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Dominican Republic Livestock Protocol V1.0

Workgroup Meeting 2

March 9, 2023

Introduction



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- 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

AGENDA

- Introductions
- Process Overview
- Protocol Considerations and Workgroup Comments
 - Project Definition – Eligible livestock categories
 - Social and Environmental Safeguards
 - Anaerobic Baseline – Greenfields
 - Site-specific B_0 value
 - Other
- Open Discussion
- Next Steps



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INTRODUCTIONS

Workgroup Members

Organization (Alphabetical)	Name
AB Energy USA, LLC	Jesus Solano
ATOA Consulting Pty Ltd	Sami Osman
Independent	Thomas Grammig
Independent	Nelly Cuello
MexiCO2	David Collin
Ministry of Environment, Dominican Republic	Kenia Feliz
Ministry of Environment, Dominican Republic	Cesar Abrill
Nestlé Dominicana	Juan Crousset
Nestlé Dominicana	Leamsy Rodriguez (Alternate)
Independent	Josefina Fernandez McEnvoy
Ruby Canyon Environmental	Miguel Angel Freyermuth Corona
Terralimpia Biogas Solutions	Carolina Porrello



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PROCESS OVERVIEW

Protocol Development Overview

- **GOAL:** To create a robust Dominican Republic Livestock Protocol that provides best practices for GHG accounting to generate Climate Reserve Tonnes (CRTs)
 - Incentivize the capture and destruction of methane emissions from livestock operations
 - Direct carbon finance to the livestock 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 US and Mexico Livestock protocols
 - Solicit and incorporate expert stakeholder feedback

Protocol Development Timeline

1. Kick-off meeting (*January 26, 2023*)
2. Workgroup process
 - Formation: February 2023
 - Meeting 1: February 21
 - Meeting 2: today - March 9, 2023
 - Workgroup Protocol Draft Review: *March 20-March 27 - tentative*
3. 30-day public comment period (*April 10 – May 9, 2023*)
4. Propose to Board adoption (*June 2023*)



~6 months

Timeline Process Detail

	Jan	Feb	Mar	Apr	May	Jun
Public webinar	26 th					
Workgroup formation						
1st workgroup meeting (webinar)		21 st				
Drafting/content development						
2nd workgroup meeting (webinar)			9 th			
Drafting/content development						
Workgroup Review			20 th - 27 th			
Public comment period & webinar (30 days)						
Staff revisions based on feedback						
Internal reviews/formatting						
Deliver Board draft						
Public Board meeting						7 TH

Workgroup Process and Expectations

CAR/Process:

- Manage the protocol development process
- Hold 2 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) 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

Eligible Livestock Categories

- Should chicken waste be eligible?
 - In the US, it is common practice to treat manure in dry form due to public health and environmental concerns
 - Is anaerobic digestion (AD) of poultry waste common practice? (i.e., AD baseline)
 - Anaerobic digestion leads to increased production of methane
 - Value as organic nitrogen fertilizer
 - Is it currently common practice to use poultry waste as an organic nitrogen fertilizer?
- Should beef cattle be eligible?
 - Is AD of beef cattle common practice?

Eligible Livestock Categories: Comments Received

- Comments regarding existing experience with biodigesters on chicken farms and potential for including chicken farms
- Comments stating that chicken farms meet the baseline requirements
- However, we have not received any studies/evidence that chicken farms or beef cattle meet the required baseline assumption of non-controlled anaerobic digestion
 - Reserve has contacted la Asociacion Dominicana de Avicultura regarding baseline scenario for chicken farms

Reserve cannot include chicken farms or beef cattle without further evidence they meet the baseline scenario requirements but can continue to assess for including in the future.

Social and Environmental Safeguards

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

- Project developers must address the following topics with the livestock operator prior to project approval:
 - Concepts of climate change and carbon markets.
 - Requirements associated with livestock projects, including ongoing monitoring, reporting, and verification (MRV).
 - Estimates of costs and benefits associated with the livestock 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, livestock operators must approve the livestock project under this protocol and the project developer

No comments submitted/changes

Social and Environmental Safeguards

- **Ongoing Notification, Participation, and Documentation:**
 - The project developer must review with the livestock 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 livestock 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.

No comments submitted/changes.

