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Argentina Landfill Protocol V1.0

Workgroup Meeting #1

January 22, 2025

Introduction



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Housekeeping

- Workgroup members can actively participate throughout the meeting
 - Please, 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

AGENDA

- Introductions
- Process Overview
- Protocol Considerations
 - Project Definition – Eligible landfill
Project Ownership
 - Social and Environmental Safeguards
 - Parameters/Default Values
- Open Discussion
- Next Steps



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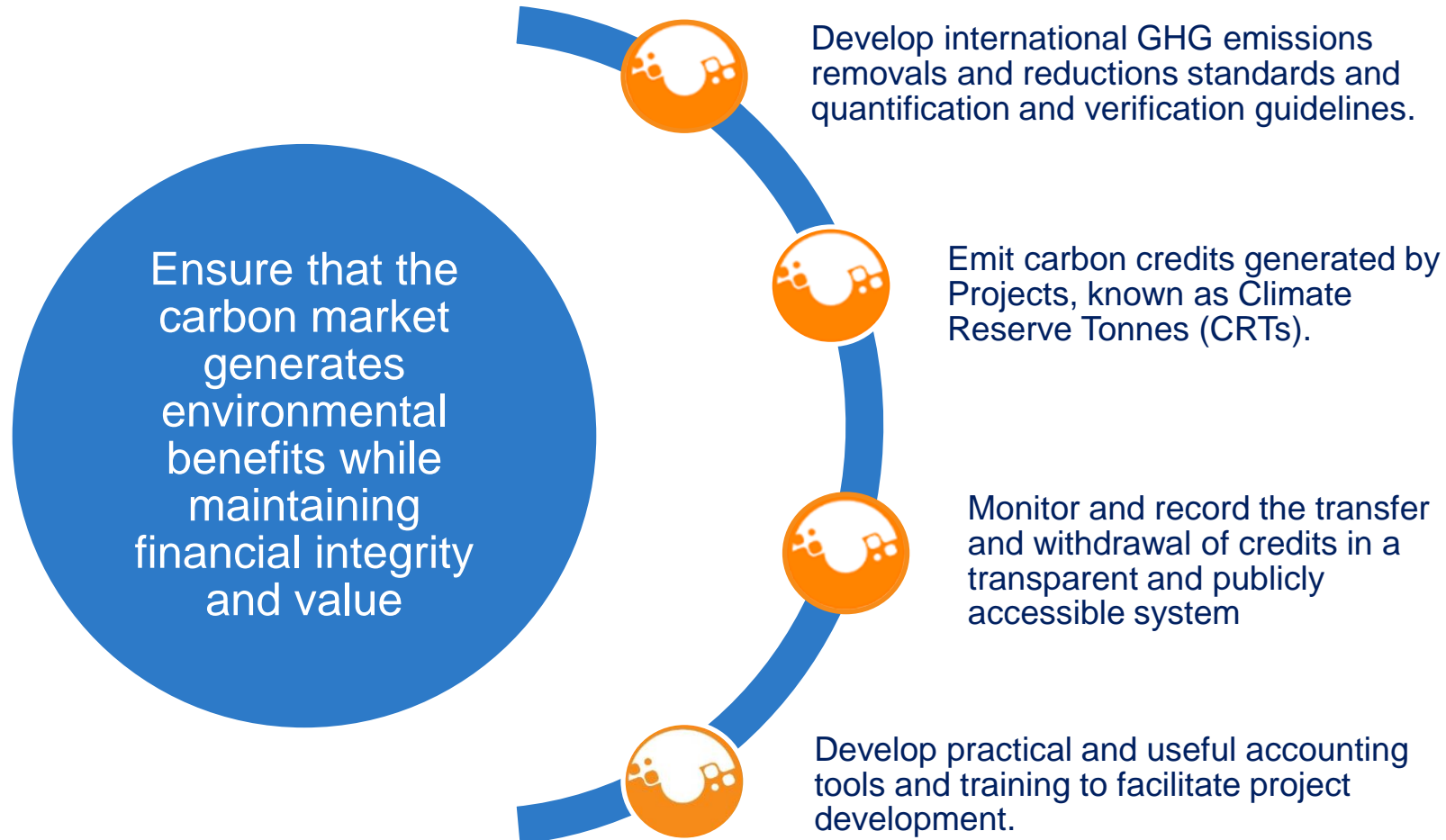
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INTRODUCTIONS

