GGGI | IMPACT AND EVALUATION UNIT

End Project Evaluation
Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea Crisis

Inception Report – Appendices

October 2024

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Appendix I. Project's Log frame

Result	Description	Indicators	Means of Verification	Assumptions and Risks
GOAL 1	**Karakalpakstan's development trajectory from the Aral Sea ecological crisis is restored for sustained green growth**			
Outcome 1	Climate Smart Agriculture related policy adopted	Climate Smart Agriculture related policy adopted	Policy recommendation, validation, workshop, government endorsement	Effective engagement and information sharing by government, private sector and civil society stakeholders
Output 1.1	Two technical analyzes (CRGG & GRIA) conducted and validated for the development of the Aral Sea Strategic Guidance/Policy Document framing the Aral Sea Development Program	Two technical documents are shared and validated by relevant representatives of the Government of Uzbekistan	CRGG & GRIA document, submission letter	Effective engagement and information sharing by government, private sector and civil society stakeholders
Activity 1.1.1	Undertake a Climate Resilient and Green Growth (CRGG) Assessment for the Republic of Karakalpakstan focusing on agriculture and agroforestry sectors	CRGG Assessment Report Three workshops on baseline setting, stocktaking of CRGG practice and validation of CRGG recommendations	Government's written endorsement of CRGG Assessment CRGG Baseline, stocktaking and validation workshop reports	Data availability and stakeholder buy-in
Activity 1.1.2	Prioritize a set of green recovery investment projects in agribusiness	A pipeline of green recovery projects in agribusiness One consultation and one validation workshop on validation of priority investment projects	Government's written confirmation on priority projects Two workshop reports	Buy-in from national and Karakalpakstan governments on green investment in CRGG sectors vis-à-vis brown investment in mining sectors
Output 1.2	Inception Action Plan to support Aral Sea Intra-agency Coordinating Mechanisms (Aral Sea ICM) for the Aral Sea Development Program developed	Aral Sea ICM Recommendations developed	Consultation workshop report	Buy-in from relevant stakeholders on Aral Sea Intra agency coordinating mechanisms
Activity 1.2.1.	Develop the sustainable bond framework	Commercial bond framework developed Stakeholder consultations	Validated commercial bond framework Consultation report with a list of financiers	Continued favorable investment climate of Karakalpakstan

Result	Description	Indicators	Means of Verification	Assumptions and Risks
Activity 1.2.2	Undertake a green employment assessment of prioritized green investment projects	Green employment assessment One workshop on validation of occupation and skill assessment	Government's written endorsement of green employment assessment Validation workshop report	Data availability and stakeholder buy-in Willingness of local communities to take on green jobs with occupation and skill training
Activity 1.2.3.	Implement high-level policy maker Aral Sea ICM consultations	Inception Action Plan for Aral Sea ICM A formal consultation with Council of Ministers and Karakalpakstan parliamentary delegates	Consultation workshop report	High-level policy maker prioritization for Aral Sea Development Program adoption
GOAL 2	**The livelihoods of small-holder agrarian communities are rehabilitated through an enhanced systematic capacity to respond to human security threats and to develop climate resilient agri-businesses**			
Outcome 2	Dehkan and private farmers (fermers) have increased resilience to climate and Aral Sea disaster risks	At least 25% of capacity building program participants from 4 districts use CSA/DRR knowledge At least 25% of capacity building program participants from 4 districts have improved business practices in their small and medium sized businesses	Follow-up survey with participants	No interference by other ministries/local authorities, or imposition of new regulations that undermines the ability by communities to implement the training recommendations
Output 2	Climate and disaster risk resilience capacity is strengthened among Dehkan farmers and fermers in 4 districts in Karakalpakstan	At least 25% of total population in agricultural sector in 4 districts participate in training on how to manage health, livelihood, and productive assets risks; At least 50% of participants are women and 25% are citizens aged 14 to 30 years. (Q3 2022)	Participant survey reports	Potential Aral Sea Disaster project fatigue, lack of trust in previous extension services among communities members or local leaders do not undermine community engagement
Activity 2.1	Develop a risk profile for disaster-related human security risks in Karakalpakstan, with focus on food and livelihood security	Validated risk profile is accepted by Government	Stakeholders confirm/validate the risk profile Government of Karakalpakstan and local governments accept the risk profile	Data availability High stakeholder engagement during consultation

Result	Description	Indicators	Means of Verification	Assumptions and Risks
Activity 2.2	Develop capacity building program with government stakeholders on climate resilience and disaster risk management focusing on food security and livelihoods	At least 6 capacity building modules designed covering topics for climate resilience and disaster risk management	Capacity building modules accepted by Government and stakeholders	High government engagement
Activity 2.3	Conduct capacity building and awareness raising activities on climate change and disaster risk resilience, focusing on food security and livelihoods	Capacity building modules and knowledge sharing events conducted in 57 village councils of citizens (VCCs) in 4 districts	Participants confirm increased awareness and acquiring skills in resilience to climate and disaster risks	High community engagement during capacity building activities and knowledge sharing events
Outcome 3	Local entrepreneurs of Karakalpakstan are equipped with climate resilient agri-business models	Farmers and MSMEs have incorporated lessons from climate resilient agri-business models and participate in the business development platform (Q2 2024) 20M USD investment commitment mobilized from demonstrated business models (by Q2 2024)	Financial statements of beneficiary enterprises Household income surveys of farmers	Strong political support from the district and regional government Beneficiary enterprises and farmers adopt effective climate resilient agri-business strategies and actions
Output 3.1	Climate resilient agri-business models are established for farmers & MSMEs	Climate resilient agri-business models developed, validated, and piloted with farmers & MSMEs (4 climate resilient agri-business models with 1 commodity and 1 value added product per model)	Increase in annual production volume for farmers and development of value-added products for enterprises reflected in financial statements and income surveys	Timely completion of piloting High participation from farmers and enterprises
Activity 3.1.1	Conduct functional and economic value chain analysis, and financial, technical, and social analysis of supply chain stages (production & processing) of focal commodities	Value chain analyzes and climate resilient agri-business models for focal commodities baseline studies (economic, social, technical and environmental)	Soft copy of value chain analyzes and baseline studies	District government provide support in collecting data Stakeholders provide quality data for financial, technical and social analysis
Activity 3.1.2	Engage key stakeholders and target groups to validate the integration and adoption of climate resilient agri-business models	Climate resilient agri-business models consulted and validated	Four climate resilient agri-business models consulted and validated by key stakeholders	High participation of key stakeholders for consultation and validation purposes
Activity 3.1.3	Pilot validated climate resilient agri-business models with farmers and MSMEs	Climate resilient agri-business models demonstrated	8 CSA agribusiness models piloted with 8 enterprises/entities	High participation and willingness of farmers for the integration of CSA technologies

