Provision of Technical Assistance for Enhancing Climate Resilience and Economic Sustainability of Livestock Farming in a Rural Community of Mongolia

Deliverable:

5.1 Final Workshop and Study Tour (December 2022 and March 2023)

Submitted to: The United Nations

About the project

The project will strengthen climate-resilient livestock farming while deriving the economic sustainability for vulnerable herding communities in Bayantümen soum and contributing to the Nationally Determined Contributions (NDC) and national climate change adaptation and mitigation priorities for Mongolia. Alinea implements this project with the Alberta Biodiversity Monitoring Institute (ABMI) and the R&D Center for Climate Change and Sustainable Development (CCSD) in Mongolia (www.climatechange.mn).

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Acronyms

CCSD	Climate Change and Sustainable Development
CCVA	Climate Change Vulnerability Assessment
CGIC	Climate Green Investment Corporation
CTCN	Climate Technology Centre and Network
DST	Decision Support Tools
ENG	English
FS	Feasibility study
GHG	Green House Gas
KSG	Key Stakeholder Group
LLC	Limited Liability Company
M	Men
MET	Ministry of Environment and Tourism
MON	Mongolia
MULS	Mongolian University of Life Sciences
NDC	Nationally Determined Contributions
NDE	National Designated Entity
NEAARC	North-East Asia and Agricultural Research Center
NGO	Non-Governmental Organization
PPT	Power Point Presentation
Q&A	Question and Answer
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
UN-FAO	United Nation-Food and Agriculture Organization
W	Women

1   Introduction

The Climate Technology Centre and Network (CTCN) is the operational arm of the United Nations Framework Convention on Climate Change (UNFCCC) Technology Mechanism and co-hosted by the United Nations Environment (UN Environment) in collaboration with the United Nations (UN) Industrial Development Organization (UNIDO). It is supported by 11 partner institutions with expertise in climate technologies. Its mission is to catalyze the development and transfer of climate technologies for energy-efficient, low-carbon and climate-resilient development in developing countries upon their request. Hence, this project concept was submitted to the CTCN by the National Designated Entity (NDE) of Mongolia.

The "***Provision of Technical Assistance for Enhancing Climate Resilience and Economic Sustainability of Livestock Farming in a Rural Community of Mongolia***" project was funded by the CTCN and implemented between November 2021 and May 2023. The project identified improved pastureland management measures and developed community-scale business models for enhancing climate-resilient livestock farming in Bayantümen *soum* of Dornod province while contributing to the Nationally Determined Contributions (NDC) and national priorities of Mongolia in the field of climate change adaptation and mitigation.

Outcome: Strengthen the climate-resilient livestock farming while deriving economic sustainability of herding communities in Bayantümen *soum*, Dornod province, Mongolia.

Objectives:
1) Enhance the capacity and knowledge of herding communities on climate-resilient livestock farming.
2) Facilitate decision-making to invest in community-scale sustainable meat processing system to improve the livelihood from livestock farming and enable the vulnerable communities to derive the best value from the livestock farming while dealing with the adverse impacts of the climate change.

The final output of the Project included workshops and training in Ulaanbaatar in December 2022 and March 2023 to share project results and provide training in the methodologies used. Key stakeholders from the project area participated in a study tour to high-end meat outlets in Ulaanbaatar and a beef feedlot operation to become familiar with these types of operations and to develop their business networks. This report presents the activities, materials and outcomes of these final events.

Deliverables: 5.1: Report on the stakeholder workshops (including results of the satisfaction survey)
5.2: Stakeholder workshop materials (under separate cover)
5.3: Consolidated Report of Project Outputs (MON/ENG) – (under separate cover)

2   Final Workshop and Training

2.1   Overview

The final activity of the project was to provide training on the project results and methodologies. Three events were held between December 2022 and March 2023:

1. Workshop to share project results with national level stakeholders, December 7, 2022
2. Training on project methodologies, December 8, 2022
3. Study tour for Key Stakeholder Group (KSG), March 4, 2023

It was originally envisioned that the final trainings would be conducted in Dornod. However, since the local stakeholders were already informed of project results, it was more efficient and effective to share the project results with national level stakeholders in Ulaanbaatar. This workshop and training event provided project results to a broader range of stakeholders from the government, university, research, project and private sectors than could have been done in Dornod. For the KSG, savings that had been realized in the training budget were used to conduct a local study tour. This allowed the KSG to visit working businesses in and near Ulaanbaatar where the project concepts were being implemented and for them to initiate business networks with these groups.