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 internationally
- 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

The Climate Action Reserve





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Climate Action Reserve Projects



Project Type
Select



Status
Select



Country
Select



State
Select



Project ID
Select



Project Video
Select

Number of Projects

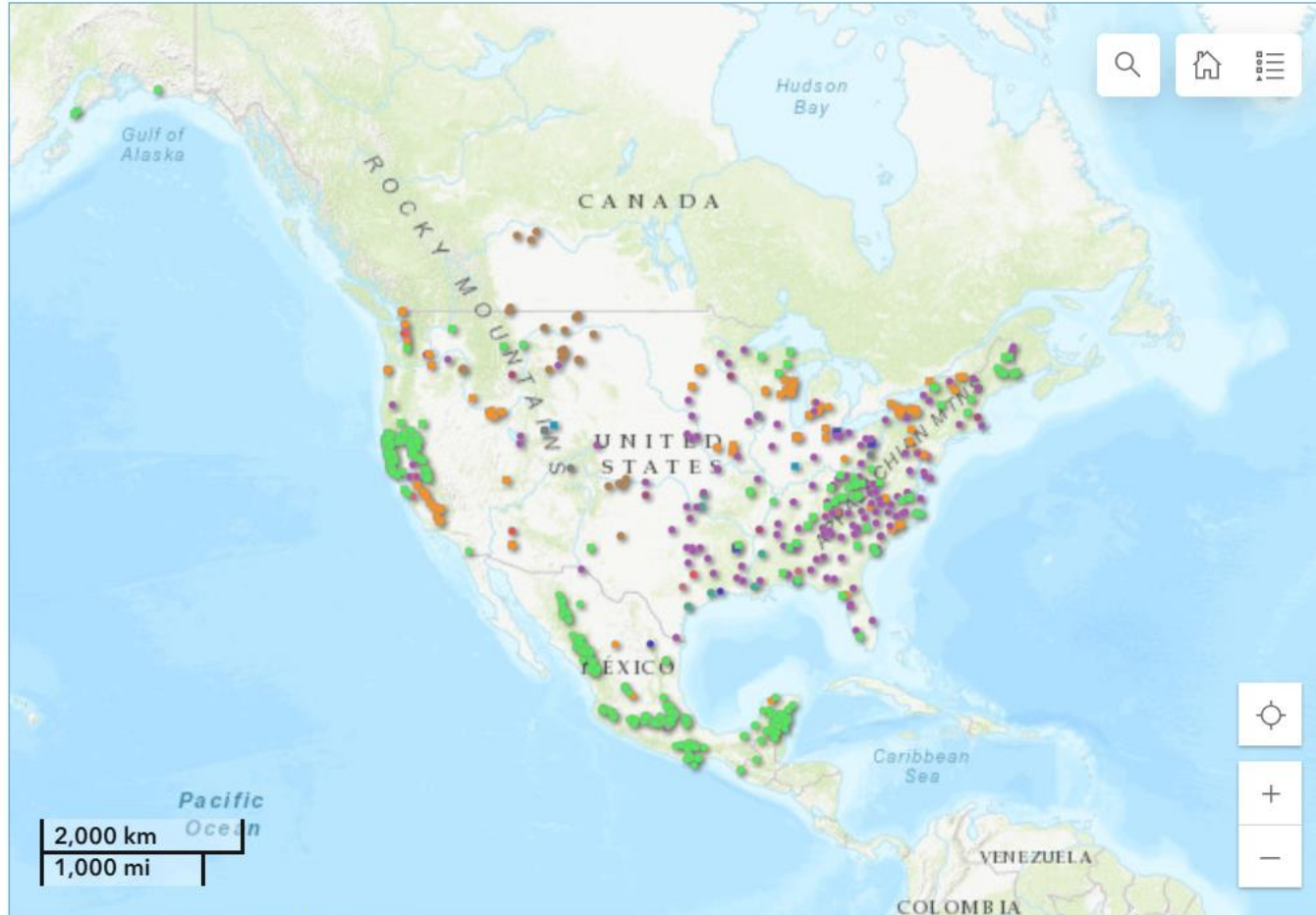
954

Compliance projects use square icons. Additionally, you can filter by project type and select the protocols that indicate (ARB) to show all California compliance projects.

Status Definitions

Listed projects have paid the submittal fee and successfully met eligibility requirements and other aspects set forth within the appropriate protocol.

