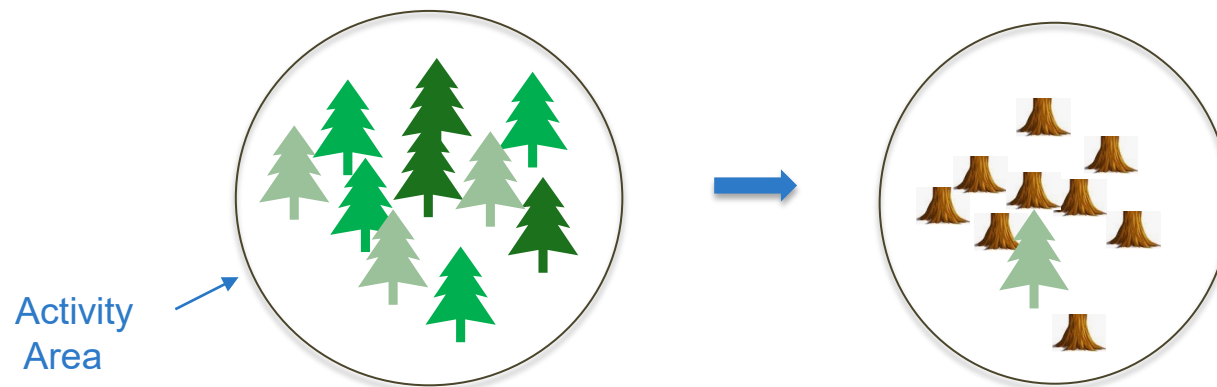
- Any reversal needs to be compensated for if they affect the contractually secured CRTs.
- There are two types of reversal:
  - Avoidable
  - Unavoidable



# Avoidable Reversal

An Avoidable Reversal is any reversal that is due to the Forest Owner's **gross negligence or willful intent**, for example harvesting, urban developments, or harm to the Activity Area, that reduces carbon stocks more than the total tons secured and emitted as credits.

- Not covered by the Buffer Pool
- The Forest Owner is responsible for removing a number of CRTs equal to the number of tons affected by the avoidable reversal.



# Unavoidable Reversal

An Unavoidable Reversal is one that is not caused by the negligence or premeditation of a Forest Owner, for example, **natural events** such as fires and pests.

To compensate:

- A Forest Project contributes an amount of CRTs to a Buffer Pool each year that credits are issued.
- The Reserve manages the Buffer Pool and will retire an amount of CRTs equal to the number of tons affected by an unavoidable reversal.





# Buffer Pool

- Contributions to the Buffer pool are determined through a **project-specific risk assessment**.
- Forest Projects also receive an
  - **economic incentive** to protect against reversals, based on an expected flow of future credits. As projects demonstrate continued compliance, a percentage of their contribution to the Buffer Pool may be redistributed to the Forest Owner over time based on the ton-year value of project-specific credits in the Buffer Pool.
- The Reserve adaptively manages the Buffer Pool, including its dividends, based on an ongoing assessment of programmatic risk and the health of the Buffer Pool.



# Project Contribution to the Buffer Pool

Risk Category	Contribution		
	Private Lands	Public Ownership	Collective Lands
Financial Failure	6% o 8%	4% o 6%	4% o 6%
Illegal Forest Biomass Removal *	2% o 4%	2% o 4%	2% o 4%
Conversion	4% o 8%	4% o 6%	4% o 6%
Over Harvesting**	0% o 4%	0% o 4%	0% o 4%
Social	2%	2%	4% o 6%
Political***	2%	4%	2%
Wildfire, Disease, or Insect Outbreak****	4% o 6%	4% o 6%	4% o 6%
Other Catastrophic Events	8%	8%	8%

\*Calculated based on implementation of forest management program and/or international forest certification programs.

\*\* Calculated based on the inclusion AA of MFM.

\*\*\* Calculated based on World Governance Indicators (<https://info.worldbank.org/governance/wgi/Home/Reports>)

\*\*\*\* Calculated based on the implementation of fire risk reduction works in your project area

*Rerversal Risk Rating* =  $100\% - [(1 - \text{FinancialFailure}\%) \times (1 - \text{IllegalForestBiomassRemoval}\%) \times (1 - \text{Conversion}\%) \times (1 - \text{OverHarvesting}\%) \times (1 - \text{Social Risk}\%) \times (1 - \text{Political Risk}\%) \times (1 - \text{Wildfire / Disease/ InsectOutbreak}\%) \times (1 - \text{OtherCatastrophicEvents}\%)]$



# Redistribution of Contributions to the Buffer Pool

- Forest Projects receive an **economic incentive for** protecting against reversals based on redistributions of contributions to the Buffer Pool or dividends from **the Buffer Pool**.
  - As projects demonstrate continued compliance, a percentage of their **contribution to the Buffer Pool may be redistributed** over time based on the tonne-year value of the project's credits in the Buffer Pool.



# Redistribution of Contributions to the Buffer Pool

- Redistributions and tonne-year value:
  - **Each year that one tCO<sub>2</sub>e is kept out of the atmosphere provides an atmospheric benefit of approximately 1%** relative to the atmospheric benefit produced by one tCO<sub>2</sub>e kept out of the atmosphere for 100 years.
  - As tCO<sub>2</sub>e are kept out of the atmosphere over time, **the portion of credits that have already provided an atmospheric benefit changes from being "at risk of reversal" to "not at risk of reversal"**.
  - The principle of tonne-year accounting is applied to the long-term management of the Buffer Pool, **such that the contributions made are redistributed over time as dividends as the credits change from being at risk to not being at risk of reversal.**



Quantification

# PROTOCOL DEVELOPMENT CONSIDERATIONS

A Forest Project must include the following Sources, Sinks, and Reservoirs:

Primary  
Effects:

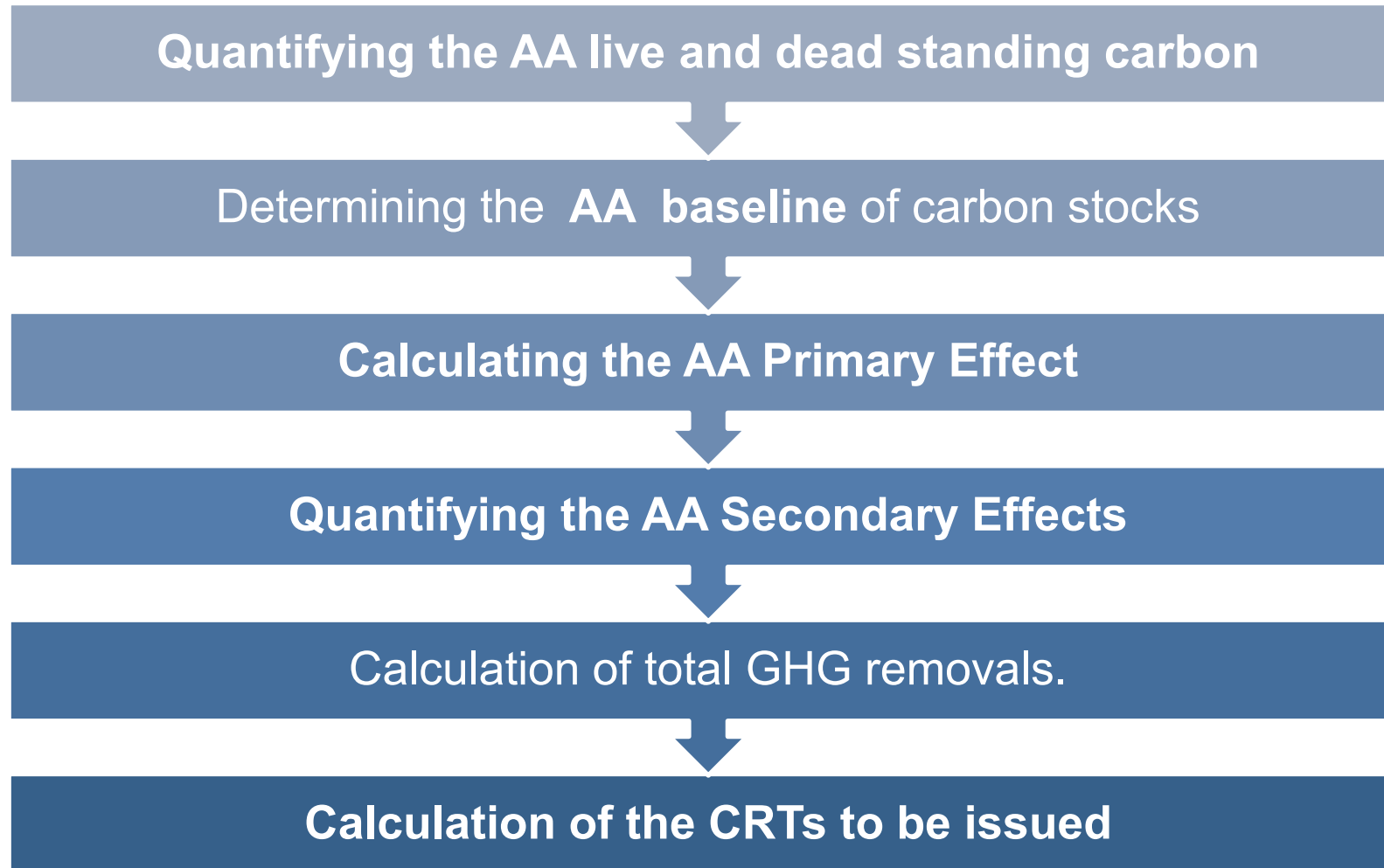
1. Standing live carbon
3. Standing dead carbon

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Secondary  
Effects:

10. Mobile combustion emissions from site preparation activities
13. Emissions from clearing of shrubs and herbaceous understory carbon
14. Biological emissions from clearing of forestland outside the Activity Area for agriculture and/or grazing
15. Biological GHG emissions/removals from changes in timber harvesting on forestland outside of the Activity Area

# Steps for GHG Quantification



# Quantification of live and dead standing carbon stocks - MFM, Restoration and Large Urban Forests

- Field sampling is required :
  - Installation of sampling plots in the field.
  - Field measurements of the trees
  - Measurements are entered into the CALCBOSK tool.
  - There is a standardized methodology



# Information taken from each plot

- The Reserve provides a form for the inventory that is consistent with Calcbosk forms

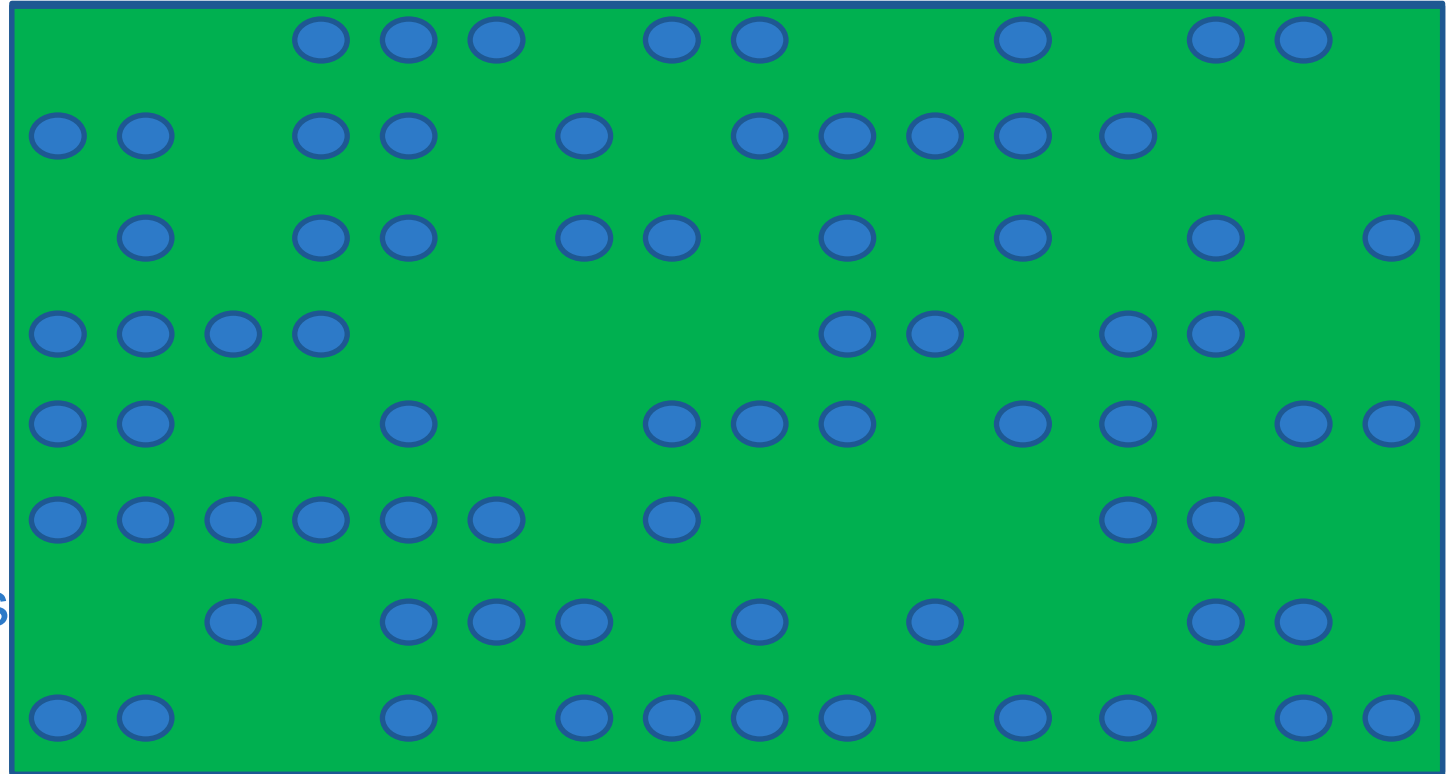
1	Número del Punto de Muestreo		5	Fecha	
2	Iniciales de los Técnicos en el Punto		6	Pendiente %	
3	Líder del Grupo		7	Aspecto	
4	Técnico #1		8	Latitud	
	Técnico #2		9	Longitud	
	Técnico #3		10	Notas	
	Técnico #4				