After the training events, a satisfaction survey was conducted to identify the level of their understanding regarding pastureland management practices for climate-resilient livestock farming and the business model designed.

2.2   Workshop on Project Activities and Results

2.2.1   Objectives, Participants and Agenda

A one-day workshop was held for government officials, project leaders and representatives of aimags and soums interested in replicating the project. The workshop was conducted at the Continental Hotel in Ulaanbaatar on December 7, 2022. The TA team presented and overview of the project and its findings. The objective of the workshop was to provide national level stakeholders with the project results and methodologies. The workshop presented the findings on:

- Gender based CCVA (climate change vulnerability assessment)
- Climate-resilient pastureland management practices and livestock farming
- Meat plant feasibility study
- Promising business models under different conditions
- Appropriate financing mechanisms available.

A total of 15 participants (6M / 9W) attended the day-long workshop, representing government, university, research institutes, Non-Governmental Organization (NGO), projects, and the private sector.

2 Final Workshop and Training

The workshop agenda is provided in Table 1. The workshop was broadcast over Zoom and recorded and is accessible at the following link:

 UN-CTCN Final Workshop day 1 - YouTube

Table 1: Final Workshop – Agenda – Ulaanbaatar, December 7, 2022

Time	Content	Presenter
Moderator: Byambadorj P., Agriculture expert		
8:30 - 9:00	Registration	
9:00 – 9:15	Opening	**Tuvdendorj G.**, Vice Minister of the Environment and Tourism **Lkhagvasuren L.**, project proponent, Director, North-East Asian Environmental and Agricultural Research Center **Debra Rasmussen**, project team leader, Director, Alinea International Ltd.
9:15 - 9:30	Project introduction	**Debra Rasmussen**, project team leader, Director, Alinea International Ltd.
9:30 - 9:55	Gender based CCVA	**Dr. Majid Irvani**, climate change expert, Alberta Biodiversity Monitoring Institute, Canada
9:55 – 10:15		**Dr. Tumendelger S.** Gender expert
10:15 - 10:30	Question and Answer (Q&A)	Participants
10:30 - 11:15	Pastureland assessment, recommendation	**Byambadorj P.**, Agriculture expert
11:15 – 11:30	Greenhouse gas, carbon sequestration	**Dr. Majid Irvani**, climate change expert, Alberta Biodiversity Monitoring Institute, Canada
11:15 - 11:30	Q&A	Participants
11:30 - 11:45	Tea, coffee break	
11:45 - 12:05	Meat processing plant, business model	**Debra Rasmussen**, project team leader, Director, Alinea International Ltd.
12:05 – 12:30		Dr. Wolfgang Lutz, German, butchers' Association /online/
12:30 - 12:45	Q&A	Participants
12:45 - 13:00	Closing	**Tserendulam Sh.**, Director General, Climate change Department, Ministry of Environment and Tourism **Lkhagvasuren L.**, project proponent, Director, North-East Asian Environmental and Agricultural Research Center **Debra Rasmussen**, project team leader, Director, Alinea International Ltd.

2.2.2 Workshop Discussion Results

During the workshop discussion was held around the future potential of the sector and stakeholder interests in conducting additional research and awareness raising. Workshop highlights:

- Participants increased their knowledge for consideration of climate change and gender when conducting community-based livestock management and crop production initiatives.
- Business collaboration with stakeholders such as the Mongolia-Indian business Council was identified as important. The project may be able to achieve next level analyses with Business Council collaboration.
- Research on climate change adaptation measures on integrated livestock and crop production sectors was determined to be necessary.
- The project should pay attention to the measures on how the knowledge shall be transferred to herders.
- Gender assessment provides interesting perspectives. However, international standards should not be copy pasted, for example in the area of property registration variance.
- Animal manure impact on soil and permafrost should be studied and considered from the climate change perspective.
- Water resource information should be integrated into crop production decision making. For example, the Kherlen river is dried out, and the area around the target area is degraded. Research is needed on available water resources. Ground water is decreased, and this information must also be considered.

2.3   Training in Business Models and Climate Change Calculations

2.3.1   Objectives, Participants and Agenda

A one-day training session for decision-makers and technical specialists interested in learning the detailed methodologies used during the project was held on December 8, 2022. The topics covered were:

- meat plant feasibility assessment
- financial analysis and business model assessments
- Green House Gas (GHG) calculations
- carbon sequestration calculations.