Registered projects

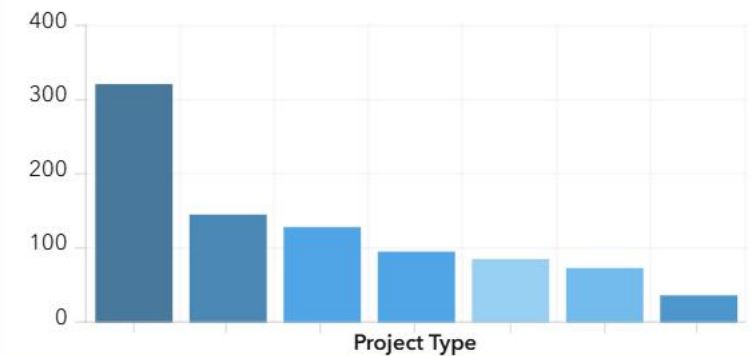


Esri, HERE, Garmin, FAO, NOAA, EPA

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Projects by Type



For questions, please contact jmao@climateactionreserve.org

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

- 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

GHG Accounting Standardization

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

Workgroup Members

Organization (Alphabetical)	Name
AOTA Carbon	Sami Osman
EMPAR Soluciones Ambiental	Brunel Alejandro
Gestión Ambiental y Desarrollo Sustentable - Gobierno de Chubut.	Fernando Pegoraro
HINS	Sofia Neyra
Independent Consultant	Jose Davila
Independent Consultant	Ana Marcela Villarroya
Independent Consultant	Nicolas Zeballos
Independent Consultant	Gisela Daniele
IRAM(Instituto Argentino de Normalización y Acreditación)	Jessica Wasilevich
LSQA Argentina	Alejandra N. Arribillaga
MexiCO2	David Colin
Ministerio de Ambiente y Economía Circular de la Provincia de Córdoba	Germán Juri
Ministerio de Ambiente y Economía Circular de la Provincia de Córdoba	Iriart Marine
Secretaría de Cambio Climático, Ministerio de Ambiente y Economía Circular de la provincia de Córdoba	Julia Coito
SEGAM CONSULTORA / Secretaría de Transición Energética, Ministerio de Infraestructura y Servicios Públicos de la provincia de Córdoba	Marcos Cena



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PROCESS OVERVIEW

Purpose

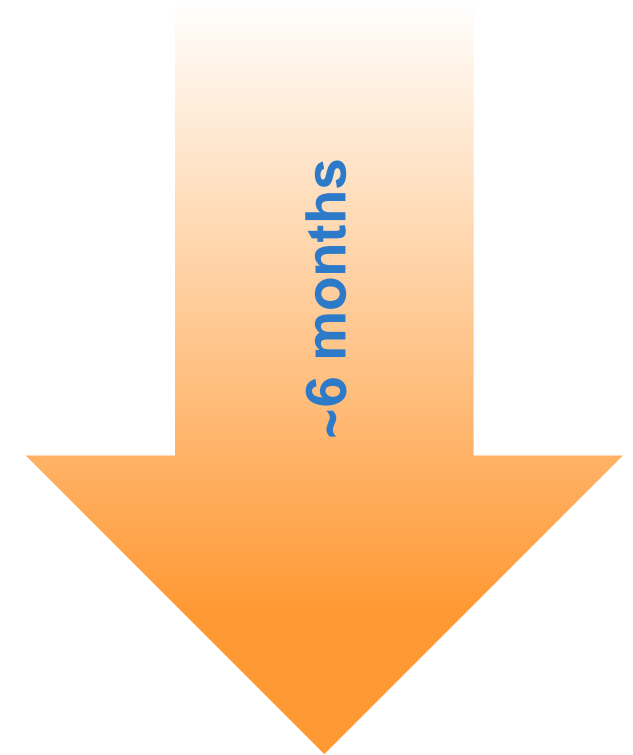
- To familiarize workgroup members with offset protocol development process – what we typically want in an offset protocol
- To present and solicit feedback from workgroup members on key considerations for the Argentina Landfill Protocol Version 1.0
- Provide draft protocol for reference and then revisions

