Assessment of Applicable Climate Technologies for Establishing Baseline GHG Emissions from Cattle Farming in Cuba - Impact Description

UNIDO Contract Number: 3000073279

Date: October 3, 2019

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Challenge: Approx. 500 characters with spaces	Cuban livestock farming is characterized by low productivity due to a variety of causes including, but not limited to: poor management of grasslands, poor herd management, inappropriate water use and lack of knowledge of sustainable farming practices. These inefficiencies lead to increased greenhouse gas emissions and economic loss. At present, Cuba has not quantified its national livestock GHG emissions, nor the potential for emission reductions and productivity improvements from implementing best practices.
CTCN Assistance: 2 to 4 bullet points. Approximately 450 characters with spaces	• Estimation of baseline cattle farming emissions • Quantification of GHG reduction potential of implementing best practices and identification of potential co-benefits • Dissemination and training of local stakeholders on project learnings and methods • Creation of a Green Climate Fund concept note
Anticipated impact: 2 to 4 bullet points to summarise anticipated impact. Approximately 250 characters with spaces. As a minimum, please include one of the following: i) Quantity of greenhouse gas emissions reduced, avoided or sequestered; or ii) Number of people with increased capacity to adapt to the impacts of climate variability and change.	• Increased local capacity to quantify livestock GHG emissions • Improved understanding of adaptation and productivity co-benefits of adopting climate smart livestock management practices • A pathway identified for reducing livestock GHG emissions in 10% of Cuba's livestock herd within 5 years, 20% of Cuba's livestock herd within 10 years and 30% of Cuba's livestock herd within 15 years. • An estimate of the quantity of greenhouse gas emissions that will be avoided through the implementation of the recommendations of the technical assistance
Linkages and contribution to NDC: 2 to 4 bullet points. Approximately 350 characters with spaces	This assistance supports Cuba's Nationally Determined Contribution by: • More accurately estimating Cuba's livestock GHG emissions (Tier 1 to Tier 2) • Enabling livestock GHG emission reduction practices and technologies to be included in Cuba's Nationally Appropriate Mitigation Actions (NAMAs) • Providing insight into livestock climate change adaptation considerations and best practices from global livestock production systems

The narrative story: Approximately 1200 characters with spaces	Cuba has not quantified its national livestock GHG emissions or the potential for its livestock sector to achieve emission reductions. In Cuba, livestock farming covers over two million hectares of land, of which approximately 16 – 20 percent is cultivated pasture, 38 percent is partially or completely covered by invasive plants and the remainder is natural pasture with low productivity (Preparation of GHG Emissions Baseline for the Beef Cattle Sector, 2018). It is within this context that the Government of Cuba approached CTCN for technical assistance in quantifying its baseline GHG emissions from cattle farming and the potential reductions that could be achieved from the implementation of range of best practices. Given current management practices, it is anticipated that there are significant opportunities for improving Cuban livestock productivity, while decreasing emissions intensity. This technical assistance will aid Cuba in estimating its baseline cattle farming emissions as well as the emission reductions that can be achieved from implementing a range of best practices. It will also identify adaptation co-benefits of climate smart livestock management practices, build capacity of local stakeholders to quantify livestock emissions and build a concept note for submission to the Green Climate Fund for financing to implement the recommendations of the project.
Contribution to SDGs: Always include contribution to SDG 13, and to the extent possible, please include contribution to 2 other SDGs, describing the contribution with a few sentence for each SDGs concerned. A complete list of SDGs and their targets is available here: https://sustainabledevelopment.un.org/partnership/register/	• SDG 13 – this technical assistance will enable Cuba to select and hopefully implement livestock management practices that reduce GHG emissions. • SDG 12 – this technical assistance will support Cuba in strengthening their scientific and technological capacity to move towards more sustainable patterns of production. • SDG 2 – this technical assistance will support Cuba in implementing resilient agricultural practices that increase productivity and productions while helping maintain ecosystems that strengthen capacity for adaptation to climate change, including improving land and soil quality.