10	11	12	13	14	15	16		17	18		
Número del Árbol	Especie	Diámetro (cm)	Altura Total (m)	Longitud de la Copa	Vigor 1: Muy sano 2: Sano 3: Suprimido 4: Muerto con algo de deterioro 5: Muerto con deterioro avanzado	Referencia al Centro		Incremento en los últimos 5 años (mm)	Defecto en el árbol 0% = no defecto 100% = todo defecto		
						A Grados azimut del árbol al centro	B Distancia del centro del árbol al centro		Bajo 1/3	Medio 1/3	Alto 1/3
1											
2											
3											
4											



# Sampling Plot Selection

1. We define the Activity Area through a map.
2. A grid of points in the Activity Area (25 meters by 25 meters) is generated in a GIS.
3. The plots are selected at random.
4. Each plot has its latitude and longitude and an identification.
5. The Forest Owner is responsible for estimating the number of plots needed to achieve the confidence level.



# Confidence Level Calculation: Projects with Multiple Areas of Activity or Aggregate Projects

- The sampling error should not be more than 20% within a 90% confidence interval.
  - If the error is more than the target Sampling Error (TSE), deductions will be applied:

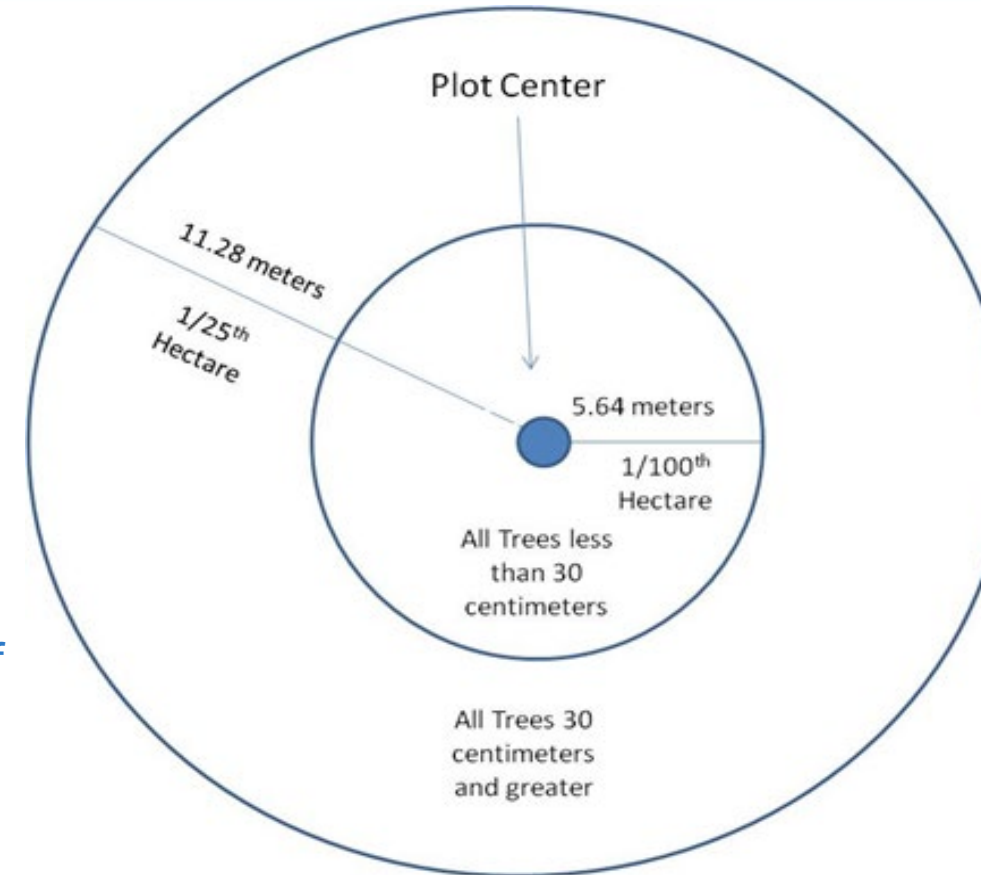
Actual Sampling Error at 90% Confidence Level	Confidence Level Confidence Deduction
<b>0 - TSE%</b>	0%
<b>TSE a 20%</b>	(Actual sampling error – TSE %) to the nearest 1/10th per cent
<b>Greater than 20%</b>	100%

- Deductions decrease the amount of credits issued to the project.