A total of 18 participants (11 M/7 W) attended the day-long workshop, representing government, university, research institutes, projects, and the private sector. The workshop agenda is provided in Table 2. The training was broadcast over Zoom and recorded and is accessible at the following link:
UN-CTCN Final Workshop day 2 - YouTube

2.3.2   Workshop Discussions

The participants underlined the usefulness of the session generally and calculation of the carbon emission and carbon sequestration specifically. The discussion was held around the following:
- GHG emission calculation:
  - Project results should be coordinated not only on a project level, but also on national level, including information on carbon calculations.
  - These types of projects can be used to support determination of country specific GHG emission factors.
  - Carbon intensity assessment.
  - Country specific protocol refinement.
- Fertilizer Implications
- Grazing Implications:
  - Impacts of the current overgrazed system
  - Protected area grazing potential.
- Soil:
  - Mongolia has a very good mapping on soil. Mongolia has soil mapping in five (5) dimensions.
  - Monitoring of soil is essential.
- Herders:
  - A recent survey shows that the young herders are not herders but farmers.
- References:
  - The project needs to share literature.

2 Final Workshop and Training

Table 2: Training – Business Models and Climate Change Calculation

Time	Content	Presenter
8:30 - 9:00	Registration	
9:00 – 9:45	Decision Support Tools - Meat Plant and Business Models *Decision Support Tools (DST) for meat plant* *DST for business models*	D. Rasmussen
9:45 - 10:30	Economic Modelling	D. Rasmussen
10:30 – 10:45	Tea Break	
10:45 – 12:00	GHG Emissions Reductions and Carbon Sequestration Potential of Climate-Resilient Livestock Farming Practices - Introduction - Direct and Indirect GHG Emissions Sources - Potential for GHG Emissions Reductions - Potential for GHG mitigation through Carbon Sequestration - Data and Information needs - Implications for Policy and Programs - Open Discussion	Majid Iravani
12:00 – 1:00	Lunch	
1:00 – 2:15	GHG Emissions Assessment of Climate-Resilient Livestock Farming Introduction - Livestock Life Cycle Impact Assessment - Existing Methodologies and Data and Information Needs - GHG Assessment in Bayantumen Soum - Open Discussion	Majid Iravani
2:15 – 2:30	Tea Break	
2:30 – 4:30	Carbon Sequestration Assessment of Climate-Resilient Livestock Farming - Introduction - Carbon Sequestration, Carbon Stock and Carbon Stock Changes - Existing Methodologies and Data and Information Needs - Carbon Sequestration Assessment in Bayantumen Soum - Open Discussion	Majid Iravani

3   Key Stakeholder Study Tour

3.1   Study Tour Participants

A KSG of 11 soum and bagh representatives was established at the end of the Bagh meeting on April 6, 2022. The group provides technical overview and a guidance throughout the project. They are directly involved in the assessment and planning through the participatory planning process. The group members take key decisions with regards to identification of the appropriate climate change adaptation and pastureland management options and guide the development and selection of community-scale business models for climate-resilient livestock farming. The group represents various soum and bagh technical and governance bodies as well as representative organizations for the poor, the elderly, women and youth. The group is 36% women. Membership in the group is shown in Table 3.

Table 3: Members of the Key Stakeholders' Working Group

Name	Position	Location	Gender
1. L. Lkhagvasuren	Herder, farmer, initiator	Lake	Male
2. E. Narangarav	Soum governor	Soum center	Female
3. Gantulga	Bagh governor	4th bagh	Male
4. Kh. Enkhbaatar	Citizen's Khural's Chairman, 4th bagh	4th bagh	Male
5. O. Gantumur	Member of Citizen's Khural, 4th bagh	Khotont - Khulstai	Male
6. E. Enkhtsetseg	Member of Citizen's Khural, 4th bagh. Leader of women's council.	Bayanbulag	Female
7. S. Jodovzagd	Member of Citizen's Khural, 4th bagh. Leader of senior people's council	Gurvantsaidam, Gurvanii bulag	Female
8. Myagmar	Member of Citizen's Khural, 4th bagh. Veterinarian	Sharburd	Male
9. Zorigtbaatar	Member of Citizen's Khural, 4th bagh. Leader of young people's council	Khotont	Male
10. Kh. Enkhkherlen	Soum Civil Servant - Environment issues	Soum center	Female
11. B. Battugs	Soum Civil Servant- Agricultural issues	Soum center	Male
		% Female	36%