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Activity	Gantt Chart (Weeks) - September 1, 2019 to July 31, 2020	Deliverable(s)	Deadline
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48		
Output #1: Development of Implementation Planning and Communication Documents			
Activity 1.1: Work plan in the form of a response plan		Deliverable 1.1: Work Plan	14-nov-19
Activity 1.2: Monitoring and Evaluation Plan		Deliverable 1.2: Monitoring and Evaluation Plan	04-oct-19
Activity 1.3: CTCN Impact Description		Deliverable 1.3: CTCN Impact Description	04-oct-19
Activity 1.4: Closure and Data Collection Report		Deliverable 1.4: Closure and Data Collection Report	30-jun-20
Output #2: Development of an Initial Baseline Estimate of GHG Emissions from Cattle Farming			
Activity 2.1: Stakeholder and Specialist Meeting to Present the Initiative and Identify the Data Required to Calculate Baseline Emissions		Deliverable 2.1: Report on the Outcomes of the Meeting and List of Participants	29-nov-19
Activity 2.2: Gathering and Quantifying Secondary Information on Cattle Farming to Develop an Initial Baseline Estimate of GHG Emissions		Deliverable 2.2: Database, Report on Cuba's Baseline Livestock GHG Emissions and First Progress Report	31-ene-20
Output #3: Estimate of the GHG Emissions Mitigation and Improvement in Livestock Productivity that would Result for the Application of a Range of Good Practices Applicable to Cattle Farming in the Cuban Context			
Activity 3.1: Gathering and Analyzing Secondary Information on Appropriate Climate Technologies for Increasing Cattle Productivity and Decreasing Cattle GHG Emissions in Cuba		Deliverable 3.1: Technical Report on Good Practices and Climate Technologies	29-feb-20
Activity 3.2: Estimating the Mitigation Potential of the Good Practices and Climate Technologies		Deliverable 3.2: Report on the Mitigation Potential of Good Practices and Climate Technologies	31-mar-20
Activity 3.3: Participatory Meeting to Select the Most Appropriate Mitigation Options		Deliverable 3.3: Meeting Report and Second Progress Report	15-abr-20
Output #4: Dissemination of the Information Generated on the Current Status of Emissions and the GHG Mitigation Potential of Applying Good Practices and Proper Climate Technologies to Researchers, Specialists, Local Leaders and Producer Groups			
Activity 4.1: Dissemination of Knowledge Generated		Deliverable 4.1: Open-Access Database and Handbook of Good Practices and Climate Technologies	30-abr-20
Activity 4.2: Regional Workshops		Deliverable 4.2: Workshop Report and Third Progress Report	30-may-20
Output #5: Drafting a Concept Note for the Green Climate Fund (GCF)			
Activity 5.1: Drafting of GCF Concept Note		Deliverable 5.1: GCF Concept Note	30-jun-20
Activity 5.2: Final Project Presentation		Deliverable 5.2: Meeting Report, Participant List and Final Report	30-jun-20

Please note: The project team has left one month of leeway in the work plan to allow some room for potential unexpected delays.

