

Argentina Landfill Protocol

Workgroup Meeting Notes and Takeaways

Workgroup Meeting #1 Notes – 1/22/2025 | 11:30am – 1:30pm (ARG time)

Reserve Attendees: Amy Kessler, Rachel Mooney, Alex French, Miguel López Delgado

[Link to review recording](#)

Workgroup Members in attendance:

Organization (alphabetically)	Name	Present (P) or Absent (A)
ATO Carbon	Sami Osman	A
Ecobait360 /Delta Regional National Technological University	Ariel Clebañer	P/ Observer
EMPAR Environmental Solutions	Brunel Alejandro	A
Environmental Management and Sustainable Development	Fernando Pegoraro	P
HINS	Sofia Neyra	P
Independent Consultant	Ana Marcela Villarroya	P
Independent Consultant	Gisela Daniele	A
Independent Consultant	Jose Davila	P
Independent Consultant	Nicolas Zeballos	P
IRAM - Argentine Institute for Standardization and Accreditation	Jessica Wasilevich	P/Observer
LSQA Argentina	Alejandra N. Arribillaga	P
MexiCO2	David Colin	A
Ministry of Environment and Circular Economy Cordoba Province	Germán Juri	A
Ministry of Environment and Circular Economy Cordoba Province	Iriart Marine	A
Secretariat of Climate Change, Ministry of Environment and Circular Economy of the Province of Córdoba	Julia Coito	P
SEGAM CONSULTANT/Secretariat of Energy Transition, Ministry of Infrastructure and Public Services of the Province of Cordoba	Marcos Cena	A

Agenda:

- Introduction
- Process overview
- Protocol Considerations
 - Project Definition
 - Project Ownership
 - Eligibility Rules
 - Social and Environmental Safeguards
 - Parameters/Default Values
 - Open discussion
- Next steps

Main Points of Discussion and Decisions Made:

1. Project Definition

- The Reserve reviewed the Project Definition
- The Reserve reviewed the proposed qualifying destruction devices and requested information from the WG asking if the presented destruction devices are present in the Argentinian landfill sector.
 - WG member: This is a large territory, and a large part of the population is centralized in urban centers. Most landfills do not have technology to generate electricity. Capture/destruction devices are not common. In their experience only 2 of 8 landfills that he knows of have a biogas collection system and present some of the destruction devices presented. In general, they are passive ventilation systems and there is no gas collection or energy generation; the carbon project may incentivize this technology due to the cost of implementing the technology for collection and destruction of landfill gas.
 - The Reserve confirmed that the intent of the Protocol is to make investment in technology for methane emissions reduction attractive for the sector.
 - WG member: knows of a landfill in Mendoza that had microturbines for electric power generation a few years ago. The status of the mentioned landfill was not determined.
- The Reserve reviewed other requirements for eligible landfills:
 - Not subject to regulations or other legal requirements requiring destruction of methane gas.
 - Is not a bioreactor
 - Does not add any liquid other than leachate to the waste mass in a controlled manner.
- The Reserve requested information on the required operating permits and the applicable rules/regulations at the national level and by province.
 - WG member: Regarding the third requirement. There is a practice seen in some landfills that involves the recirculation of leachate, without adding liquid and internally in the cell/s of the landfill, which generally occurs in areas of low rainfall (such as Mendoza Province). However, this is not the case in areas with high rainfall >1000mm of precipitation (e.g. Jujuy Province).

- The Reserve's understanding is that the practice discussed is within the requirements given that no non-leached liquid is being added in a controlled manner and does not reach bioreactor levels.
 - The WG Member confirmed that they are not adding any other liquids to the leachate.
- WG member: it also depends on the precipitation (rain and snow) received in the area where the landfill is installed, which can vary depending on the jurisdiction. For example, in the South and the Coast "evapotranspiration pools" are installed and in the Cordillera, rain can become a problem.
- The Reserve reviewed other eligibility considerations
 - Captured landfill gas may be destroyed on-site, transported for off-site use (e.g., through transmission or distribution pipelines), or used as an energy source for vehicles.
 - Regardless of the project developers' use of the captured landfill gas, for the project to be eligible to register GHG reductions under this protocol, the final destination of the methane must be its destruction.
 - Passive flares do not qualify as destruction devices for this protocol.
 - In addition to reducing methane, the installation and operation of a landfill gas collection and destruction system can affect anthropogenic CO₂ and methane emissions associated with the consumption of electricity and fossil fuels.
 - Landfill gas collection and destruction systems are generally comprised of extraction wells, collection pipes, vacuum pumps, and other technologies that enable and/or enhance the collection of landfill gas and convey it to destruction technology. In some landfills, the gas is destroyed only by means of a burner.
- The Reserve asked the WG to confirm if landfill gas collection and destruction systems in Argentina meet the conditions outlined above.
 - WG member: asked if they have considered including methanization of the gas? It is used in the U.S. and in due course it is going to happen in Latin America.
 - The Reserve would like clarification from the WG member to better understand the reference to "methanization".