A study tour held on March 3 and 4, 2023 provided the KSG and other interested individuals from Bayantumen soum an opportunity to visit a working feedlot and hold meetings with Mongolian companies developing the market for younger, high-quality beef and sheep meat. The intent was that they would develop business relationships that will allow them to begin making changes in herd structure and marketing. The study tour included members of the Key Stakeholders group as well as other interested herders from the Second and Third Baghs of Bayantumen Soum. In total, 20 participants from Bayantumen Soum joined the study tour including 12 women (60%).

3.2   Schedule of Activities

The study tour group visited the Lavai company beef feedlot in Nalaikh district, east of Ulaanbaatar and the MON Lamb project in Ulaanbaatar. The objective of the visit was to introduce the participants to a real example of cattle feedlot design, management practices and livestock farming the farm, Lavai

3   Key Stakeholders Study Tour

Limited Liability Company (LLC) and the restaurant outlet of the MON Lamb project for high quality young lamb production. The schedule of activities is provided in Table 4.

Table 4: Study Tour Agenda, March 4, 2023

Time	Activity	Responsible Person	
09:00-11:00	Leave to Nalaikh district from Ulaanbaatar	P.Byambadorj, Agricultural Engineer, facilitator	
11:00-11:05	Opening remarks		
11:05-13:00	Visit Lavai feedlot		
13:00-13:20	Questions and Answers		
13:20-13:40	Conceptual design of the feedlot system (design and management)	Lavai feedlot manager Mr.Tsolmon	
13:40-14:00	Questions and Answers	Participants	
14:00-15:30	Leave to Ulaanbaatar from Nalaikh district		
15:30-16:30	Lunch	MONLamb restaurant	
16:30-17:00	Introduction of Mongolian Lamb programme	Rich herder incubator NGO, L. Odser	
17:00	Closing speech	L. Lkhagvasuren	

3.3   Highlights of Site Visits

3.3.1   Lavai LLC beef feedlot

The main purpose was to see the cattle feedlot design, management practices and livestock farming in reality at Lavai's farm and to gain knowledge from project managers. The group met with Mr. Tsolmon, the Lavai feedlot director.

The following information was presented:

- Feeder cattle
  - Collection of cattle based on only Mongolian breed
  - Feeder cattle are collected from the Sukhbaatar and Dornod aimags
  - Feeder cattle are brought to the feedlot using their own company truck
- Feeds
  - They have eight hectares of land next to the feedlot which will be seeded to corn in 2023. Other feeds are from the market.
  - Lavai feedlot does not use hay from the market
- Feedlot
  - Feedlot capacity = 500 cattle
  - Average Daily Gain is 1.25 kg (an average)
  - Ration for the cattle changes at the 45 days
  - Total day of feeding is 90 days
  - Water is heated before watering the animals

- Slaughtering
  - Slaughtering is done at the Nalaikh district's "Tsaluut" slaughterhouse. Price for slaughtering one cattle is 55,000-70,000 MNT
- Market, Products and Brands
  - Lavai released "Shudlen"[1] (2 years old cattle) brand for the market. Please refer to training materials through the facebook address.
  - Size of boxed meat 20 kg sold for 350,000 MNT. 1 carcass produced 8 boxes.
  - Market: 280 household and 11 restaurants
  - They have released a new product, "bone soup", using Korean fully automated technology. An invitation was extended to the "bone soup" factory on another visit.
- Collaboration
  - Lavai expressed their willingness to cooperate with you especially in sourcing young cattle (24 months).

3.3.2   MON Lamb brand, Ulaanbaatar

The main purpose was to taste the lamb meat cuisine at the MON Lamb restaurant and get the knowledge from project manager. The group met with L. Odser of the Mongolian Lamb brand.

The following information was presented:

- The MON Lamb[2] restaurant is located at the Central tower, 3rd floor. Please refer to training materials through the facebook address.
- Gobi, Khangai region and Eastern Mongolian sheep weights are different.
- Lamb meat is the same as sheep meat, but younger.
- Customers are starting to eat and understand lamb meat after many years.
- Live weight (50kg) Lamb meat price starts from 1,200 to 2,000 yuan in China (1 yuan =500 MNT; 600,000 – 1,000,000 MNT).
- Mongolians have a big opportunity, especially Eastern Mongolia.
- Bayantumen has everything required (open water resource, hay and pasture) to develop a lamb industry.