Ouput	Activity	Inputs				Notes/Comments	Deliverable	Deadline	Estimated Costs			Total Cost	Expenditure and Implementation Schedule	
		Senior Hours	Junior Hours	Travel	Materials for Workshops				Consultants	Travel	Workshops		6m	12m
Output 1: Development of implementation planning and communication documents	A1.1 Work plan in the form of CTCN response	1	2				D1.1 - CTCN Response Plan Template	10-oct-19	$400.00			$400.00	$400.00	
	A1.2 Monitoring and Evaluation Plan	1	3				D1.2 - CTCN Monitoring and Evaluation Plan	04-oct-19	$525.00			**$525.00**	$525.00	
	A1.3 CTCN Impact Description	1	3				D1.3 - CTCN Impact Description	04-oct-19	$525.00			**$525.00**	$525.00	
	A1.4 Closure and Data Collection Report	2	4.5				D1.4 - CTCN Closure and Data Collection Report	30-jun-20	$862.50			**$862.50**	$862.50	
								Sub-total	**$2,312.50**	**$0.00**	**$0.00**	**$2,312.50**	**$2,312.50**	**$0.00**
Output 2: Development of an initial baseline estimate of GHG emissions from cattle farming	A2.1 Meeting with leaders and specialists to present the initiative and identify the data required	16	4	One international team member travel from Canada ($1,000 USD flight) for five days (budget estimated using all inclusive per diem of $280/day for accommodations, meals, local taxis, laundry, local telephone calls, and gratuities), plus a mobilization allowance of $200 for the trip.		An english speaking team member will attend in person.	D2.1 - Meeting minutes, participant list, summary report on chosen quantification method	31-oct-19	$2,900.00	$2,600.00		**$5,500.00**	$5,500.00	
	A2.2 Gather secondary data/information and quantify initial baseline GHG estimate	36	50				D2.2 - Database and report on the calculation of the baseline GHG emissions	31-ene-20	$11,650.00			**$11,650.00**	$11,650.00	
								Sub-total	**$14,550.00**	**$2,600.00**	**$0.00**	**$17,150.00**	**$17,150.00**	**$0.00**
Output 3: Estimate of the GHG emissions mitigation and improvement in livestock productivity	A3.1 Gather and analyze secondary information on appropriate climate technologies for increasing cattle productivity and decreasing cattle GHG emissions	25	32				D3.1 Technical report on good practices and climate technologies - up to 5 best practices identified for in-depth analysis and full GHG quantification	29-feb-20	$7,750.00			**$7,750.00**	$7,750.00	
	A3.2 Estimate the mitigation potential of the good practices and climate technologies chosen in Activity 3.1	35	45				D3.2 Report on the mitigation potential of the good practices and an open-access database	31-mar-20	$10,875.00			**$10,875.00**		$10,875.00
	A3.3 Participatory meeting for the selection of the most appropriate mitigation options	35	12.5	One international team member travel from Europe ($1,500 USD flight) for three days (budget estimated using all inclusive per diem of $200/day for accommodations, meals, local taxis, laundry, local telephone calls, and gratuities), plus a mobilization allowance of $200 for visas, etc. for the trip.	Venue, supplies and travel for Cuban team	A spanish speaking team member will attend in person. Additional team members will participate remotely.	D3.3 Meeting report on outcomes	31-mar-20	$6,812.50	$2,300.00	$1,040.00	**$10,152.50**		$10,152.50
								Sub-total	**$25,437.50**	**$2,300.00**	**$1,040.00**	**$28,777.50**	**$7,750.00**	**$21,027.50**
Output 4: Dissemination of the information generated on the current status of emissions and the GHG mitigation potential of applying good practices	A4.1 Dissemination of knowledge generated	27.5	27.5				D4.1 Open-access database and three handbooks on good practices for select audiences	30-abr-20	$7,562.50			**$7,562.50**		$7,562.50
	A4.2 Regional workshops in two regions (western and eastern) for leaders and specialists	75	22.5	Two international team members travel (One from Europe - $1500 USD flight and one from Canada - $1000 USD flight) for five days (budget estimated using all inclusive per diem of $200/day for accommodations, meals, local taxis, laundry, local calls and gratuities), plus a mobilization allowance of $200/person/trip for visas, etc.	Venue, supplies and travel for Cuban team	One spanish speaking and one english speaking team member will participate in person.	D4.2 Workshop report - summarizing conversation and any new concerns raised	30-may-20	$14,062.50	$4,900.00	$2,000.00	**$20,962.50**		$20,962.50
								Sub-total	**$21,625.00**	**$4,900.00**	**$2,000.00**	**$28,525.00**	**$0.00**	**$28,525.00**
Output 5: Drafting a concept note for the GCF	A5.1 Draft a concept note for the GCF for a project to implement the main recommendations of the technical assistance	16	25				D5.1 GCF concept note	30-jun-20	$5,525.00			**$5,525.00**		$5,525.00
	A5.2 Workshop to present the final results to the different stakeholders	6	8			Will be completed remotely by webinar	D5.2 Final report and list of participants at the workshop	30-jun-20	$1,900.00			**$1,900.00**		$1,900.00
								Sub-total	**$7,425.00**	**$0.00**	**$0.00**	**$7,425.00**	**$0.00**	**$7,425.00**
								Gender Analysis (Approx. 3%)	**$2,742.00**			**$2,742.00**		**$2,742.00**
								GRAND TOTAL	**$74,092.00**	**$9,800.00**	**$3,040.00**	**$86,932.00**	**$27,212.50**	**$59,719.50**

Assessment of Applicable Climate Technologies for Establishing Baseline GHG Emissions from Cattle Farming in Cuba - Monitoring and Evaluation Plan