Result	Description	Indicators	Means of Verification	Assumptions and Risks
Activity 3.1.4	Pilot validated climate resilient agri-business models with beneficiary MSMEs	Climate resilient agri-business models are piloted in the target districts (processing level)	Four climate resilient agri-business models piloted with entrepreneurs developing value added products at processing level	High participation and willingness of entrepreneurs for the development of value-added products
Output 3.2	Business development platform established for farmers, MSMEs, and institutional enablers	Business development platform created	One operational business development platform website	Buy-in from farmers, MSMEs, and enabler institutions
Activity 3.2.1	Create the business development platform structure and curriculum for farmers and MSMEs	Business development platform structure and curriculum program (3 months program, twice per year)	One structure and curriculum program (8 modules) established	Support and validation from institutional enablers for curriculum development and participation
Activity 3.2.2	Organize events and sessions for participating farmers and MSMEs, together with enabling institutions	Events and sessions organized (during the 3 months program, twice per year)	One event/session organized and documented per module (8 modules)	Registration and active participation of farmers, MSMEs and enabler institutions
Activity 3.2.3	Develop a strategy for future funding to keep the business development platform operational	Business Development Platform Funding Strategy	Government endorsement letter	Government continue the support of farmers and MSMEs through the business development platform
Outcome 4	Successful climate resilient agri-MSMEs and farmers across Karakalpakstan have improved access to finance from commercial banks and government green financing	MoU with the government and local financial institutions on setting up the grant/credit guarantee facility 10M investment mobilized from the government and climate fund	MoU document	Identification of successful climate resilient agri-business models through output 3.1
Output 4.1	Risk mitigating financial solutions are developed to facilitate increased commercial lending for MSMEs utilizing climate resilient agri-business models identified in Output 3.1	Risk mitigating financial solutions designed	Submitted GCF Funding Proposal for “Climate smart agriculture facility for Karakalpakstan”, Submitted Letter of intent for funding the grant scheme from the government	Support and cooperation from the local or national government
Activity 4.1.1	A green financing facility is designed to facilitate commercial lending for successful agri-MSME models identified in Output 3.1	Green financing facility	Green financing facility design	Identification of successful agri-MSME models through Output 3.1

Result	Description	Indicators	Means of Verification	Assumptions and Risks
Activity 4.1.2	Technical due diligence and financial scenario for grant and investment project pipeline	Grant and investment project pipeline	Grant and investment pipeline, letter of intent to seek funding for grant scheme from the govt	Identification of successful CSA models through Output 3.1. Willingness to support the grant scheme from the government
Output 4.2	A capacity building program on climate finance for the NDA and financial institutions is established	Number of NDA and financial institutions which have completed the program	Letter of appreciation from the participating NDA/ financial institutions	High interest in climate finance and capacity building from the local banks and the NDA
Activity 4.2.1	Develop and implement capacity building program for the NDA and financial institutions in the region	Number of NDA and financial institution stakeholders effectively trained	Survey results of participants upon completion of the program	Active engagement of the participants

Appendix II. Evaluation matrix

OECD DAC Evaluation Criteria	Key Evaluation Question	Sub-questions	Evidence sought	Existing data, and data gaps	Data collection method	Data analysis	Risks and limitations
Relevance	How well did the Project's objectives align its relevance to overarching goals and strategies with all key stakeholders?	a) Are the project-funded interventions relevant, strategic, and responsive to in-country stakeholder needs and priorities? How did the project adapt to the changes to stakeholder priorities and strengthen the program design to address these?	Government agencies buy-in Beneficiaries buy-in Project modifications justified	Original project design document is missing	Desktop review Interviews Surveys FGDs	Evidence is available from the PSC minutes and consultation workshop reports	Limited documentation on consultation processes
		b) How has the Project drawn upon the knowledge and lessons from previous development initiatives – not limited to those outlined in the Project proposal?	References to these in the project design document	Original project design document	Desktop review Interviews FGDs	Evidence will be sought from interviews	Lack of clear linkages to other development initiatives
		c) How did GGGI ensure the Project was government-led and maximize the national and local government's involvement in decision-making, approval, and implementation?	Government buy-in Government MOU and endorsement	Evidence that the risk profile report is accepted by the government	Interviews FGDs Desktop review	Evidence is sought primarily from the interviews	Key informants may not be available for interviews
Effectiveness	Have Project outputs and outcomes been achieved as intended, or are they on track to be achieved?	a) How effectively has the Project delivered its outputs and what progress has been made towards the outcomes? Please compare this based on the Project's logical framework.	Logical framework documents show indicators are met	Some indicators have not been measured (see separate excel file)	Desktop review Interviews Survey	Gap analysis of project data provided by GGGI for log-frame	Lack of monitoring data collected for some indicators
		b) What were the major factors influencing the achievement or non-achievement of the Project objectives?	Changes in project design documents	Limited recorded rationale for project changes	Desktop review Interviews FGDs	Analysis of barriers and challenges to project implementation	Potential lack of access to key project implementation partners or project staff

OECD DAC Evaluation Criteria	Key Evaluation Question	Sub-questions	Evidence sought	Existing data, and data gaps	Data collection method	Data analysis	Risks and limitations
		c) Were there any unintended consequences or negative outcomes resulting from the Project outputs?	Information about any negative outcomes or unintended consequences	No information on this currently	Interviews FGDs	Document and analyze transcript information	Informants may not provide frank answers
		d) Have there been any significant changes or adaptations made to the Project design in response to unexpected circumstances or lessons learned?	Updated versions of the project design document	Original design document isn't provided	Interviews FGDs Desktop review	Review the track changes in the project design to see modifications	Lack of monitoring information about changes to the project
		e) To what extent did GGGI effectively implement the Project, and what unique value did GGGI bring compared to other potential implementation models (such as bilateral arrangements or other organizations)?	Feedback from project partners and beneficiaries	Limited testimonials are provided in the documents	Interviews Desktop review	Document and analyze transcript information and survey results	Informants may not provide frank answers
Efficiency	To what extent did the Project ensure efficiency of the achievement of its objectives, and what mechanisms supported to ensure this?	a) How has GGGI planned and managed human and financial resources to ensure the Project is efficient in its delivery and achieved on time and within budget?	Project finance documents	Information on the project budget and expenditure	Desktop review	Review budget expenditure and assess value-for-money	Limited financial information is provided
		b) Could similar results have been achieved with fewer resources or a lower cost?	Project finance documents	Information on the project budget and expenditure	Desktop review FGDs	Review budget expenditure and assess value-for-money	Limited financial information is provided
		c) To what extent was the delivery of results affected by internal factors (such as staff turnover, procurement challenges) or external factors (such as government priorities, political will COVID)?	Feedback on staff turnover and procurement or external challenges	No data yet on internal or external factors	Interviews FGDs	Document and analyze transcripts	Staff may not provide frank feedback
		d) How effective was GGGI's own Project's management structure for the management and oversight of the Project?	Feedback from staff and key stakeholders	No data yet on project management and oversight	Interviews	Document and analyze transcripts	Stakeholders and staff may not provide frank feedback