2. Project Ownership

- The Reserve reviewed the ownership requirements.
 - The project developer is an entity with an active account in the Reserve and is responsible for all monitoring and verification of the project.
 - Ownership of GHG reductions must be clear, through explicit title. The account holder must be able to sign the Attestation of Title.
 - If the owner of the landfill is not the project developer and/or account holder, then contracts must exist between the facility owner, the project developer, and other entities that may have ownership rights to the GHG emission reductions.
- The Reserve requested further information on any special ownership conditions for landfills in Argentina, and the documents verifiers should review to confirm ownership.
 - WG Member: At the time of verification, the document that disposes the owner of the operation (who has operational control) could it be a contract - what kind of document do they ask for?
 - WG member: In the case of CEAMSE, the national installed site, is a public, national site (it belongs to the army). The main operator, CEAMSE, covers the

city of Buenos Aires and other municipalities and subcontracts 4 operating companies.

Another example of a landfill in Rosario, Santa Fe is a landfill in which the land is owned by a private entity that in turn manages the operation of the landfill, in this case the ownership is clearer and can be seen directly since the operator and owner of the land are the same entity.

- WG member- CEAMSE has clear ownership of landfill gas and of the operators working in their landfills. However, in the case of landfills without gas collection it can be complicated to define ownership. This is also the case for private landfills. In fact, in some cases during CDM times there were some problems in defining ownership. On the other hand, there are cases of private properties that have ceded the land to the municipality to install a landfill, though they do not charge the municipality. The waste is owned by the municipality and there may be a landfill operator. Therefore, in some cases it could be that the private owners of the landfill sites (ceded or donated, or with some type of contract), previously not involved in the landfill activity, may want to have a share of the benefits.
- The Reserve clarified that they will have to have a contract then between the parties to clearly define the carbon rights, which will have to be verified. In addition, it is intended to understand from the working group what are the documents that demonstrate the ownership of the carbon.

3. Eligibility Rules

- The Reserve reviewed the main eligibility rules
 - Location - Argentina
 - Project start date:
 - To be defined by the Project Developer but must be no more than 90 days after landfill gas is first destroyed in a project destruction device, regardless of whether sufficient monitoring data is available for reporting emissions reductions.
 - The start date is defined in relation to methane destruction, not by other activities that may be associated with project initiation or development. Projects are required to be submitted for announcement within 12 months of operation.
 - Project crediting period
 - For the crediting period, it is defined as 10 years after the start date.
 - The project is eligible until a landfill gas control and destruction system is legally required.
 - Renewal of the crediting period may be requested within 6 months of the end of the last reporting period. The project must meet the requirements of the most current version of the protocol, including the legal requirements test.
 - The Reserve clarified that the request must be made within 6 months after the end of the final reporting period.
 - The Reserve asked whether it should include 2 or 3 10-year crediting periods, for a total of 20-30 years.
 - WG did not provide any comments.
 - The Reserve defined additionality, and the two additionality tests: the performance Standard test and legal requirements test.

- Performance Standard Test: For this protocol, the Reserve uses a practice change threshold that establishes an industry-wide baseline scenario and the changes implemented in the project scenario.
- Legal Requirements Test: A project activity may not be required by any law, regulation, or legally binding mandate.
- The Reserve requested the following information:
 - Definitions of the different types of solid waste disposal methods in Argentina.
 - If possible, inventories related to the operation of each landfill, including specific data on the current status of their existing venting systems (cells or pits) and/or passive or spontaneous burning systems.
 - Information/data about the Impact of the CDM and other international standards on common practices.
 - Confirmation that the installation of landfill gas capture and destruction systems is not common practice in Argentina's landfills.
- The Reserve reviewed the four scenarios that meet the Performance Standard Test and examples were requested to contrast the scenarios presented.
 - WG member: in Chubut there are 2 landfills that may be eligible. One with about 300 tons/day and the other 50 tons/day. The first one includes the installation of a landfill gas collection system in the bidding documentation and construction plan. Therefore, it will likely have a gas collection and destruction system. However, it seems that there are inactive modules. In the second case, it is not complete, they would have to install a flare, etc.
 - WG member: Piedras Blancas operated by Cornejo in Cordoba, it is a landfill that was recently expanded, and they are about to start a landfill gas capture and power generation project, it is in the plan review phase.
 - <https://agenda4p.com.ar/2024/11/19/en-el-predio-de-piedras-blancas-se-instalara-una-planta-de-biogas-en-el-marco-de-un-acuerdo-entre-cormecor-y-epec/>
 - https://cormecor.com.ar/?page_id=311
 - WG member: There are some gas capture and destruction systems that were installed for the purpose of reporting to the CDM but have not been inactive for the last few years.
 - The WG member confirmed that the project was installed roughly more than 6 years ago for the CDM, but it was never listed, and the activity was not continued.
 - The Reserve clarified that the protocol includes deductions for baseline destruction.
- Reserve reviewed the Regulatory or Regulatory Compliance:
 - Must attest that the project is in compliance with all laws applicable to the project activity.
 - Must disclose any and all instances of legal violations (material or otherwise) caused by the project or project activities.
- The Reserve requested information on specific laws/regulations applicable to landfills in Argentina and what regulatory bodies/agencies oversee landfills.
 - WG member: in Argentina there are still no specific regulations. In the province of Chubut an environmental impact assessment (EIA) is required for the installation of the landfill and then a management and monitoring

plan for the evolution of the landfill. The latter must specify the management and collection of gases, although it only must comply with its plan, not with regulations or guidelines specifying the capture/destruction system. Once it is approved, it can be implemented and then can start its operation. The Secretary of the Environment at the Provincial or Municipal level will oversee regulating and supervising potential landfill infractions.