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[1] *шудлэн брэнд - Search Results | Facebook*
[2] *Чинээлэг Малчин | Facebook*

Figure 1: Training at the Lavai Beef Feedlot

Figure 2: After Training at the MON Lamb Restaurant

4   Results of Satisfaction Surveys

4.1   Final workshop

Participants completed an evaluation form at the end of the workshops. The assessment included a general evaluation about the event and a self-evaluation of the knowledge and skills gained.
On average, participants rated the event at 4.3 out of 5.0. This included contribution to understanding of the topic (4.2), format (4.2), usefulness (4.4), the ability to share professional experience with colleagues (4.3), length (4.3), time for questions and discussion (4.4) and overall satisfaction (4.4).

Participants also assessed their level of knowledge and skills before and after the event (Table 5). Overall, the knowledge level increased from 2.3 (some prior understanding) to 3.5 (somewhat increased) on a four-point scale.

Table 5: Change in Level of Knowledge and Skills after Workshop

Knowledge and Skills Gained	Average (4-point scale)		
	Before	After	Average Change
CCVA	2.8	3.6	0.8
Incorporating Gender into CCVA	2.6	3.4	0.7
Pasture Assessments and Options for Improvement	2.4	3.4	1.0
GHG and Carbon Sequestration Potential in Mongolian Pastureland	2.4	3.4	1.1
Slaughterhouse feasibility assessments	2.0	3.7	1.7
Business models for herders, feedlots and community-scale slaughterhouses	2.0	3.7	1.7
AVERAGE:	**2.3**	**3.5**	**1.2**

Scale: Before	Scale: After
1-no prior understanding	1-not increased
2-some prior understanding	2-moderately increased
3-good prior understanding	3-Somewhat increased
4-very good prior understanding	4-significantly increased

4.2   Training

Participants completed an evaluation form at the end of the training session. The assessment included a general evaluation about the event and a self-evaluation of the knowledge and skills gained.

On average, participants rated the event at 3.9 out of 5.0. This included contribution to understanding of the topic (4.0), format (3.9), usefulness (4.0), the ability to share professional experience with colleagues (4.1), length (3.6), time for questions and discussion (3.5) and overall satisfaction (4.2).

4   Results of the Satisfaction Surveys

Participants also assessed their level of knowledge and skills before and after the event (Table 6). Overall, the knowledge level increased from 2.3 (some prior understanding) to 3.5 (somewhat increased) on a four-point scale.

Table 6: Change in Level of Knowledge and Skills after Training

Knowledge and Skills Gained	Average (4-point scale)		
	Before	After	Average Change
Decision Support Tool, checklist for Feasibility (FS)	2.4	3.2	0.8
Economic Modelling	2.4	3.3	0.9
GHG Emissions Reductions and Carbon Sequestration Potentials - Implications for Policy and Programs	2.2	3.3	1.1
GHG Emissions Assessment	2.2	3.1	0.9
Carbon Sequestration Assessment	2.2	3.3	1.1
AVERAGE:	**2.3**	**3.2**	**0.9**

Scale: Before

1-no prior understanding

2-some prior understanding

3-good prior understanding

4-very good prior understanding

Scale: After

1-not increased

2-moderately increased

3-Somewhat increased

4-significantly increased

4.3   Study Tour

A formal evaluation of the study tour was not conducted. However, comments from the participants were very favourable. After the completion of the study tour, the Governor of Bayantumen soum expressed her satisfaction with the experience in a formal letter of appreciation (Figure 3).

Figure 3: Letter of Appreciation, Bayantumen Soum to MOET

Annex A.   Participant Lists

Registration list

"Enhancing climate resilience and economic sustainability of livestock farming in a rural community of Mongolia" project