Number of Activity Areas	Target Sampling Error (TSE)
1	5%
2	7%
3	8%
4	9%
5	10%
6	11%
7	12%
8	13%
9	14%
10	15%
11	16%
12	17%
13	18%
14	19%
15+	20%

# Field measurements: Plots

- Standardized methodology
  - Two circumferences:
    - **Small circle**
      - 5.64m distance from plot center plot center for small trees ( $\geq 5$  cm and  $< 30$  cm DBH ) = area of 1/100<sup>th</sup> (one hundredth) of a hectare.
    - **Large circumference**
      - 11.28 m distance from plot center plot center for large trees ( $\geq 30$  cm DBH) = area of 1/25<sup>th</sup> (one hundredth of a hectare). DBH) = area of 1/25<sup>th</sup> (one twenty-fifth) hectare.
- We multiply the calculated carbon in each circumference by its corresponding factor to estimate the area of one hectare.



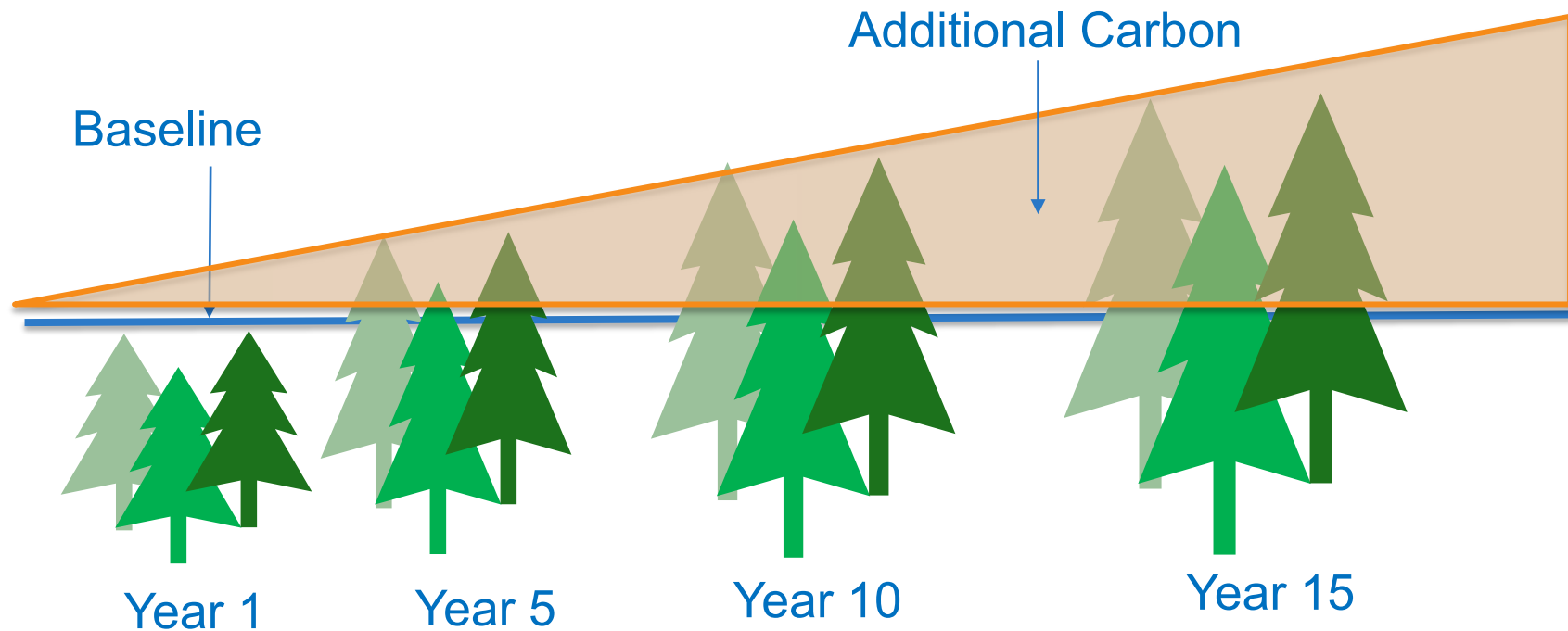
- Field sampling is required:
  - An inventory of carbon stocks may be deferred for those that are not affected by site preparation until the second full verification.
  - By the second full verification, must provide an estimated inventory of all required carbon stocks by using the field sampling inventory methodology.
  - Projects are not eligible to receive CRTs until after the second full verification where inventory verification is conducted.

# Small Urban Forests, Agroforestry and Silvopastoral Systems

- Small Urban Forestry, Agroforestry, and Silvopastoral Activity Areas may use the canopy cover inventory methodology:
  - Forest Owners maintain the option of using the intensive inventory methodology for all Activity Areas.
  - The canopy cover inventory methodology includes deriving a measurement of the **area of canopy cover** within the Activity Area, which are applied to the **ratio estimators** to produce an estimate of CO<sub>2</sub>e.
  - Ratio estimators represent a relationship between CO<sub>2</sub>e in standing trees and canopy cover.
    - The Reserve is evaluating studies to determine ratio estimators (tCO<sub>2</sub>e) for Panama.

After approving the additionality requirements, the baseline is established:

- The baseline quantification will be pending further evaluation of forest management programs for IFM Activity Areas
- For other activity types the baseline will be established as Initial Carbon Stocks (ICS)



# Calculating Primary Effects

- For each Activity Area: the actual change in GHG removals associated with the expected effects must be quantified
  - For activities requiring field sampling inventory:
    - CALCBOSK automatically grows the inventory data to represent the inventory as of the end date of the reporting period
  - For activities using the canopy coverage methodology :
    - An image representing the end date of the reporting period is used.
  - The Carbon Monitoring Worksheet facilitates calculation of Primary Effects



# Quantification the Secondary Effects

Carbon stock enhancement activities by the Forest Project may result in increased forest carbon emissions outside the Forest Project.