- WG member: there is no specific regulation at the national level. The GIRSU Plan, for urban waste management, is very general and in the case of specific regulations for landfills, it would be necessary to look at the provincial or even municipal level. Each province has its own strategy. For example, Santa Fe or BBA have their own regulations.
- WG member: There is no national law, but by province or municipality. It is very difficult to know all the regulations in the country since they are by province; doing a search it was found the total number of landfills in the country which are 41, but it is not defined in which province they are installed so it is necessary to review province by province.
- WG Member: could send the analysis of national and provincial regulations from their thesis. Sent by chat the regulations of Cordoba:
 - https://static.cordoba.gov.ar/DigestoWeb/pdf/ec2ae67c-1adc-4926-beba-4070f565a995/TEX_12648.pdf
- The Reserve requested confirmation to require the verifier to look up the applicable rules for each province, and if the documents are publicly available.
 - The WG confirmed that this is appropriate and regulations are publicly available.
 - WG shared two articles:
 - <https://www.infobae.com/america/medio-ambiente/2024/02/15/argentina-figura-entre-los-paises-con-mas-emisiones-de-metano-a-partir-de-vertederos-con-basura/>
 - <https://www.argentina.gob.ar/interior/ambiente/control/estrategia-nacional>

4. Social and Environmental Safeguards

- The Reserve reviewed the social and environmental safeguards
 - Free Prior Informed Consent
 - WG: No comments
 - Ongoing notification, participation, and documentation
 - WG: No comments
 - Labor and Safety
 - The Reserve requested information on specific laws on Occupational Health and Safety for landfill operators.
 - The Reserve requested information on regulatory bodies/agencies that the verifier can contact to confirm regulatory compliance.
 - WG: No comments

- The Reserve invited participants to send their comments by email due to time constraints.
- Dispute Resolution/No Disputes
 - WG: No comments
 - The Reserve invited participants to send their comments by email due to time constraints.
- Environmental Safeguards: Regulatory Compliance
 - The Reserve requested information on the regulatory body that oversees environmental regulations and if there is a regulatory agency/body that the verifier can contact to confirm compliance with the law
 - WG: No comments.
 - The Reserve invited participants to send their comments by email due to time constraints.
- Environmental safeguards: pollutant mitigation
 - WG: No comments.
 - The Reserve invited participants to send their comments by mail due to time constraints.

5. Parameters and Default Values

- The Reserve requested collaboration to establish the Tables of Emission Factors for Argentina.
 - Emission Factors for Stationary and Mobile Combustion Fuels in Argentina
 - Net Calorific Values of Fossil Fuels in Argentina
 - Predetermined Destruction Efficiencies for Combustion Devices

6. Next steps:

- The Reserve reviewed the next steps
 - WG should send their comments on the items discussed at the first meeting in writing by February 5, 2025.
 - The next WG meeting is planned for February 12, 2025, at 11:30-13:30 ARG time, please provide your comments if you need to change the date

Pending Questions for the Workgroup:

- Please clarify what is meant by methanization in terms of the Landfill Protocol.
- Please clarify what Evapotranspiration Pools are and their role in landfills.
- Provide examples of active Landfill Gas Collection and Control Systems and applicable destruction devices in use in the jurisdiction.
- Provide further information on the national, provincial, and/or local environmental permits and documents required to operate a landfill.
- Provide further information on the special ownership conditions for Landfills in Argentina that should be considered in the protocol. What documents should verifiers review to confirm ownership of landfill facilities in Argentina?
- Please review the Free Prior Informed Consent and Notification and Participation (Social Safeguards 1 and 2). Specifically, please clarify the overview of stakeholders involved and to be considered in order to comply with the requirements of these safeguards.

- Please clarify the definitions of the different types of solid waste disposal methods in Argentina.
- Are there inventories or databases that track the operation of each landfill and data on landfill gas collection and control systems in the jurisdiction.
- Please provide additional information on the impact of CDM or other international standards on common practice in the industry.
- Provide studies and/or data to confirm that the installation of landfill gas collection and control systems not common practice at landfills in Argentina?
- Please provide further information on the laws/regulations applicable to landfills in Argentina (by Province, Municipalities) and the applicable regulatory agencies.
- Please provide information on Occupational Health and Safety laws for landfill sites and the applicable regulatory body/agency.
- Please provide information on the regulatory body that oversees environmental regulations for landfills.
- Please provide the Emission Factors for Stationary and Mobile Combustion Fuels in Argentina, Net Calorific Values of Fossil Fuels in Argentina, Predetermined Destruction Efficiencies for Combustion Devices. Alternatively, confirm that the use of existing values is appropriate.