Venue: Conference room, Continental hotel, Ulaanbaatar   07 December 2022

No	Name	Organization	Position	Sex	Email address	Phone No
1	A.Narangaravuu	Ministry of Environment and Tourism (MET)	Expert of Climate Change Department	F	a.narangaravuu@gmail.com	99420868
2	B.Undrakh-Od		Soil expert	F	undrakhod.baatar@gmail.com	98110132
3	B.Munkhshur	Asian Foundation	Senior expert of Environment	F	Munkhshur.erdenebat@asiafoundation.org	99180394
4	B.Dumei	Lavai LLC	Director	F	dumei@lavai.mn	99091416
5	L.Lkhagvasuren	North-East Asia and Agricultural Research Center (NEAARC)	Project proponent and director	M	Lhagva1999@gmail.com	99039761
6	B.Indra	ETI LLC	Director	F	boldindra@gmail.com	99111523
7	G.Ariunbat	Businessman	Businessman	M	ariunbat@gmail.com	99083307
8	Ganhulug	United Nation-Food and Agriculture Organization (UN-FAO)	Expert	M	vanchints@gmail.com	99094976
9	Gantulga B.	Mongolia-Indian Business Council	Executive Director	M	info@mibc.mn	99102413
10	I.Otgonjargal	Shine usult magazine	Director	F	otgonjargal@gmail.com	88006228
11	S.Ankhdelger	Suun tsatsal LLC	Director	F	s.ankhdelger@gmail.com	88051217

Annex A: Participant Lists

No	Name	Organization	Position	Sex	Email address	Phone No
12	B.Gantuya	University of Finance and Economics	Rural partnership department	F	gantuya.b@ufe.edu.mn	99071704
13	G.Zoljargal	Climate Green Investment Corporation (CGIC) LLC	Advisor	F	zoljargal.g@cgic.mn	88113010
14	G.Odkhuu	Komit service LLC		M	odoku@gmail.com	99190564
15	Yu.Khorloo	University of Finance and Economics	Vice professor	M	khorloo.yu@ufe.edu.mn	99017582

Registration list

**"Enhancing climate resilience and economic sustainability of
livestock farming in a rural community of Mongolia" project**

Venue: Conference Room, Continental Hotel, Ulaanbaatar   08 December 2022

No	Name	Organization	Position	Sex	Email address	Phone No
1.	G.Ganzorig	Economic and business school, Mongolian University of Life Sciences(MULS)	Vise professor	F	Ganzorig.g@muls.edu.mn	99839839
2.	Ts.Batnaran	MULS	Teacher	M	Batnaran17@gmail.com	99910476
3.	L.Lkhagvasuren	NEARC	Project proponent and director	M	Lhagva1999@gmail.com	99039761
4	B.Indra	ETI LLC	Director	F	boldindra@gmail.com	99111523
5.	G.Ariunbat	Businessman	Businessman	M	ariunbat@gmail.com	99083307
6.	Ganhulug	UN-FAO	Expert	M	vanchints@gmail.com	99094976
7.	U.Munkhdavaa	Ulaanbaatar investment and management company	General manager	M	munkhdavaa@ubim.mn	88883236
8.	B.Bujidmaa	Climate Change research and cooperation center	Expert for carbon estimation	F	Bujidmaa2009@gmail.com	80325201
9.	N.Dulamsuren	METAGRO LLC	Business analyst	F	Dulamsuren.n@metagro.mn	99102413
10.	B.Gantuya	University of Finance and Economics	Rural partnership department	F	gantuya.b@ufe.edu.mn	99071704
11.	G.Zoljargal	CGFC	Advisor	F	zoljargal.g@cgic.mn	88113010
12.	G.Odkhuu	Komit service		M	odoku@gmail.com	99190564
13.	M.Sergelen	UN-FAO	SKALA project focal point	M	Sergelen.munkhuu@fao.org	95662201
14.	G.Enkhbaatar	UN-FAO	STREAM project expert	M	enkheemost@gmail.com	88151718

Annex A: Participant Lists

No	Name	Organization	Position	Sex	Email address	Phone No
15.	B.Gantulga					
16.	S.Dolgorsuren	UN-FAO	Advisor	F	Dolgorsuren.sanjjav@fao.org	88510648
17.	N.Tsermaa	University of Alaska	Ph.D research	F	tnyamdavaa@alaska.edu	80165881
18.	Yu.Khorloo	University of Finance and Economics	Vice professor		khorloo.yu@ufe.edu.mn	99017582