Social and Environmental Safeguards

- **Respect Local Land Tenure Rights and No conflicts:** the livestock operator(s) and/or project developer must attest to having uncontested land title for the entire project boundary, including all livestock facilities directly associated with the carbon project.
 - a. The Reserve holds public comment on all listed projects prior to registration. See the Reserve Offset Program Manual and website for further information on programmatic and project specific public consultation processes. Projects that receive material complaints will not be registered until a satisfactory dispute resolution plan has been approved.

Modified based on WG feedback, comments?

Social and Environmental Safeguards

- The environmental safeguards requirements include:
 - **Air and Water Quality:** 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).
 - **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
 - **Animal Welfare:** The project developer must attest that the project is in material compliance with all applicable laws, including those related to the treatment and well-being of livestock. See Section 3.6 Regulatory Compliance for further information.

Added Animal Welfare safeguard based on WG feedback, comments?

Safeguards MRV

Eligibility Rule	Eligibility Criteria	Frequency
Social Safeguard 1 - FPIC	Signed documentation demonstrating compliance with social safeguard 1 FPIC.	Once during first verification
Social Safeguard 2- Ongoing Notification, Participation, and Documentation	Signed documentation demonstrating compliance with social safeguard 2 Ongoing Notification, Participation, and Documentation.	Every verification
Social Safeguard 3 – Labor and Safety	Signed Attestation of Regulatory Compliance form attesting to be in material compliance with all applicable laws, including labor and safety.	Every verification
Social Safeguard 4 – No Conflicts	Signed Attestation of No Conflict attesting that there are no land tenure disputes that affect the project boundary, including all livestock facilities directly associated with the carbon project.	Every verification
Environmental Safeguard 1 – Air and Water Quality & Environmental Safeguard 3	Signed Attestation of Regulatory Compliance form attesting to be in material compliance with all applicable laws, including those related to air and water quality and treatment and wellbeing of livestock.	Every verification
Environmental Safeguard 2 – Mitigation of Pollutants	Historical records and ongoing monitoring and reporting through data logging of physical measurements, online sources, and government data to demonstrate the project was 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 have acquired the appropriate local permits prior to installation to prevent violation of all applicable laws.	Every verification

Clarified MRV requirements based on WG feedback, comments?

Other comments related to social and environmental safeguards



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- Comments generally in support of the social and environmental safeguards alignment to objectives in the DR.
- Comment regarding alignment with the REDD+ safeguards.
 - The Reserve reviewed these safeguards; however, they are primarily focused on the forestry sector.
 - Is there a specific safeguard or consideration that is not included in the proposed protocol safeguards?

Anaerobic Baseline - Greenfields

- Greenfields: Projects that are implemented at new livestock facilities that have no prior manure management systems
 - Project developers must demonstrate uncontrolled anaerobic storage/treatment is common practice in the industry and geographic region where the project is located
- Are there any regions in the Dominican Republic where uncontrolled anaerobic storage and/or treatment is not common practice?
- WG comments received stating there is no region where uncontrolled anaerobic storage and/or treatment is not common practice
- However, we did not receive any studies/evidence supporting these comments

Without further studies, the Reserve will leave the current project specific requirement in order to prove the additionality of greenfield projects.

Site-Specific Determination of B_0 Value

- B_0 Value: Maximum Methane Potential
- Adopted in US protocol with consultation from experts since the default values for dairy cattle were very conservative.
- **Sampling schedule:** six samples at regular intervals throughout the day and combined to represent one sampling event for each livestock category separately. Samples taken at pre-defined month range.
 - Sample procedures vary depending on the manure management system
 - Methane potential is positively correlated with milk production. To prevent overestimation, samples must be taken in average or below-average milk production periods.
- **Laboratory Requirements:** 3 years using Biochemical Methane Potential (BMP) Assay procedures and ISO 11734

Site-Specific Determination of B_0 Value

- Is there a dataset with monthly milk production trends to determine months for sampling?
 - If so, what months have average or below-average milk production?
- Is there a standard laboratory certification scheme pertaining to BMP Assay?
- Do labs in the DR have the required experience outlined in Section 6.1?
 - Experience with testing and ISO 11734 and at least 3 years of experience with BMP assay?
- Comments that both milk production does not vary month to month and that it does:
 - April and May would tend to have higher than average milk production due to abundance of rain
- Reserve has contacted la Junta Agroempresarial Dominicana, Inc. regarding laboratory analysis for BMP testing
- Comment that sampling may be costly, regardless if labs are located in the DR. Sampling is voluntary, default values are available.