## Depends on the activity:

**1. Reforestation Activities:** secondary effects for site preparation activities

- Mobile combustion emissions associated with site preparation.
- Biomass removal resulting from site preparation

**2. Reforestation, Restoration, Agroforestry, and Silvopastoral Systems Activities:** Secondary effects due to the displacement of agricultural activities

**3. Improved Forest Management Activities:** Secondary effects due to the decrease in the displacement of harvesting activities

# Secondary Effects of Mobile Combustion for Reforestation Activities

Mobile combustion emissions associated with site preparation need to be calculated:

- Requires analysis of shrub cover before and after site preparation activities through remote sensing to calculate the percentage of shrub cover loss due to site preparation activities.
  - Emissions should only be quantified for areas where mechanical equipment is used for vegetation removal.
- The mobile combustion emission factor is applied based on conservative assumptions:
  - 1.61 tCO<sub>2</sub>e/ha

$$SE_{mobil,init} = \Sigma(-1) \times (1.61 \times (CC_{shrub,pre,AA} - CC_{shrub,post,AA}) \times A_{AA})$$

# Secondary Effects of Biomass Removal for Reforestation Activities

Emissions from biomass removals associated with site preparation need to be calculated :

- Requires analysis of shrub cover before and after site preparation activities through remote sensing.
- A default ratio estimator is applied for shrubs based on the assessment area ( $RE_{AA}$ )
  - The Reserve is evaluating studies to determine ratio estimators (tCO<sub>2</sub>e) for Panama.

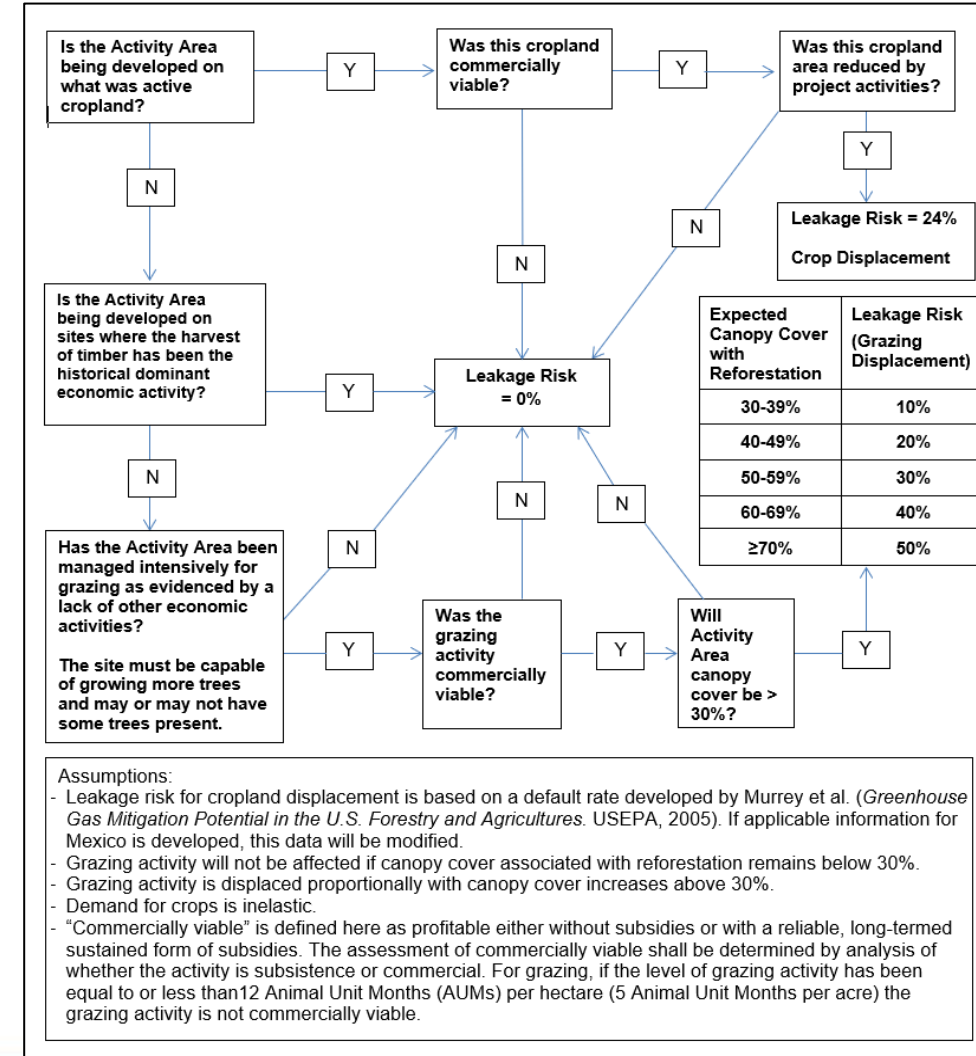
$$SE_{shrub,init} = \Sigma[(-1) \times (A_{AA} \times (CC_{shrub,pre,AA} - CC_{shrub,post,AA}) \times RE_{AA})]$$

# Secondary Effects for Reforestation, Restoration, Agroforestry and Silvopastoral Systems Activities



The risk of secondary effects associated with the displacement of agricultural activities needs to be calculated:

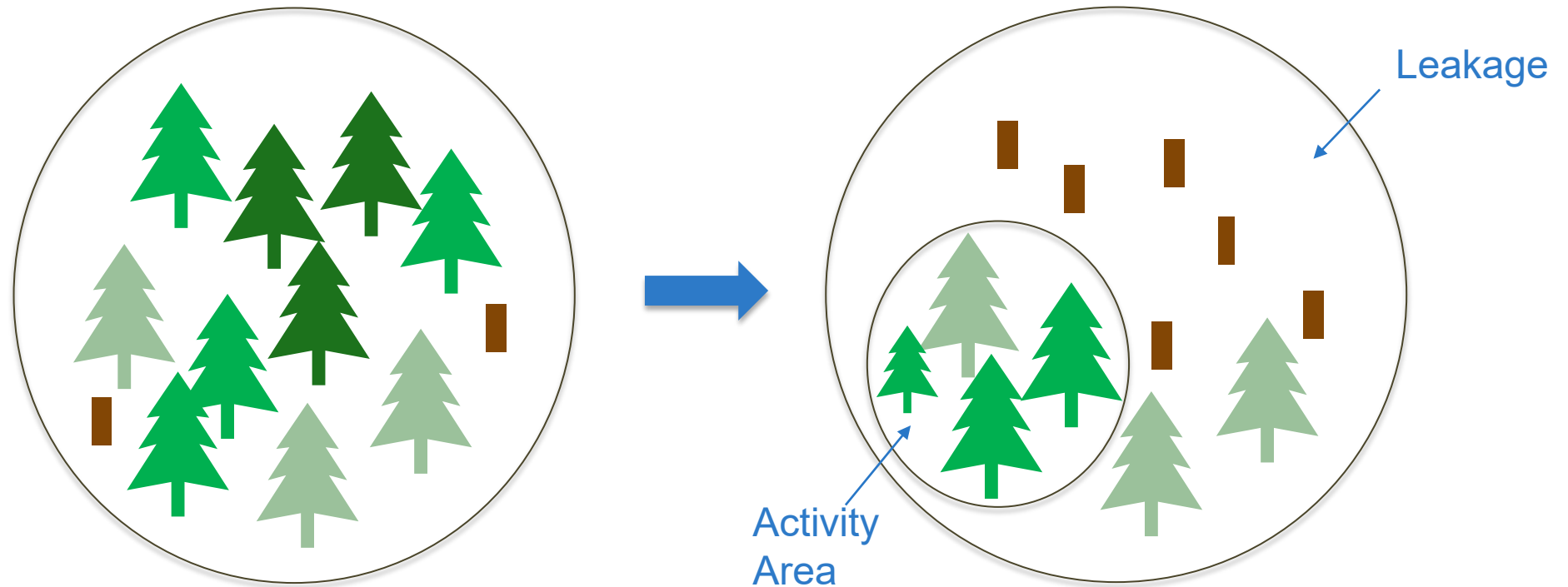
- The flow chart is used to determine the leakage risk and leakage deduction for each Activity Area.
- The flow chart consists of questions about the level of agriculture activities before project implementation and the level of reforestation activities by the project.