Protocol Development Overview

- **GOAL:** To create a robust Argentina Landfill Protocol that provides best practices for GHG accounting to generate Climate Reserve Tonnes (CRTs)
 - Incentivize the capture and destruction of methane emissions from landfill operations
 - Direct carbon finance to the landfill sector and make biogas control system projects more financially attractive to investors
 - Adhere to high quality offset criteria and Reserve's principles
 - Leverage lessons learned from the Reserve's Mexico and US Landfill Protocols
 - Solicit and incorporate expert stakeholder feedback

Protocol Development Timeline

1. Kick-off meeting (*November 27, 2024*)
2. Workgroup process
 - Formation (*December 2024*)
 - Meeting 1 (*today – January 22, 2025*)
 - Meeting 2 (*February 5, 2025 – tentative*)
 - Meeting 3 (*February 26, 2025 – tentative*)
3. 30-day public comment period (*April-May 2025*)
4. Propose to Board adoption (*June 2025*)



Timeline Process Detail

	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Public webinar	27 th							
Workgroup formation								
1st workgroup meeting (webinar)			22 nd					
2nd workgroup meeting (webinar)				5 th				
3rd workgroup meeting (webinar)				26 th				
Drafting/content development								
Public comment period & webinar (30 days)								
Staff revisions based on feedback								
Internal reviews/formatting								
Deliver Board draft								
Public Board meeting								TBD

Workgroup Process and Expectations

CAR/Process:

- Manage the protocol development process
- Hold 2 or 3 workgroup meetings
- Reserve staff identify and solicit feedback on specific protocol criteria
 - **Specific questions for WG will be highlighted in red**
- Reserve staff will share the draft protocol with WG
- Revise protocol based on feedback

WG/Expectations:

- Attend all (~2-3) workgroup sessions
- Be active participants: provide input and ask questions on protocol concepts and language
- After meetings, share additional input and expertise as needed
- Review draft protocol and provide written feedback to Reserve staff
- Be constructive, collaborative, and productive



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PROTOCOL CONSIDERATIONS

Project Definition

- ✓ **Collection** of methane gas from one or more specified cells at an eligible landfill, **and destruction** of such methane by one or more destruction devices.
- ✓ **Expansion of an existing gas collection and control system (GCCS)** to a new cell or cells. May optionally be included within an existing project or submitted as a new project.
- ✓ **Captured landfill gas (LFG) can be destroyed on-site or transported for off-site use.** In either case, the final destination of the LFG must be destruction.
- ✓ **Qualifying devices** include utility flares, enclosed flares, engines, turbines, microturbines, boilers, pipelines, leachate evaporators, furnaces, sludge dryers, burners, kilns or fuel cells.
 - Other devices may be eligible, subject to approval by the Reserve.

Project Definition

An eligible landfill is one that:

1. Is not subject to regulations or other legal requirements requiring the destruction of methane gas;
2. Is not a bioreactor, as defined by the U.S. EPA: *“a MSW landfill or portion of a MSW landfill where any liquid other than leachate (leachate includes landfill gas condensate) is added in a controlled fashion into the waste mass (often in combination with recirculating leachate) to reach a minimum average moisture content of at least 40 percent by weight to accelerate or enhance the anaerobic (without oxygen) biodegradation of the waste”*;
3. Does not add any liquid other than leachate into the waste mass in a controlled manner.

Landfill definition & regulation in Argentina.

What permits and documents must a landfill have to operate according to the current rules/regulations at national and provincial level?

Project Definition

- ✓ Captured landfill gas could be **destroyed on-site, transported for off-site use** (e.g., through a gas transmission and distribution pipeline), or **used to power vehicles**.
- ✓ Regardless of how project developers take advantage of the captured landfill gas, for the project to be eligible to register GHG reductions **under this protocol, the ultimate fate of the methane must be destruction**.
- ✓ **Passive flares do not qualify** as eligible destruction devices under this protocol.
- ✓ In addition to reducing methane, the installation and **operation of a landfill gas collection and destruction system could impact anthropogenic CO2 and methane emissions** associated with the consumption of electricity and fossil fuels.
 - Depending on the project's particular circumstances, this effect could either increase or decrease operational GHG emissions. (Section 4, the GHG Assessment Boundary, delineates the scope of the accounting framework).