OECD DAC Evaluation Criteria	Key Evaluation Question	Sub-questions	Evidence sought	Existing data, and data gaps	Data collection method	Data analysis	Risks and limitations
		e) How did the Project governance arrangements support coordination and decision making among the Government of Uzbekistan, GGGI, and KOICA?	Feedback from staff and key stakeholders	Data gaps remain on the effectiveness of the decision-making arrangements	Desktop review Interviews	Document and analyze transcripts	Stakeholders and staff may not provide frank feedback
Sustainability	How sustainable is the Project in terms of continued benefits for the targeted communities and stakeholders beyond the Project lifespan?	a) Are the outcomes likely to lead to subsequent impacts, mainly in terms of Operation and Maintenance (O&M) of interventions, after project closure either intended (as per the program log frame) or unintended, and either positive or negative in the future?	Strong buy-in and ownership of outcomes toward positive impact	Data on buy-in is evident from consultation workshop reports, MOUs	Interviews Surveys FGDs Desktop review	Document and analyze transcript information and survey results	Difficult to ascertain if the project buy-in will lead to a positive impact
		b) What measures are/were implemented to ensure the sustainability of Project outcomes beyond the Project lifecycle? To what extent will financial and economic resources be available to sustain the benefits achieved by the project?	Exit strategies Resource mobilization strategies	Business Development Platform planning is underway	Interviews Surveys Desktop review	Document and analyze transcript information and survey results	Resources for a second phase may not yet be secure
		c) Are there any potential social, political, financial, and environmental risks or barriers to the long-term sustainability that the evaluation should consider?	Evidence of any risks or barriers	Some risks and barriers are evident in the documents	Interviews FGDs	Document and analyze transcript information	Social-cultural and political barriers could be particularly challenging to overcome
		d) Does the Project have a clear exit strategy to ensure the sustainability of the results achieved by the intervention, and is this exit strategy supported by stakeholders?	Evidence of an exit strategy	Business Development Platform planning is underway	Interviews Surveys Desktop review	Document and analyze transcript information and survey results	If stakeholder buy in is limited it may be difficult to have a good exit strategy

OECD DAC Evaluation Criteria	Key Evaluation Question	Sub-questions	Evidence sought	Existing data, and data gaps	Data collection method	Data analysis	Risks and limitations
Cross cutting sections	How did the Project consider gender equality and social inclusion and human rights in the planning and its delivery of its outputs and outcomes?	a) How were gender-specific needs and priorities identified and incorporated into the project's design? In what ways did the Project address the distant needs and priorities of women and men throughout the implementation? What impact did the Project have on gender equality?	Gender-specific measures in the project implementation	Clear evidence of how the consultation processes and capacity building program was targeting gender inclusion	Interviews Surveys Desktop review	Analyze monitoring data on gender information, survey data and interview data	A lack of monitoring data on the ways that gender inclusion was integrated
		b) How did the Project facilitate the meaningful participation of women and youth in decision making processes, including project planning, implementation, and monitoring and evaluation? What challenges were encountered in ensuring their participation and how were these challenges addressed?	Gender and youth specific information in project documents and in interviews	Missing information on how youth were included in consultation processes	Interviews	Analyze interview transcripts to ascertain how youth (and women) were included in the project	Understanding the socio-cultural dimensions and challenges may require more in-depth study
		c) In what ways did the Project foster collaboration with relevant stakeholders and organizations working on gender-related issues to ensure a comprehensive and coordinated approach to gender mainstreaming?	Evidence of stakeholder collaboration and coordination on gender	Review of PSC meeting minutes and project reports	Interviews FGDs Desktop review	Analyze transcripts and documents to assess the level of collaboration and coordination on gender mainstreaming	Gender mainstreaming may not be a priority for the stakeholders
		d) How did the Project contribute to fostering social inclusion in the agricultural sector? What measures were taken to ensure equitable access to Project resources and benefits across different social and demographic groups?	Evidence of different social and demographic groups participating in the project	Evidence of a workshop targeting people with disabilities is available, but more information is needed	Interviews FGDs Survey data	Analyze transcripts of focus groups and interviews for information on social inclusion	Limited feedback may be provided on this topic in interviews and focus groups

OECD DAC Evaluation Criteria	Key Evaluation Question	Sub-questions	Evidence sought	Existing data, and data gaps	Data collection method	Data analysis	Risks and limitations
	How comprehensive and effective is the Project's M&E (M&E design, implementation, and utilization) in capturing progress towards its objectives?	a) How effectively does the M&E design integrate the theory of change and results framework with the operation's objectives and indicators, ensuring they are comprehensive, specific, measurable, achievable, relevant, and time-bound?	Evidence of monitoring data, evaluation and learning	Project synthesis report is missing Some monitoring data is missing	Desktop review Interviews	Analyze the approach taken by the team to M&E and the opportunities for improvement	High staff turnover or other factors may have limited the data collection effort
		b) How rigorously are M&E data collected and analyzed to reflect accurate, reliable outcomes, and how effectively are methodological flaws addressed and corrected throughout the Project lifecycle?	Evidence of monitoring data, evaluation and learning	Project synthesis report is missing Some monitoring data is missing	Desktop review Interviews	Analyze the approach taken by the team to M&E and the opportunities for improvement	M&E systems may be time consuming and difficult to implement
		c) To what extent is M&E data utilized for making informed management decisions, adjusting Project strategies, and influencing the design of future interventions based on performance and outcome evidence? Were there any missing gaps in the MEL data, if so please describe them.	Evidence of monitoring data, evaluation and learning	Project synthesis report is missing Some monitoring data is missing	Desktop review Interviews	Analyze the approach taken by the team to M&E and the opportunities for improvement	There may be a time lag between the collection of monitoring data and decision-making
	How did the Project address key environmental, social, and fiduciary issues that arose during Project design and implementation?	a) How did the Project consider safeguards – including labor and working consideration, political exposed person – in its engagement with the agri-MSMEs, for instance?	Evidence of safeguard measures being implemented	Limited information on safeguards in the documents	Desktop review Interviews	Analyze transcripts and documents for evidence	Limited information may be available regarding safeguards
		b) What were the methodologies, implementation plan, and results for this?	Evidence of safeguard measures being implemented	Limited information on safeguards in the documents	Desktop review Interviews	Analyze transcripts and documents for evidence	Limited information may be available regarding safeguards

Appendix III. List of Interviewees

The following list of interviewees has been developed in consultation with the GGGI office in Uzbekistan for the two-week evaluation mission (22 October to 1 November 2024). Depending on the level of data saturation following these interviews, the evaluation team may request additional interviews with other stakeholders. However, our initial analysis indicates that these interviews will be sufficient.