# Secondary Effects for Improved Forest Management Activities

Emissions associated with the displacement of harvesting activities needs to be calculated. :

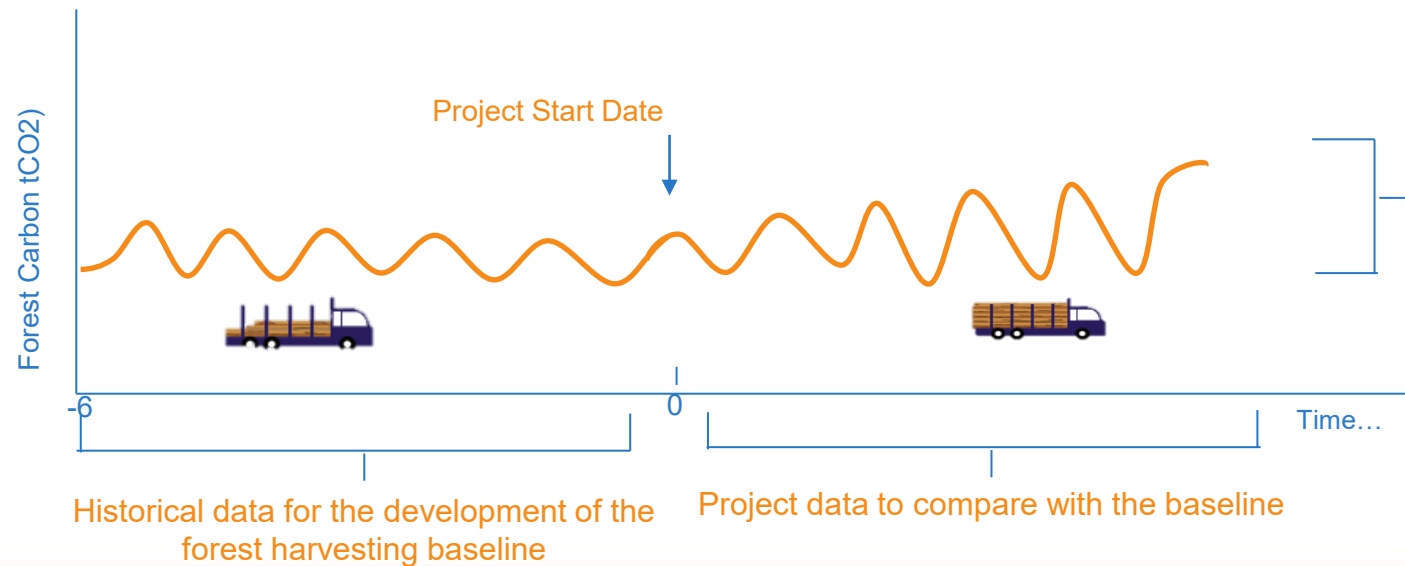
- the difference between timber harvesting before and after the implementation of project activities



# Secondary Effects for Improved Forest Management Activities

The temporality for assessing secondary effects is carried out throughout the life of the project:

- A historical average is calculated, using the harvest volumes of the 6 years prior to the start date as the baseline
- Each year the present value is calculated for comparison with the baseline.
- Sum the current values up to the current year and sum the baseline values up to the current year, and compare the summed values each year
  - Apply 20% deduction to the difference when the project scenario is lower than the baseline scenario summed to the current year



- The amount of CO<sub>2</sub> in the forest fluctuates with the harvesting cycle.
- After project implementation, carbon stocks are increased, which increases timber products in the long term.



**MRV**

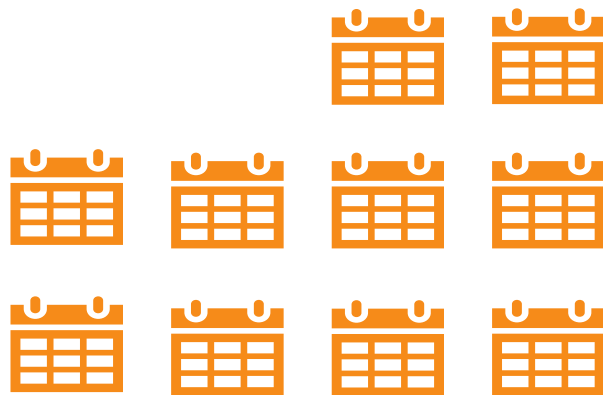
# **PROTOCOL DEVELOPMENT CONSIDERATIONS**

# Reporting Period

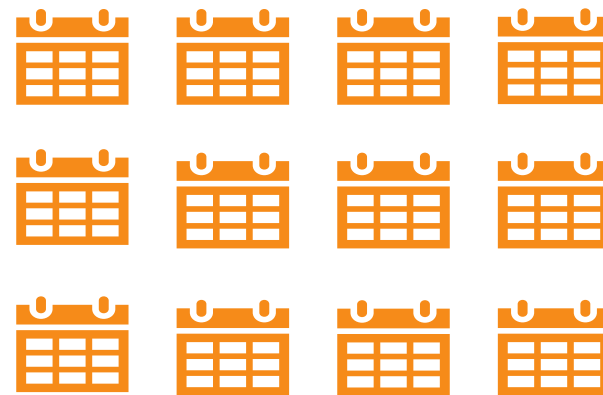
A Reporting Period is a period of time in which the Forest Owner quantifies and reports GHG removals:

- They have a duration of 12 months
- Exception: the first Reporting Period, which may be up to 12 months from the Project Start Date.