Project Definition

- ✓ **Landfill gas collection and destruction systems** typically consist of wells, pipes, blowers, caps, and other technologies that enable or enhance the collection of landfill gas and convey it to a destruction technology. At some landfills, a flare will be the only device where landfill gas is destroyed.
- ✓ For **projects that utilize energy or process heat technologies to destroy landfill gas**, such as turbines, reciprocating engines, fuel cells, boilers, heaters or kilns, these devices will be where landfill gas is destroyed. Most projects that produce energy or process heat also include a flare to destroy gas during periods when the gas utilization project is down for repair or maintenance.
- ✓ **Direct use arrangements which entail the piping of landfill gas to be destroyed by an industrial end user at an off-site location** are also an eligible approach to destruction of the landfill gas. For instances of direct use, agreements between the project developer and the end user of the landfill gas (i.e., an industrial client purchasing the landfill gas from the project developer), must include a legally binding agreement to assure that the GHG reductions will not be claimed by more than one party.

Does a landfill gas collection and destruction system in the Argentinian context resemble with the above mentioned?

Other considerations

Project Ownership

- Project developer is an entity with an active account on the Reserve and is responsible for all project monitoring and verification. Project developers can be:
 - Landfill facility operators,
 - GHG project developers,
 - other entities such as municipalities, or waste management companies
- Must have clear ownership of the reductions and established through explicit title and must sign the Attestation of Title
 - May be contracts in place between facility owner and project financiers

Are there any special ownership conditions for Landfills in Argentina that should be considered?
What documents should verifiers review to confirm ownership of Landfill facilities in Argentina?

Eligibility Rules

Eligibility Rule I: Location

Eligibility Rule II: Project Start Date

Eligibility Rule III: Project Crediting Period

Eligibility Rule IV: Additionality

Eligibility Rule V: Regulatory Compliance

Project Crediting Period

- Crediting period is defined as 10 years following the project's start date
- Eligible up until a regulatory body legally requires the landfill to install a GCCS
- May apply for a renewed crediting period
 - Project lifespan:
 - 2 or 3, 10-year crediting periods for 20-30 years total
 - Must apply within 6 months of the end of the final reporting period
 - Must meet the requirements of the newest version of the protocol
 - Legal landscape and common practice is assessed every renewed listing review

- Must be above and beyond business-as-usual scenarios
- Must pass two additionality eligibility rules
 - 1. Performance Standard Test**
 - Better than business-as-usual
 - Practice-based threshold that focuses on the baseline scenario and changes made in the project scenario
 - 2. Legal Requirements Test**
 - Passes when there are no laws, statutes, regulations, court orders, environmental mitigation agreements, permitting conditions, or other legally binding mandates requiring project activities
 - No longer eligible on the date destruction becomes legally required

Analysis of the Common Practice - Development of the Performance Standard Threshold

For this protocol, the Reserve uses a practice-change threshold that focuses on the baseline scenario and changes made in the project scenario.

- The analysis must be based on available reliable official data from Argentina
- Two types of best practices must be determined to define the performance standard threshold: first, **the use of landfills** as a final solid waste disposal technology instead of other technologies, such as open dumps or controlled sites; and second, **the use of LFG collection and destruction systems** instead of passive venting in landfills.

Definitions of the different types of final solid waste disposal methods in Argentina

If possible, inventories related to the operation of each landfill that include specific data regarding the current status of their existing venting systems (wells) and/or passive or spontaneous flaring systems.

Impact of CDM and other international Standards on Common Practice

Is the installation of landfill gas collection and destruction systems a common practice in landfills in Argentina?

Performance Standard Test

1. Installation of a LFG collection system and a new qualifying destruction device at an eligible landfill where landfill gas has never been destroyed prior to the start date.
2. Installation of a new qualifying destruction device at an eligible landfill where LFG is currently collected and vented but never destroyed prior to the start date.
3. Installation of a new qualifying destruction device at an eligible landfill where LFG was collected and destroyed prior to the start date using:
 - I. A non-qualifying destruction device (e.g., passive flare); or
 - II. A destruction device not otherwise eligible (e.g., qualifying device installed prior to the project start date)

Are there any active LFG destruction systems in Argentina? Examples

4. Installation of a new gas collection system on a physically distinct cell(s) where neither gas collection nor destruction has previous occurred, and connection of this new collection system to an existing LFG destruction system.
 - The landfill cell must be engineered in such a way that landfill gas cannot migrate between that cell and other landfill cells.
 - The new collection system must have its own meter that meets the requirements of the Protocol.
 - There can be more than one project in the same landfill.