UNIDO Contract Number: 3000073279

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(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
Output #1: Implementation planning and communication documents					
Activity 1.1: Project initiation and project closure	- 2 sets of conference call meeting minutes (kick-off and project closure) - 1 Response Plan - 1 Monitoring and Evaluation Plan - 1 Impact Description - 1 Closure and Data Collection Report	- Number of international and multi-country technology and knowledge sharing events (Indicator 5) - Number of participants at event (Indicator 6) - Number of information materials created by the assistance (Indicator 16c)	Record of events (ongoing) Attendance records (at time of meeting) Record of information materials produced (ongoing)		
Output #2: Initial baseline estimate of GHG emissions from cattle farming					
Activity 2.1: Stakeholder and specialist meeting to present initiative and identify the data required to calculate baseline emissions	- 1 meeting - 1 report on the outcomes of the stakeholder and specialist meeting and a participant list	- Number of international and multi-country technology and knowledge sharing events (Indicator 5)	Record of events (ongoing) Attendance records (at time of meeting)		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
		- Number of participants at event (Indicator 6)	Record of reports produced (ongoing)		
Activity 2.2: Gather secondary data/information and quantify initial baseline GHG estimate	- 1 database on Cuba's baseline livestock GHG emissions - 1 report on Cuba's baseline livestock GHG emissions	- Number of tools strengthened, revised or developed (Indicator 16a) - Number of technical documents strengthened, revised or created (Indicator 16b)	Record of tools developed (ongoing) Record of reports produced (ongoing)		
Output #3: Estimate of GHG mitigation and productivity improvements that would result from the application of a range of good practices					
Activity 3.1: Gather and analyse secondary information on appropriate climate technologies for increasing cattle productivity and	- 1 report on good practices and climate technologies	- Number of technical documents strengthened, revised or created (Indicator 16b)	Record of reports produced (ongoing)		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
decreasing cattle GHG emissions					
Activity 3.2: Estimate the mitigation potential of the good practices and climate technologies	- 1 report on the mitigation potential of good practices and climate technologies - 1 draft open-access database containing the quantification method used for the mitigation estimates	- Number of technical documents strengthened, revised or created (Indicator 16b) - Number of tools strengthened, revised or developed (Indicator 16a)	Record of reports produced (ongoing) Record of tools developed (ongoing)		
Activity 3.3: Participatory meeting to select the most appropriate mitigation options	- 1 participatory workshop - 1 report on the outcomes of participatory meeting and next steps	- Number of international and multi-country technology and knowledge sharing events (Indicator 5) - Number of participants at event (Indicator 6) ○ Number of women	Record of events (ongoing) Attendance records (at time of meeting) Photos		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
		○ Number of men			
Output #4: Dissemination of information generated on the current status of emissions and the GHG mitigation potential of applying good practices and proper climate technologies to researchers, specialists, local leaders and producer groups					
Activity 4.1: Dissemination of knowledge generated	- 3 handbooks on good practices and climate technologies - 1 final open-access database containing the quantification method used for the mitigation estimates	- Number of other information materials strengthened, revised or created (Indicator 16c) - Number of documents developed to inform other policies, strategies and plans on climate change mitigation (Indicator 17d) - Number of tools strengthened, revised or developed (Indicator 16a)	Record of information materials produced (ongoing) Record of reports produced (ongoing) Record of tools developed (ongoing)		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values

Activity 4.2: Regional workshops	- 2 regional workshops
	- 1 workshop report and participant list
		- Number of international and multi-country technology and knowledge sharing events (Indicator #5)
		- Number of participants at event (Indicator #6)
		  o Number of women
		  o Number of men
		- Number of participants that were satisfied with the event and its outcomes (Indicator 14)
		- Number of organizations with increased awareness and knowledge to better own and drive national mitigation planning processes (Indicator 20)
			Record of events (ongoing)
			
			Attendance records (at time of meeting)
			
			Participant evaluation survey (at time of meeting)
			
			Record of information materials produced (ongoing)
			
			Photos		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
		- Number of other information materials strengthened, revised or created (Indicator 16c)			
Output #5: Green Climate Fund concept note					
Activity 5.1: Draft GCF concept note	- 1 GCF concept note	- Number of documents developed to inform other policies, strategies and plans on climate change mitigation (Indicator 17d) - Total anticipated amount of funding/investment mobilised (in USD) as a result of the technical assistance	Record of reports produced (ongoing)		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
		○ Anticipated amount of public funding mobilized from international and regional sources (Indicator 28b)			
Activity 5.2 Final project presentation	- 1 webinar presentation - 1 meeting report in the form of meeting minutes and a participant list	- Number of international and multi-country technology and knowledge sharing events (Indicator 5) - Number of participants (Indicator 6) ○ Number of women ○ Number of men - Anticipated average total GHG reductions in metric tonnes of CO_2e as a result of the	Record of events (ongoing) Attendance records (at time of meeting)		

(A) Outputs and Activities as described in the Response Plan	(B) Response Plan target for the Output or Activity	(C) Indicator	(D) Method and frequency for data collection	(E) Value for Output/Activity produced using the indicator in column C	(F) Difference between targeted and delivered Output and activity values
		technical assistance (Indicator 31) - Anticipated average annual GHG reductions in metric tons of CO2-e, as a result of the technical assistance (Indicator 32)			

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