Interviewees

Government stakeholders - National

- Ministry of Investments, Industry and Trade (National)
- Ministry of Ecology, Environmental Protection and Climate Change (National)
- Ministry of Agriculture (National)

Government stakeholders – Republic of Karakalpakstan

- Council of Ministers of the Republic of Karakalpakstan
- Ministry of Water Management of the Republic of Karakalpakstan
- Ministry of Investments and Foreign Trade of the Republic of Karakalpakstan
- Ministry of Public Education of the Republic of Karakalpakstan
- Ministry of Employment and Poverty Reduction of the Republic of Karakalpakstan
- Committee of Forestry of the Republic of Karakalpakstan
- Bozataw district officials in the Republic of Karakalpakstan
- Karozek district officials in the Republic of Karakalpakstan

Private sector / financial institutions / farmers/agricultural businesses

- Agrobank
- Sanoat Qurilish Bank (SQB)
- Chamber of Commerce and Industry of the Republic of Karakalpakstan
- Consult Group
- Forestry enterprise – Director in Bozataw
- Farmer in Bozataw (Aktuba Jaylau)
- Farmer in Jusbasi
- Farmer in Askhat Rufat
- Agroimpex farm (Kegeyli district)

Development partners

- Korea International Cooperation Agency
- United Nations Multi-Partner Human Security Trust Fund for the Aral Sea Region in Uzbekistan
- United Nations Development Programme (UNDP)
- GIZ
- Deutsche Sparkassenstiftung fur Internationale Kooperation (DSIK)
- International Center for Agricultural Research in Dry Areas (ICARDA) – CGIAR center in Uzbekistan
- International Innovation Centre for the Aral Sea Basin

Farmers. Students, Teachers

- Focus Group Discussion and Survey introduction with farmers/fermers, students and teachers in Bazataw district
- Focus Group Discussion and Survey introduction with farmers/fermers, students and teachers in Karaozek district

- Focus Group Discussion and Survey introduction with farmers/fermers, students and teachers with Chimbay and Kegeyli districts

Global Green Growth Institute

- Country Representative and Program Staff (current and former) (approximately 6)

Appendix IV. GGGI supplied documents

Project documents	
2021	Project Document
2022	Project Document_220719_v10
2021	Grant Agreement
2021	Beneficiaries classification
2022	Financial report_2021
2023	Financial report_2022
2022	Biannual Report_2022
2023	Biannual Report_2023
2022	PSC minutes_2022_03
	PSC minutes_2022_10
	PIU minutes_2022_01
2022	PIU minutes_2021_12
	PIU minutes_2022_01
	PIU minutes_2022_02
	PIU minutes_2022_03
	PIU minutes_2022_04
	PIU minutes_2022_06&07
	PIU minutes_2022_08
	PIU minutes_2022_11
	Monthly update_2022_06&07
	Monthly update_2022_12
	Monthly update_2023_04&05
	Monthly update_2023_10
	Monthly update_2023_11
	Baseline report
2022	2022 Annual Report
2022	2022 Q1 Quarterly Report_220430
2022	2022 Q3 Quarterly Report_221031
2024	Engagement Strategy

Project documents	
2022	2022 Newsletter_2209
2022	Agricultural Legal and Policy Review
2022	Climate Resilient Green Growth Assessment (CRGG)
2022	Green Recovery Investment Analysis
2024	Whitepaper: Policy recommendations on sustainable landscapes, climate-smart agriculture, and forestry development
2022	CRGG Stocktaking Workshop
2022	Technical Advisory Consultations validating CRGG and GRIA, Nukus
2022	Technical Advisory Consultations validating CRGG and GRIA, Nukus
2022	Technical Advisory Consultations validating CRGG and GRIA, Tashkent
2024	Whitepaper Validation Workshop
2024	Whitepaper workshop article
2022	Green Recovery Investment Analysis (GRIA)
2023	Capital Expenditure for Infrastructure Adaptation Measures for Agriculture
2023	Tree nursery capacities and investment mobilization opportunity assessment
2022	Technical Advisory Consultations validating CRGG and GRIA, Nukus
2022	Technical Advisory Consultations validating CRGG and GRIA, Nukus
2022	Technical Advisory Consultations validating CRGG and GRIA, Tashkent
	Green bond concept
	Green bond TOR
2024	$400m Sustainable bond issuance article
2024	Green employment assessment report
2024	MOEEPCC RK Endorsement letter
2024	MOEPR RK Endorsement letter
2024	Forestry Committee RK Endorsement letter
2024	Endorsement letters translated into Eng
2024	GGGI-UNRO Joint action plan article
2024	Whitepaper Validation Workshop
	A risk profile
	Capacity building modules

Project documents	
	Module 1. CC and Aral Sea region
	Module 2. Health
	Module 3. Climate-smart farms
	Module 4. Drought-adapted farming and water
	Module 5. Agroforestry
	Module 6. Climate-resilient agribusiness
2024	Student training article
2024	Microgreen training article

Appendix V. Survey instrument (questionnaire)

Survey questionnaires

Part one

Survey to obtain feedback on the capacity building modules (outcome 2)

Introduction: This survey is for participants in the GRIP Aral Sea Project capacity building modules for awareness-raising and sensitization for climate and disaster risk resilience among Dekhan farmers and fermers, under Outcome 2 (output 2.1).

Participants were trained through the Ministry of Public Education of Karakalpakstan (MPE) in coordination with the four districts targeted for the training program (Kegeyli, Bozataw, Chimbay, and Karauzyak district administrations). It is estimated that 12,000 students have been trained through the program.

With GGGI's support, this survey will be distributed through the training providers (i.e. schools and vocational training centres) to the students that participated in the training (part 1-1) and for the trainers that delivered the awareness raising and capacity building modules (part 1-2).

Part 1-1 For training participants

Biographical information

1. Please select your age range from the options below:
   - 14-17
   - 18-24
   - 25-30
   - 31-40
   - 41-50
   - 51-60
   - Over 60

2. Please indicate your gender identity.
   - Female
   - Male

3. Which district do you currently reside in?
   - Kegeyli
   - Bozataw
   - Chimbay
   - Karauzyak
   - Other (please specify) _____

4. Please select which of the following choices describes your occupation:
   - Student
   - Homestead landowner
   - Homestead landowner and dekhan farmer
   - Fermer (private farmer)
   - Individual entrepreneur
   - Working in a small-to-medium sized business
   - Other (please specify) _____

Feedback on capacity building program

5. Which of the following capacity building modules have you been trained in for awareness-raising and sensitization for climate and disaster risk resilience (please choose up to 6 options):
   - Climate change and Aral Sea Region
   - Health: Environment Hazards & Prevention
   - Climate-Smart Household Farms
   - Drought-Adapted Farming & Water Management
   - Agroforestry, Horticulture and Viticulture in dry conditions
   - Basic Agri-Business and Entrepreneurial Skills
   - None

6. To what extent was the training that you attended relevant to you?
   - Not at all relevant
   - Not relevant, but still interesting to learn
   - It was relevant to some aspects of my life and/or work
   - It was relevant to most aspects of my life and/or work
   - It was highly relevant to all aspects of my life and/or work
   - Not applicable.

7. To what extent has the training you received increased your knowledge and awareness of climate change and disaster risks?
   - Not at all
   - To a small extent
   - To a moderate extent
   - To a large extent
   - To an exceptional extent
   - Not applicable

8. To what extent have you applied the knowledge that you gained from the capacity-building module in day-to-day life and/or agricultural business (select one option)?
   - Not at all
   - To a small extent
   - To a moderate extent
   - To a large extent
   - Completely
   - Not applicable

9. What level of improvement have you seen in the resilience of your household farm and/or agri-business to climate and disaster risks as a result of implementing the knowledge gained from participating in this training module (select one option)?
   - No improvements
   - Slight improvements
   - Moderate improvements
   - Significant improvements
   - Exceptional improvements
   - Too early to tell
   - Not applicable

10. If you participated in the training module on 'Climate Change and the Aral Sea Region', have you implemented any of the following actions (choose one or more):
    - Reduce consumption (e.g., more vegetables, less meat)
    - Eco-friendly travel
    - Reduce water consumption
    - Reduce use of packaging
    - Retain crop residue on soil to keep soil moisture (mulching method)
    - Make and use compost to improve soil quality

- Protect windows outdoors and reduce heat indoors
- Access digital resources on climate change to learn more
- Other (please specify) _____
- Not applicable.