Reserve still needs dataset with monthly milk production trends by month to apply site-specific methodology; default values are still included as an option.

Other comments

General Law 225-20 - Article 125: Treatment of organic waste. The organic waste will be treated by biodigestion or composting process.

Paragraph I.- The treatment of waste of animal origin, from the food industry, agriculture, or the sacrifice of animals for human consumption, may be carried out using biodigesters, where the biogas will be burned. In the event that the generated Biogas that in turn generates energy, it will be considered as a recovery process.

WG comments that this both is not currently a legal requirement for installing a biodigester and that it should be considered as such: Is there currently in implementation a legal requirement for the installation of a biodigester?

- Monitoring requirements for biogas flow meters are costly: consider using the CDM AMS-III.R methodology
 - CAR Mexico Livestock Protocol:
 - The total flow of biogas, measured continuously and recorded every 15 minutes or totalized and recorded at least daily, adjusted for temperature and pressure, prior to delivery to the destruction device(s)
 - The flow of biogas delivered to each destruction device, measured continuously and recorded every 15 minutes or totalized and recorded at least daily, adjusted for temperature and pressure. Single flow meter alternative with use of lowest BDE.
 - The fraction of methane in the biogas, measured with a continuous analyzer or, alternatively, with quarterly measurements.
 - Operational status of each destruction device, measured and recorded at least hourly. Demonstrating the presence of a safety shutoff valve as an alternative.

It was unclear to Reserve staff which specific monitoring requirement is costly and how the CDM requirements relate to the Reserve requirements?

- Parameter table 3: monitoring operationality of the biogas systems
 - Required sampling for 30 days every 2 years
- Parameter table 4: biogas flow meters to monitor accumulated biogas
 - Required annual sampling for 30 days over 1 year

- VS and Maximum Methane Potential (Bo,L) default values: updated values in IPCC 2019 Refinement to the 2006 IPCC Guidelines
 - 2006 LATAM value: 0.29 (M³ CH₄/KG VS)
 - 2019 “Other region” value:
 - High Productivity Systems: 0.45
 - Low Productivity Systems: 0.29
 - Reserve is looking into these values
 - Reserve updates calculation tool with the most recent available data, so project developers are able to utilize updated values when they become available
- Could swine farms that had installed biodigesters several years ago but have stopped operating due to swine flu be eligible?
 - What kind of documentation would be available to prove that the biodigesters have not been active for several years and that they would require a significant investment to start back up?

Other comments

- **Consideration of enteric fermentation:** there are potential methodologies we may consider to use as a starting point; however, this would require greater review. The Reserve suggests excluding for now and will consider developing a separate WG to include across US, MX, and DR livestock protocols.
- **Consideration of N₂O:** currently there is no methodology to use as a starting point, may be considered in the future.
- **Consideration of reduced electricity or fossil fuel usage:**
 - How would the captured methane be used in the DR? Electricity generation? Vehicle combustion?
 - If vehicles, what is the current fossil fuel being used?
 - If electricity generation, is there data to demonstrate the current energy mix that would be displaced?
 - How significant is this consideration for the DR?

Other Comments

- Current GHG Assessment Boundary that would be impacted:
 - SSR13: Delivery and use of project electricity to grid (all excluded)
 - SSR14: Off-site thermal energy or power (all excluded)
 - SSR15: Use of project-generated thermal energy (all excluded)
- Current Quantification:
 - Equation 5.11 Carbon Dioxide Emission Calculations
 - If there's a net decrease in CO₂ emissions from grid-delivered electricity, then CO_{2,net} = 0
 - Removing this statement would result in additional crediting
 - **What other calculations would be necessary? Are there methodologies already available?**

Other comments

- Suggestion to review the following laws:
 - Law 368-22 Territorial Planning, Land Use and Human Settlements (December 2022)
 - Law 345-22 (August 2022) Requires the National Statistics Office (ONE) to produce environmental statistics according to the regionalization scheme.
 - Climate Change Law
 - Law on Energy Efficiency and Rational Use of Energy

Reserve is reviewing these laws. Are there any specific applications we should consider?



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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
 - Finalize draft to share with workgroup: **March 20th**
- ***For Workgroup:***
 - Email feedback on today's discussion or protocol draft review (by **March 15th**)
 - Look out for draft to review: **March 20th – March 27th**

Key contacts

- ***Climate Action Reserve:***

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THANK YOU!