Annex A: Participant Lists

Study Tour to Nalaikh District – Participants – March 4, 2023

№	Name	Position	KSG*	Sex	Contact
1	L. Lkhagvasuren	Herder, farmer, initiator	√	M	99039761
2	E. Enkhtsetseg	Member of Citizen's Khural of the 4th bagh (Leader, Women's Council)	√	F	88641052
3	G. Tsolmon	Herder of 3rd bagh		F	89720202
4	N. Altantuya	Herder of 3rd bagh		F	94280110
5	O. Sarangerel	Governor of 3rd bagh		F	94774996
6	B. Naranbaatar	Herder of 3rd bagh		M	88532666
7	D. Enkhbat	Herder of 2nd bagh		F	88066249
8	S. Chuluun erdene	Herder of 4th bagh		F	99860996
9	G. Zorigtbaatar	Member of Citizen's Khural of the 4th bagh (Leader, Young People's Council)	√	M	89447911, 86823464
10	Ch. Enkhmaa	Herder of 4th bagh		F	88587009
11	O. Ganbat	Herder of 3rd bagh		M	98707272
12	N. Iderbat	Herder of 3rd bagh		M	89896711
13	A. Enkhtsetseg	Bayantumen soum accountant	√	F	89091845
14	Kh. Enkhbaatar	Citizen's Khural's Chairman of the 4th bagh	√	M	88597595
15	E. Narangarav	Bayantumen soum governor	√	F	88093779
16	D. Tsogzoldorj	Herder of 3rd bagh		M	93313438
17	O. Munkhtsetseg	Herder of 3rd bagh		F	98134689
18	Ts. Muuguulmaa	Herder of 3rd bagh		F	93333438
19	J. Tsogtbaatar	Herder of 4th bagh Bayantumen soum representative at Dornod aimag		M	99108908
20	A. Byambadelger	Expert for agriculture of Bayantumen soum		F	88338837
	Project team members				
21	P. Byambadorj	Agricultural Engineer		M	95898505
	Other bagh representatives				
22	L. Odser	Head of Rich Herder Incubator NGO		M	99117271
23	Soyolmaa	Manager of Rich Herder Incubator NGO		F	99041959
24	Mr. Tsolmon	Lavai LLC Feedlot Director		M	99114232
25	Amaraa	Driver		M	99895669
	Key Stakeholder Group				

Лавай компанийн үхэр бордох байгууламж болон Монгол хурга төслийн үйл ажиллагааны танилцуулгад оролцогчдын бүртгэлийн хуудас

Зорилго: Лавай компанийн үхэр бордох загвар, менежменттэй газар дээр нь танилцах, Монгол хурга төслийн танилцуулга уулзалтад оролцох

Налайх дүүрэг   2023 оны 3-р сарын 04-ний өдөр

№	Овог, нэр	Байгууллага	Мэргэжил	Хүйс	Утасны дугаар
	Дорнод аймгийн Баянтүмэн сумын оролцогчид				
1	Г. Зоригтбаатар	Алтан Дорнот Бүрт	Малын эмч	эр	89447911
2	А. Жаргал	4р баг	нягтлан	эм	89091945
3	Ч. Энхмаа	IV баг	малчин.	эм	88687028
4	Б. Очирбат	3-р баг	малчин.	эр	98707272
5	Н. Идэрбат	3-р	малчин	эр	89896711
6	Д. Энхтуяа	4-р	малчин	эм	88641052
7	Б. Нэмон	3р	малчин	эм	89720202
8	Н. Алтантуяа	3р	малчин.	эм	94280110
9	О. Серенпорэв	3р баг	багийн засаг дарга	эм	94744996
10	Б. Нэрэнбаатар	4р баг	малчин	эр	88532666
11	О. Энхбаатар	4р баг	малчин	эр	88598515
12	Э. Мөнххүү	3-р баг	Малчин	эм	98134689
13	Б. Оюундэлгэр	3р баг	малчин	эр	93313438
14	Б. Мөнгөнзул	3р баг	малчин	эм	93333438
15	Б. Баярсайхан	4-р баг	хөө-н тасаг мэргэжилтэн	эм	88338837
16	С. Чулуун-Эрдэнэ	4р баг	ЗДТГ нягтлан	эм	99860996

17	Д. Энхбат	2-р бел	ламин	ан	88066249
18	Д. Харалгарав	1-р бел	Засаг дарга	2и	88093779
19	Ф. Лхагвасурэн	4-р бел	менеж	эл	99039761
20	М. Уртнабазар	4-р бел	ИТХ төлөөлөгч	эл	99108908
	Төслийн багийн төлөөлөгч				
21	П.Бямбадорж	Уур амьсгалын өөрчлөлт тогтвортой хөгжлийн судалгаа хөгжлийн төв	ХАА-н зөвлөх	М	95898505
	Бусад оролцогчид				
22	н. Амараа		жолооч	эр.	99875669
23	л. Одоо	Цаст овоо менеж дийтгурлах төв ТББ	Тэргүүн	эр	79117271
24	ц.Сойолмаа	"	менеж	эр	99041957
25	н. Волмои	Лабат тэрдэх ИТХ дарга	захирал	эр	99114232