11. If you participated in the training program on 'Climate Change Adaptation and Health', have you implemented any of the following actions (choose one or more of the following):
    - Measures to prevent infection – purify water
    - Measures to prevent infection – eat a variety of food
    - Measures to prevent infection – regular exercise
    - Measures to prevent infection – sufficient sleep
    - Measures to prevent infection – spend time in fresh air
    - Self-protection measures against air pollution - wear a mask
    - Self-protection measures against air pollution – use fans and ventilate house
    - Self-protection measures against air pollution – open windows when cooking
    - Self-protection measures against air pollution – don't burn trash or leaves
    - Self-protection measures against air pollution – don't smoke inside
    - Self-protection measures against air pollution – plant trees on windy side of land to block incoming dust
    - Other (please specify) _____
    - Not applicable.

12. If you participated in the training on 'Climate-Smart Households', which of the following Climate-Smart Household approaches have you implemented as a result of the training you received? Select all that are appropriate.
    - Rainwater harvesting
    - Composting
    - Trees / windbreaks
    - Planting drought and salt-tolerant fruit trees
    - Biological plant protection measures to reduce pests
    - Measures to reduce animal diseases and treat common farm animals
    - Mini-greenhouse (hotbed)
    - Mini-hydroponic systems
    - Drip-irrigation systems
    - Making fodder
    - Other (please specify) _____
    - Not applicable.

13. If you participated in the training on 'Farming in dry conditions', which of the following farming practices did you implement as a result of the training you received? Select all that are appropriate.
    - Conservation agriculture – no-tillage
    - Conservation agriculture – mulching
    - Conservation agriculture – crop rotation
    - Agroforestry – windbreaks
    - Agroforestry – planting drought-tolerant trees and shrubs
    - Viticulture adapted to dry conditions
    - Measures to protect trees and gardens from pests and diseases
    - Other (please specify) _____
    - Not applicable.

14. If you participated in the training on 'Climate-Resilient Farm Management', which of the following farming practices did you implement as a result of the training you received? Select all that are appropriate:
    - Introducing climate-smart agricultural practices - drip irrigation
    - Introducing climate-smart agricultural practices - mulching
    - Preparing a business plan for a climate-smart agribusiness
    - Assess the effectiveness of your entrepreneurial activity in climate-smart agriculture
    - Other (please specify) _____
    - Not applicable.

15. If you participated in the training on 'Climate-Resilient Agrobusiness Acceleration', which of the following did you access under the Business Development Platform (www.greenaral.uz) because of the training that you received? Select all that are appropriate:
    - Advisory Services
    - Agri-Finance services
    - E-learning module
    - Agri-business pages
    - Agri-Market pages
    - Other (please specify) _____
    - Not applicable.

16. What barriers, if any, have you encountered when trying to apply the knowledge that you gained from the training to enhance your resilience? (Select all that apply)
    - Lack of resources (financial, land)
    - Insufficient support or guidance (training)
    - Limited access to relevant tools or technologies (information)
    - Resistance to change from others (social/cultural)
    - Environmental (e.g., disasters and climatic events)
    - Other (please specify) _____

17. How would you rate the quality of the training modules and materials provided?
    - Low quality
    - Sufficient quality
    - Good quality
    - High quality
    - Excellent quality.

18. Was the length of the training program appropriate to build your awareness of the topic and enable you to apply this knowledge in practice?
    - Yes, it was a sufficient length of time
    - It was sufficient, but I would have appreciated more time
    - No, it was insufficient.
    - No, it was too long and could have been shortened.

19. Was the training approach sufficiently interactive to enable you to learn from case studies and real-world examples?
    - Yes, it had a good mix of information, case studies and real-world examples
    - To some extent, as it did have some case studies and real-world examples, but could have benefited from more of these
    - No, it could have been improved with more interactive case studies or real-world examples
    - Not sure
    - Not applicable.

20. On what topics would you like to have additional training (capacity building) on climate change resilience, if any (select as many as appropriate):
    - Climate change resilience and health
    - Climate-smart households
    - Climate smart agricultural practices
    - Climate smart agribusiness management (including financial management)
    - Climate smart agribusiness management and legal knowledge
    - Climate smart agriculture and business development
    - Climate change science and ecology of the Aral Sea region
    - Climate change mitigation (e.g., measures to reduce greenhouse gas emissions)
    - Climate change resilience and water resources management
    - Climate change resilience and technology
    - Climate change resilience and finance
    - Opportunities for women and climate change resilience

- Other (please specify):_____

21. In your opinion, how important is it for students and agricultural workers in your district to receive this type of training?
    - Not important
    - Slightly important
    - Moderately important
    - Very important
    - Extremely important
    - Not sure.

22. Would you like to provide any other comments on GGGI's capacity building program that you participated in? (free text response)

Part 1-2 For teachers delivering modules to participants

Biographical information

1. Please select your age range from the options below:
    - 14-17
    - 18-24
    - 25-30
    - 31-40
    - 41-50
    - 51-60
    - Over 60

2. Please indicate your gender identity.
    - Female
    - Male

3. Which district do you currently reside in?
    - Kegeyli
    - Bozataw
    - Chimbay
    - Karauzyak
    - Other (please specify)

Feedback on capacity building training materials provided by GGGI

4. Which of the following capacity building modules have you taught under the GGGI program (please choose up to 6 options):
    - Climate change and Aral Sea Region
    - Health: Environment Hazards & Prevention
    - Climate-Smart Household Farms
    - Drought-Adapted Farming & Water Management
    - Agroforestry, Horticulture and Viticulture in dry conditions
    - Basic Agri-Business and Entrepreneurial Skills
    - None

5. To what extent was the training that you delivered relevant to the participants?
    - Not at all relevant
    - Not relevant, but still interesting
    - Somewhat relevant
    - Mostly relevant
    - Highly relevant
    - Not applicable.

6. In your opinion, what level of quality were the training modules and materials designed by GGGI that you utilized to teach?
   - Low quality
   - Sufficient quality
   - Good quality
   - High quality
   - Excellent quality
   - Not sure.

7. To what extent were the training modules and materials sufficient to meet their purpose of raising awareness and acquiring skills in resilience to climate change and disaster risks?
   - Not at all
   - To some extent
   - To a reasonable extent
   - To a large extent
   - Completely
   - Not sure.

8. In your opinion, was the length of the training program appropriate to build student awareness of the topic and enable your students to apply this knowledge in practice?
   - Yes, it was a sufficient length of time
   - It was sufficient, but I would have appreciated more time
   - No, it was insufficient.
   - No, it was too long and could have been shortened.

9. To what extent was the support provided by GGGI to you in delivering these training modules sufficient:
   - Not at all
   - To some extent
   - To a reasonable extent
   - To a large extent
   - Completely
   - Not sure.