Reporting Period 1 :



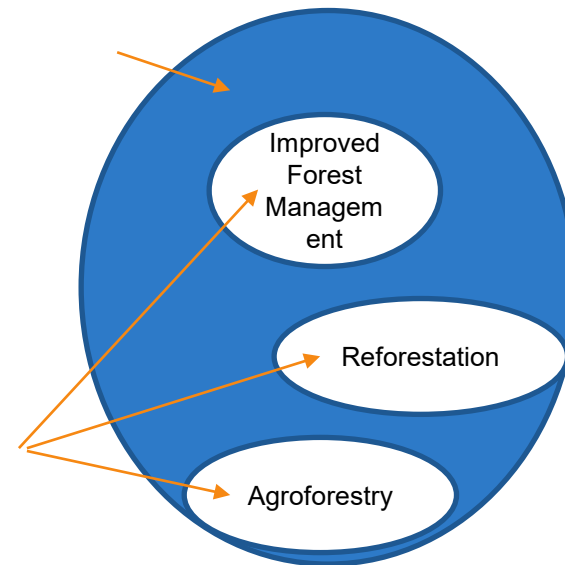
Reporting Period 2-X :





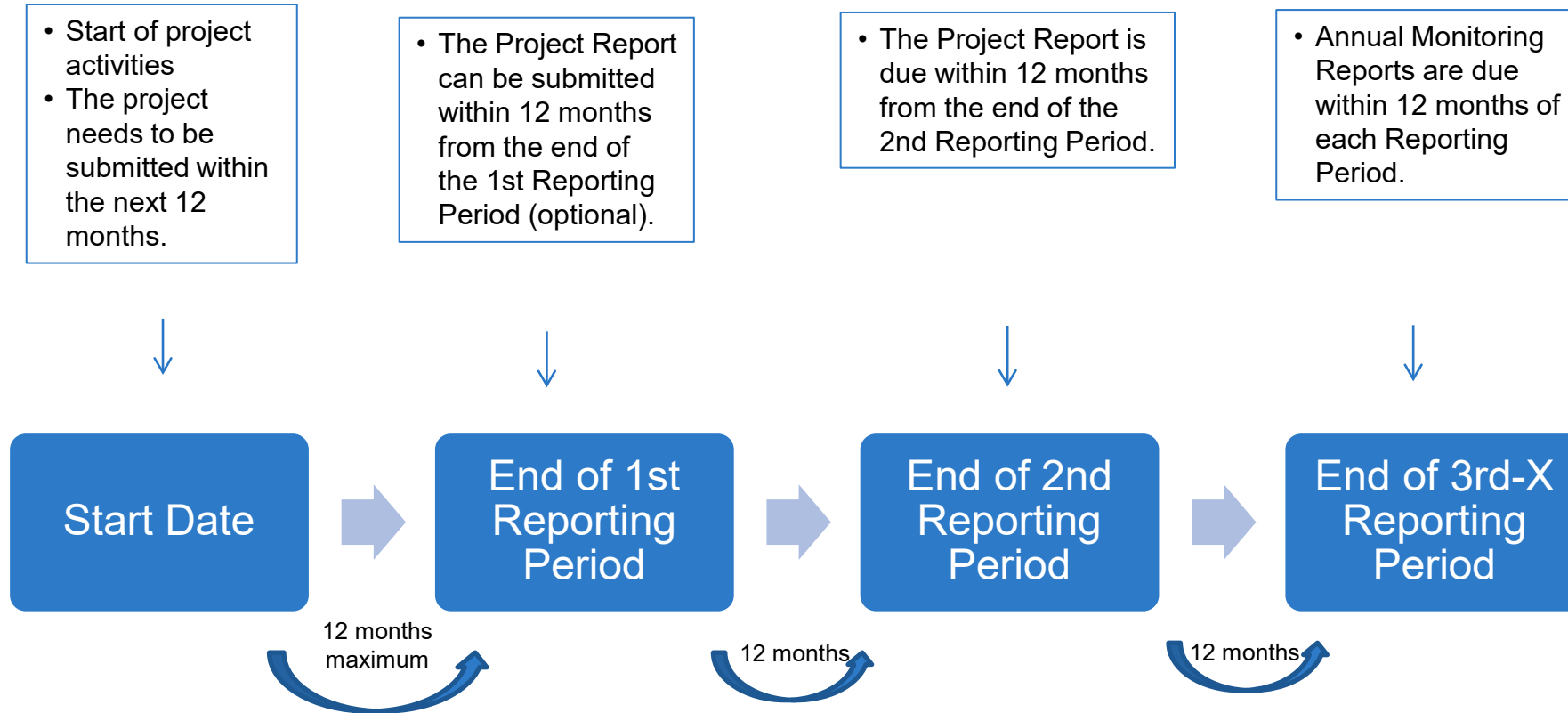
The Project Area and the Activity Area serve as two distinct levels of monitoring:

- Project Area:
  - Monitoring of forest cover for leakage (environmental safeguard 4)
- Activity Area:
  - Quantification of carbon stocks
  - Native species reports (environmental safeguards 2 and 3)



- **Project Submission Form:** Is required to determine whether the project meets the eligibility criteria.
  - Must be submitted within the 12 months after the start date.
- **Project Report :** the main document describing the project
  - Defines the Project Area and Activity Areas, how eligibility requirements are met, additionality, permanence, and shows the quantification of the baseline and project carbon stocks.
  - To be submitted within 12 months after the end of the first or second Reporting Period.
- **Annual Monitoring Report:** the basis for reporting project updates on an annual basis
  - To be submitted within 12 months after the end of each Reporting Period.