Annex B.   Satisfaction Surveys

Title of training	Project Results Sharing Workshop
Start date	07-12-2022
End date	07-12-2022
Location (address)	Continental Hotel
Location (city)	Ulaanbaatar
Location (country)	Mongolia

Part 1: General Assessment

	Average (out of 5)
I Learning objectives	
The training contributed to my understanding of the topic	4.2
The format of the training was well suited to the learning objectives	4.2
II Content relevance	
The training received is useful in relation to my work	4.4
The training enabled me to share professional experiences with colleagues	4.3
III Overall satisfaction	
The length of the training was adequate for the objectives and content	4.3
The training allowed adequate time for questions and discussions	4.4
Overall, I am satisfied with the training provided	4.4
AVERAGE	**4.3**

Comments:

Preparation could be improved from the point of fodder information

Interesting topic and good surveys have been introduced

Results/findings from the survey should be implemented in each aimag/soum

Part 2: Skills and Knowledge

Scale: Before	Scale: After
1-no prior understanding	1-not increased
2-some prior understanding	2-moderately increased
3-good prior understanding	3-Somewhat increased
4-very good prior understanding	4-significantly increased

Before

Knowledge and Skills Gained	Average (4 point scale)		
	Before	After	Ave. Change
Climate Change Vulnerability Assessments	2.8	3.6	0.8
Incorporating Gender into Climate Change Vulnerability Assessments	2.6	3.4	0.7
Pasture Assessments and Options for Improvement	2.4	3.4	1.0
GHG and Carbon Sequestration Potential in Mongolian Pastureland	2.4	3.4	1.1
Slaughterhouse feasibility assessments	2.0	3.7	1.7
Business models for herders, feedlots and community-scale slaughterhouses	2.0	3.7	1.7
AVERAGE:	**2.3**	**3.5**	**1.2**

Comments:

Would like to get copis of the PPTs and presentations by email.

Annex B: Satisfaction Surveys

Title of training	Training Workshop - Methods
Start date	08-12-2022
End date	08-12-2022
Location (address)	Continental Hotel
Location (city)	Ulaanbaatar
Location (country)	Mongolia

Part 1: General Assessment			
	Average (out of 5)		
I Learning objectives			
The training contributed to my understanding of the topic	4.0		
The format of the training was well suited to the learning objectives	3.9		
II Content relevance			
The training received is useful in relation to my work	4.0		
The training enabled me to share professional experiences with colleagues	4.1		
III Overall satisfaction			
The length of the training was adequate for the objectives and content	3.6		
The training allowed adequate time for questions and discussions	3.5		
Overall, I am satisfied with the training provided	4.2		
AVERAGE	**3.9**		
Comments:			
It was/would be good to link to organizations doing CC calculations			
The results should be distributed to government level policy makers			
I would like to get the PPTs and word files presented. Dulamsuren.n@metagro.mn			
Some slides had too much information and too small a font. Not so pofessional.			
Fit the content matter to the time available. Less talking. Difficult to understand.			
Part 2: Skills and Knowledge			
Scale: Before	Scale: After		
1-no prior understanding	1-not increased		
2-some prior understanding	2-moderately increased		
3-good prior understanding	3-Somewhat increased		
4-very good prior understanding	4-significantly increased		
Before			

Knowledge and Skills Gained	**Average (4 point scale)**		
	Before	**After**	**Ave. Change**
Decision Support Tool, checklist for FS	2.4	3.2	0.8
Economic Modelling	2.4	3.3	0.9
GHG Emissions Reductions and Carbon Sequestration Potentials - Implications for Policy and Programs	2.2	3.3	1.1
GHG Emissions Assessment	2.2	3.1	0.9
Carbon Sequestration Assessment	2.2	3.3	1.1
AVERAGE:	**2.3**	**3.2**	**0.9**
Comments:			
I would like to get the slides, WORD files and XLS from Debra & Majid. These would be useful for Mongolian researchers.			