10. In your opinion, was the training approach in the modules sufficiently interactive to enable students to learn from case studies and real-world examples?
    - Yes, it had a good mix of information, case studies and real-world examples
    - To some extent, as it did have some case studies and real-world examples, but could have benefited from more of these
    - No, it could have been improved with more interactive case studies or real-world examples
    - Not sure
    - Not applicable.

11. On what topics would you like to have additional training modules on climate change and disaster risk resilience, if any (select as many as appropriate):
    - Climate change resilience and health
    - Climate-smart households
    - Climate smart agricultural practices
    - Climate smart agribusiness management (including financial management)
    - Climate smart agribusiness management and legal knowledge
    - Climate smart agriculture and business development
    - Climate change science and ecology of the Aral Sea region
    - Climate change mitigation (e.g., measures to reduce greenhouse gas emissions)
    - Climate change resilience and water resources management
    - Climate change resilience and technology
    - Climate change resilience and finance
    - Opportunities for women and climate change resilience
    - Other (please specify): _____

12. Please provide any other feedback you wish to on GGGI's modules that you taught or any other suggestions for GGGI's future capacity building programs. (free text response)

Part Two

Survey seeking feedback on capacity building program for agri-businesses

Introduction: Under outcome 3 of the Aral Sea GRIP, there have been 366 participants in training on climate resilient agri-business models, including 91 women and 138 youth. This survey should be completed only by training participants in these capacity building programs that were working in an agri-business.

With GGGI's support, this survey can be distributed to the agri-businesses that have participated in these training programs.

1. Please select which of the following choices describes your agricultural business:
   - Micro sized agri-business (average number of employees up to 10 people)
   - Small sized agri-business (average number of employees 11 to 50 people)
   - Medium sized agri-business (average number of employees 51 to 250 people)
   - Large sized agri-business (average number of employees more than 250 people)
   - Individual entrepreneur (annual turnover limit: up to 1 billion UZS)
   - Not applicable.

2. Please select your age range:
   - 14-17
   - 18-24
   - 25-30
   - 31-40
   - 41-50
   - 51-60
   - Over 60

3. Please indicate your gender identity.
   - Female
   - Male.

4. Which of the following events or training sessions did you attend related to climate-smart business models (select as many as appropriate):
   - "Efficient land and water management in tree nurseries and demonstration of commercial tree propagation technologies", held on 24-26 Oct 2023.
   - "Crop quality and yield increase through resource efficiency – climate friendly water and input saving technologies in winter wheat and fruit production", held on 28- 30 Nov and 1 Dec 2023.
   - "Karatal (black willow) benefits – economic, environmental and social benefits", held on 2 Dec 2023.
   - Capacity building training on 'Climate-Resilient Agrobusiness Acceleration' held on xxxx
   - Capacity building training on 'Climate-Resilient Farm Management' held on xxxx
   - Not applicable.

5. To what extent was the event or training that you attended relevant to you?
   - Not at all relevant
   - Not relevant, but still interesting to learn
   - It was relevant to some aspects of my work
   - It was relevant to most aspects of my work
   - It was highly relevant to all aspects of my work
   - Not applicable.
   - Why?

6. To what extent have the skills and knowledge gained from the capacity building program been applied in your day-to-day agri-business operations?
   - Extensively applied
   - Moderately applied
   - Occasionally applied
   - Rarely applied
   - Not applied at all.
   - Why?

7. How would you rate the overall improvement in your agri-business practices as a result of participating in the event or training program?
   - Significant improvement
   - Moderate improvement
   - Slight improvement
   - No improvement
   - Negative impact
   - Too early to tell
   - Not applicable.
   - Why?

8. In which ways is your agri-business more resilient because of your implementation of these strategies? (Select all that apply)
   - More efficient land and water management
   - More resource efficient crop production and/or horticulture
   - Improved use of trees for farm resilience
   - Financial management and budgeting
   - Marketing and sales strategies
   - Operational efficiency and productivity
   - Customer service and client relations
   - Strategic planning and goal setting
   - Improved legal knowledge
   - Other (please specify) _____
   - Not applicable

9. What barriers, if any, have you encountered when trying to apply the knowledge that you gained from the training to enhance your resilience? (Select all that apply)
   - Lack of resources (financial, land)
   - Insufficient support or guidance (training)
   - Limited access to relevant tools or technologies (information)
   - Resistance to change from others (social/cultural)
   - Environmental (e.g., disasters and climatic events)
   - Other (please specify) _____

10. How confident are you that the improvements in your agribusiness practices that resulted from the training program will be sustained over the longer-term?
    - Very confident
    - Somewhat confident
    - Neutral
    - Somewhat uncertain
    - Very uncertain
    - Not appliable
    - Not sure.

11. What aspects of the capacity building program were most beneficial in improving your agri-business practices? (Select up to three)
    - Practical workshops and hands-on training
    - Expert advice and mentorship

- Networking opportunities with peers
- Access to resources and tools
- Case studies and best practice examples
- Follow-up support and guidance
- Other (please specify) _____
- Not sure.

12. Have you supported the implementation of any of GGGI's climate-resilient agri-business model demonstration projects?
    - Yes
    - No
    - Not sure.

13. To what extent have you incorporated lessons from GGGI's agri-business models demonstration project into your agri-business practices?
    - Not at all
    - To a small extent
    - To a moderate extent
    - To a large extent
    - Completely
    - Not sure.

14. Have you accessed information or services in the 'GreenAral Business Development Platform' (www.greenaral.uz) (select as many as appropriate)?
    - Advisory Services
    - Agri-Finance services
    - E-learning module
    - Agri-business pages
    - Agri-Market pages
    - Other (please specify) _____
    - Not applicable.

15. In your opinion, how important is it for small and medium enterprises working in the agricultural sector to receive this type of training on agri-business models?
    - Not important
    - Slightly important
    - Moderately important
    - Very important
    - Extremely important
    - Not sure.

16. Would you be interested in participating in further training and events provided by GGGI on climate resilient agri-business models:
    - Yes
    - No
    - Not sure.

17. Please provide any other feedback you wish to on GGGI's training program for climate resilient agri-business models or the 'GreenAral Business Development Platform' (www.greenaral.uz). (free text response)

Appendix VI. Interview – Discussion guide 1 (Outcome 1)

Discussion guide 1 - Outcome 1

Evaluation of the Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea Crisis.

Outcome 1 - Climate Smart Agriculture (CSA) related policy adopted (Revised in July 2024). Focuses on adopting the CSA policy, supported by technical analyzes and strategic guidance. Key activities include conducting a Climate Resilient and Green Growth Assessment, prioritizing green investment projects, a green employment assessment, and developing a Commercial bond framework. The outcome is also supported by establishing an intra-agency coordination mechanism, through an inception action plan.

Interviewee:

Organisation:

Date / time:

Location:

Interviewer to read

You are invited to participate in a study on the Green Rehabilitation Investment Project for the Karakalpakstan Republic, aimed at mitigating the impacts of the Aral Sea Crisis. This study seeks to assess the Project's effectiveness in supporting farming families and micro, small, and medium enterprises in Karakalpakstan. Conducted by Risk Frontiers and Juru in collaboration with the Global Green Growth Institute (GGGI), the findings will help improve future Project facilitation.