# Monitoring Cycle



Verification refers to the inspection and review of all sampling and calculation activities as well as of reported information and eligibility criteria:

## Initial Verification

- It is a Full Verification
- 12 months from the end of the Reporting Period in which the Project Report was submitted.

## Full Verification

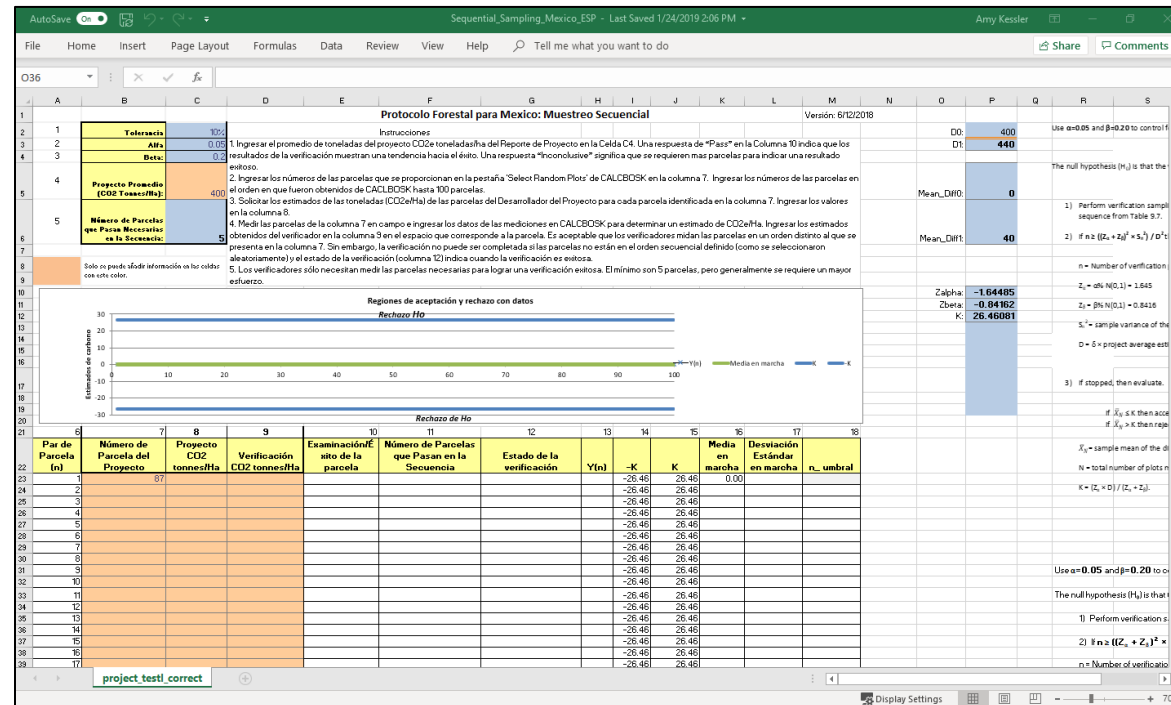
- Required every 6 Reporting Periods.
- or if new Activity Areas are added to the project

## Desktop Verification

- Optional annual verification of monitoring reports
- Required to receive credits prior to on-site verifications
- 12 months from the end of the Reporting Period

# ¿Qué es el muestreo secuencial?

- Sampling method is for verifiers to determine whether randomly selected measurements are within the tolerance limits established by the protocol.



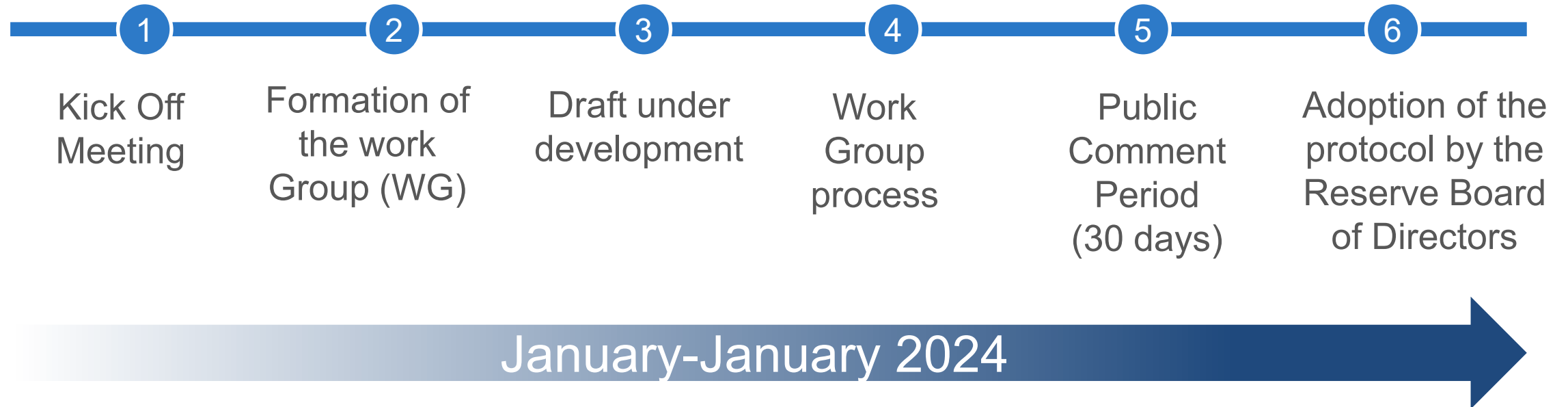


# QUANTIFICATION TOOLS DEMONSTRATION



# SUMMARY AND NEXT STEPS

# Timeline of protocol development





# Next steps

- ***For Interested Stakeholders:***
  - Still can submit Local Engagement Form
  - Email interest to sign up for updates as an observer
  - Email us feedback anytime
- ***For Reserve:***
  - Compile summary notes on discussion
  - Post recording, notes, and presentation to the webpage
  - Start drafting protocol with workgroup considerations
  - Prepare for next workgroup meeting: ~ August
  - Set meeting for sub-committee on land tenure/clarification of carbon ownership
- ***For Workgroup:***
  - Email feedback on today's discussion before July 20
  - Look out for invitation for next meeting: ~ August



# QUESTIONS OR COMMENTS?

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