Performance Standard Test

To ensure additionality of the emission reductions for projects with baseline destruction:

- Landfills with a baseline non-qualifying device (i.e., scenario 3a) must be deducted the amount of methane destroyed by the device.
- Landfills with a baseline qualifying device (i.e., scenario 3b) must deduct the amount of methane that could have been destroyed if the device was operating at full capacity.
- Closed landfills with baseline qualifying flares must deduct the amount of methane collected by the baseline landfill gas wells and destroyed by the qualifying flare.
- Projects with existing GCCS that later adds a new, physically-distinct landfill cell must deduct destruction from a baseline qualifying or non-qualifying device, if applicable.

Regulatory Compliance

- Must attest that the project is in compliance with all laws applicable to the project activity
- Required to disclose any and all instances of legal violations – material or otherwise – caused by the project or project activities
 - “caused” by Project activities if it can be reasonably argued that a violation would not have occurred in the absence of the project activities
- If a violation is caused by project activities, credits will not be issued for the period of the violation
 - Administrative or violations due to “acts of nature” will not impact crediting
 - Re-occurring violations due to intent or negligence may impact crediting
- For projects with multiple discrete source facilities (from GCCS project in both location and management), it may be possible to demonstrate a violation occurring at one source facility does not impact the eligibility of the entire project

Are there specific laws/regulations applicable to landfills in Argentina?

What regulatory agencies oversee such legal violations?

Social and Environmental Safeguards

- Social Safeguards
 - Free, Prior, and Informed Consent (FPIC)
 - Ongoing Notification, Participation, and Documentation
 - Labor and Safety
 - Dispute Resolution
- Environmental Safeguards
 - Air and Water Quality
 - Mitigation of Pollutants

- **Free, Prior, and Informed Consent (FPIC)**

- Project developers must address the following topics with the landfill operator prior to project approval:

- Concepts of climate change and carbon markets.
 - Requirements associated with landfill projects, including ongoing monitoring, reporting, and verification (MRV).
 - Estimates of costs and benefits associated with the landfill project and the division of costs and distribution of benefits or benefit sharing. The source used for carbon pricing estimates must be disclosed.
 - After the topics have been addressed, landfill operators must approve the landfill project under this protocol and the project developer

Feedback?

Social Safeguards

- **Ongoing Notification, Participation, and Documentation:**
 - The project developer must review with the landfill operator on an annual basis the following topics:
 - Ongoing project activities, including MRV
 - Credits issued
 - Purchase agreements, project finances, and ongoing benefit sharing arrangements
 - Project notification and documentation must be presented to the landfill operator in an appropriate format and language to ensure understanding.
- **Labor and Safety:** The project developer must attest that the project is in material compliance with all applicable laws, including labor or safety laws.

Is there a specific law regarding the safety and labor of landfill operators?

Is there a regulatory agency the VB could contact to confirm compliance with the law?

- **Dispute Resolution/ No Conflicts:** The Reserve holds 30-day public comment on all listed projects prior to registration and has an ongoing dispute resolution process. Projects that receive material complaints will not be registered until a satisfactory dispute resolution plan has been approved.

Feedback?

Environmental Safeguards

- The environmental safeguard requirements include:
 - **Regulatory Compliance:** The project developer must attest that the project is in material compliance with all applicable laws, including environmental regulations (e.g., air and water quality).
 - What regulatory body oversees environmental regulations?
 - Is there a regulatory agency/ body the VB could contact to confirm compliance with the law?
 - **Mitigation of Pollutants:** Projects must be designed and implemented to mitigate potential releases of pollutants that may cause degradation of the quality of soil, air, surface and groundwater and project developers must acquire the appropriate local permits prior to installation to prevent violation of all applicable laws

Feedback?

Parameters/Default Values

Emission Factor Tables for Argentina

- Fuel Emission Factor for Stationary and Mobile Combustion
- Fossil Fuels Net Calorific Values
- Default Destruction Efficiencies for Combustion Devices



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NEXT STEPS

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 notes summary on discussion
 - Post recording, notes, and presentation to the webpage
 - Incorporate feedback from workgroup discussion
 - Identify areas of focus for next workgroup meeting (if needed)
- ***For Workgroup:***
 - Email feedback on today's discussion (by **January 27th**)
 - Look out for information for next meeting's discussion topics
 - Tentative next Workgroup Meeting: **February 5th** , 11:30-13:30 ARG time – Comments?

Key contacts

Climate Action Reserve:

Protocol development lead:

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THANK YOU!