If you choose to participate, the interview will last approximately 30 minutes to one hour, with the session being audio-recorded and transcribed.

All information collected during the study is confidential, except where required by law. No individual or organization will be identified in any publication of the results without prior agreement. Only the research team will have access to the data collected. A summary of the results can be provided upon request.

Participation is voluntary, and you may withdraw at any time without providing a reason and without consequence.

Do you have any questions?

Are you happy to continue with this interview?

Overarching questions

A. What do you see as the strengths of GGGI's program?

B. Building on these strengths, what do you consider could be improved?

Specific questions on outputs and activities (relevant to this stakeholder)

Outcome 1: Climate Smart Agriculture policy adopted

1. What progress has been made in the adoption and implementation of the Climate Smart Agriculture policy to your knowledge?

2. In what ways is the Climate Smart Agriculture policy development resulting from the Project relevant to your organization?

3. How effective will the Climate Smart Agriculture policy be at meeting your organization's objectives? In what way could it be improved?

4. In undertaking its policy work and research (e.g. CRGG and green jobs assessments), can GGGI improve engagement and information sharing among government, private sector, and civil society?

Output 1.1 - Two technical analyzes, Climate Resilient and Green Growth (CRGG) Assessment Global Recovery Investment Analysis (GRIA) conducted and validated

Activity 1.1.1

Undertake a Climate Resilient and Green Growth Assessment for the Republic of Karakalpakstan focusing on agriculture and agroforestry sectors

5. How effective were GGGI's workshops in developing the CRGG Assessment?
   a. What strengths and weaknesses did GGGI exhibit in managing these workshops?
   b. What improvements could be made?
   c. How did GGGI promote the participation of women and youth in the CRGG workshops, and how successful were these efforts? What challenges were faced in ensuring their equal participation, and how can these challenges be addressed?

6. How effective has the CRGG been in achieving these objectives:
   a. Assessing the agricultural sector in Uzbekistan and Karakalpakstan
   b. Evaluating climate change impacts on agriculture
   c. identifying priority investment areas
   d. Supporting adaptive capacity through needed interventions?

7. Has the CRGG assessment informed your organization's policy development or decision-making?

Activity 1.1.2

Prioritize a set of green recovery investment projects in agribusiness (Consultation Workshop and Validation workshop) (undertaken in Sept/Oct 2024 with the Ministry of Agriculture)

8. How effective were the Consultation and Validation workshops and project screening processes with the Ministry of Agriculture in identifying agribusiness investment priorities, and was participant representation adequate (including women and youth)?
   a. What are your thoughts on GGGI's role as a facilitator in investment prioritization?
   b. Can it be improved?

9. How many Green Recovery Projects are likely to be funded from the pipeline of projects, and how relevant are these projects to the needs of agri-MSMEs?
   a. How can GGGI ensure support from national and Karakalpakstan governments for implementation of green investment projects?
   b. How successful do you think that the priority Green Recovery Projects are likely to be?

10. How were gender equality and social inclusion criteria addressed in the project prioritization processes for the pipeline of Green Recovery Projects?

    a. How was sustainability included as a criteria in the prioritization process?

Output 1.2 Inception Action Plan to support Aral Sea Intra-agency Coordinating Mechanisms (Aral Sea ICM) for the Aral Sea Development Program developed (note: this is a coordination mechanism for the Multi-Party Trust Fund for the Aral Sea)

Activity 1.2.1

Develop a Sustainable bond framework

11. What are your reflections on GGGI's facilitation of the Second Party Opinion process, and what recommendations do you have for enhancing it?

12. How effective was GGGI role in facilitating the Sustainability Bond Framework, and how could it improve?

13. How well is the Sustainability Bond progressing to meet its objectives?

Activity 1.2.2

Undertake a Green Employment Assessment of prioritized Green Investment Projects

14. What are your thoughts on GGGI's design and implementation of:
    a. The Green Employment Assessment
    b. The consultation workshop with government officials on the Green Employment Assessment

15. How will the Green Employment Assessment impact:
    a. Community willingness to take on green jobs?
    b. Creation of green jobs in agriculture and forestry?
    c. Increased participation of women in agriculture?

16. Will these outcomes be sustainable in the long-term?

Activity 1.2.3

Implement high-level policy maker Aral Sea ICM consultations (delivered through a White Paper process for the Multi-Party Trust Fund for the Aral Sea)

17. What are your reflections on GGGI's design and implementation of the consultation workshop with policymakers for the Aral Sea ICM (in the development of the white paper)?
    a. Did it respond to the goals and objectives of stakeholders?
    b. Did the process demonstrate inclusion (including gender inclusion)?
    c. In what ways might this be improved?

18. What ongoing coordination mechanism has been designed under the Inception Action Plan for coordination of policy and programmatic activities for the Aral Sea region?

19. Is there anything you would like to add about GGGI's project on the Aral Sea Crisis?

Appendix VII. Interview – Discussion guide 2 (Outcome 2)

Discussion guide 2 (Outcome 2)

Evaluation of the Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea Crisis.

Outcome 2 - Targets rehabilitating livelihoods by improving the capacity of small-holder agrarian communities to manage human security threats and develop climate-resilient agri-businesses. This involves training Dehkan farmers on climate resilience, creating risk profiles for disaster-related human security risks, and conducting capacity-building programs on food security and livelihoods. The aim is to increase farmers' resilience, with at least 25% adopting climate-smart agriculture and improved business practices.

Interviewee:

Organization:

Date / time:

Location:

Interviewer to read

You are invited to participate in a study evaluating the Green Rehabilitation Investment Project for the Karakalpakstan Republic, aimed at mitigating the impacts of the Aral Sea Crisis. This study seeks to assess the Project's effectiveness in supporting farming families and micro, small, and medium enterprises in Karakalpakstan. Conducted by Risk Frontiers and Juru in collaboration with the Global Green Growth Institute (GGGI), the findings will help improve future Project facilitation.

If you choose to participate, the interview will last approximately 30 minutes to one hour and will be audio-recorded and transcribed.

All information collected during the study is confidential, except where required by law. No individual or organization will be identified in any publication of the results without prior agreement. Only the research team will have access to the data collected. A summary of the results can be provided upon request.

Participation is voluntary, and you may withdraw at any time without providing a reason and without consequence.

Do you have any questions?

Are you happy to continue with this interview?

Overarching questions

A. What do you see as the strengths of GGGI's program?

B. Building on these strengths, what do you consider could be improved?

Specific questions on outputs and activities (relevant to this stakeholder)

Introduction: Outcome 2 of the program is focused on increasing the resilience of dehkan farmers and fermers to climate change and disaster risks in the Aral Sea region. To achieve this outcome, the program has delivered a capacity building program to students on climate change, resilience, health and agriculture, through the Ministry of Public Education of Karakalpakstan (MPE) and Monocentres (vocational training centres) in coordination with

the four districts targeted for the training program (Kegeyli, Bozataw, Chimbay, and Karauzyak district administrations). It is estimated that 12,000 students have been trained through the program.

Activity 2.2

Develop capacity building program with government stakeholders on climate resilience and disaster risk management focusing on food security and livelihoods

Relevant Capacity building modules:

- Module 1. CC and Aral Sea region
- Module 2. Health
- Module 3. Climate-smart farms
- Module 4. Drought-adapted farming and water
- Module 5. Agroforestry
- Module 6. Climate-resilient agribusiness

Activity 2.2

Conduct capacity building and awareness raising activities on climate change and disaster risk resilience, focusing on food security and livelihoods

Questions on Capacity building programs (activities 2.1.2 and 2.1.3)

Relevance

1. How relevant is this capacity building project to your organization's goals and strategies?

2. How relevant do you think this capacity building and awareness raising program was to the participants (students and/or farmers/fermers, and/or SMEs)?

3. How well did GGGI manage the governance arrangements and coordination on the capacity building program with the relevant government stakeholders?

Effectiveness

4. Do you think that the capacity building program was strategically designed?

5. Do you think that the implementation approach for the capacity building program was effective in raising awareness?
   a. Do you think that it was also effective in building skills and capacities?

6. Was the design and/or implementation of the capacity building program adapted or changed in response to the local circumstances?
   a. If so, how was it adapted or changed?

7. What do you think the main challenges or barriers are with the design and implementation of capacity building programs for farmers and fermers on climate change and disaster resilience in the Karakalpakstan Republic?

8. Do you think the training program provided sufficient case studies and/or practical experiences?

Efficiency

9. Do you think that the implementation approach for the capacity building program was efficient (i.e. delivered through the schools and vocational training centres)?

10. What reflections do you have on GGGI as an training developer and/or provider in this area? Did GGGI have a unique value add compared to other potential training providers?

Potential impact and Sustainability

11. Can you provide an example of how this capacity building program has increased the awareness and/or knowledge of any particular participant or organization?

12. Do you think that the training outcomes will be sustainable over the longer term?

13. Were there any barriers to the long-term sustainability of these training outcomes (i.e., such as access to ongoing training, financing, resources or support)?

14. Do you have any suggestions on how these outcomes could be made more sustainable?

Cross-cutting issues

15. Do you think that the training program provides gender-specific needs and priorities in their design?

16. Do you think that the training program addressed the needs of people with disabilities?

17. Do you think that the training program fostered social inclusion in the agricultural sector?

18. Are you aware of any feedback being collected from the participants on the training program?
    a. If so, how was this feedback used to improve the delivery of the training program?

19. Would you like to provide any other feedback on the delivery of this training program?

Questions on the risk profile for disaster-related security risks in Karakalpakstan

20. Are you aware of the risk profile (vulnerability assessment) on the four target districts (Bozataw, Chimbay, Karauzyak, and Kegeyli) prepared by GGGI and Human Asia, to support the design of the capacity building program?
    a. If yes, do you think this document was well researched and delivered to inform the program design?
    b. Do you have any feedback on the risk profiles (vulnerability assessment)?
    c. Do you think that the partnership with Human Asia was an effective and efficient approach to prepare this assessment?

21. Is there anything you would like to add about GGGI's project on the Aral Sea Crisis?

Appendix VIII. Interview – Discussion guide 3 (Outcome 3)

Discussion guide 3 – Outcome 3

Evaluation of the Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea Crisis.

Outcome 3 - Seeks to equip local entrepreneurs with climate-resilient agri-business models, fostering investments and business development platforms. Activities include value chain analyzes, piloting resilient agri-business models, and establishing a business development platform. The goal is to mobilize US$ 20M in investments and enhance the annual production volume for farmers.

Interviewee:

Organization:

Date / time:

Location:

Interviewer to read

You are invited to participate in a study evaluating the Green Rehabilitation Investment Project for the Karakalpakstan Republic, aimed at mitigating the impacts of the Aral Sea Crisis. This study seeks to assess the Project's effectiveness in supporting farming families and micro, small, and medium enterprises in Karakalpakstan. Conducted by Risk Frontiers and Juru in collaboration with the Global Green Growth Institute (GGGI), the findings will help improve future Project facilitation.

If you choose to participate, the interview will last approximately 30 minutes to one hour and will be audio-recorded and transcribed.

All information collected during the study is confidential, except where required by law. No individual or organization will be identified in any publication of the results without prior agreement. Only the research team will have access to the data collected. A summary of the results can be provided upon request.

Participation is voluntary, and you may withdraw at any time without providing a reason and without consequence.

Do you have any questions?

Are you happy to continue with this interview?

Overarching questions

A. What do you see as the strengths of GGGI's program?

B. Building on these strengths, what do you consider could be improved?

Activity 3.1.1

Conduct functional and economic value chain analysis, and financial, technical, and social analysis of supply chain stages (production & processing) of focal commodities

1. How well did GGGI facilitate the Value Chain Analysis (VCA) process, especially in:
   a. Getting district government support for data collection?

   b. Ensuring stakeholders provided quality data?

2. How could these processes be improved?

Activity 3.1.2

Engage key stakeholders and target groups to validate the integration and adoption of climate resilient agri-business models

3. Were GGGI's consultations for climate-resilient agri-business models effective in involving farmers and enterprises (30 farmers and 14 consultants)? How could participation be increased?

4. What barriers affected the consultation process, and how can GGGI address them?

5. Were GGGI's validation processes timely? Did any delays affect model piloting or adoption by farmers and MSMEs?

6. How effectively did GGGI ensure local entrepreneurs had access to climate-resilient agri-business models? What improvements could be made?

7. How were gender equality and social inclusion addressed in the design and implementation of agri-business models at the district level?

8. How well did GGGI manage governance arrangements with government stakeholders for agri-business models?

9. Will the agri-business models for farmers and entrepreneurs be sustainable long-term?

Activity 3.1.3

Pilot validated climate resilient agri-business models with farmers and MSMEs

10. Was the process for selecting agri-business models for piloting effective and appropriate?
    a. How could it be improved?

11. What measures did GGGI use to ensure participation of stakeholders (i.e. relevant ministries and other farmers) in the piloting of climate-resilient agri-business models?
    a. How effective were these?

12. Were GGGI's efforts to integrate CSA technologies in production by farmers effective?
    a. What feedback was received
    b. Were learnings applied to improve the project?

13. Was the selection process for the pilots with farmers transparent, effective and fair?

Activity 3.2.1

Create the business development platform structure and curriculum for farmers and MSMEs

14. How well did GGGI manage the governance and oversight of the business development platform with stakeholders? Could this be improved?

15. How effective was GGGI in gaining support from farmers, MSMEs, and institutions for the business platform? How can buy-in be improved?

16. Were the business development platform structure and curriculum sufficient to meet its objectives?

Activity 3.2.2

Organize business development events and sessions for participating farmers and MSMEs, together with enabling institutions

17. How effectively did GGGI oversee and manage business development events for farmers, MSMEs, and enabling institutions, and what measures were taken to encourage registration and participation?

18. What strategies did GGGI implement to promote meaningful participation of women and youth in these events, and how can female participation be increased given the current gender ratio?

Activity 3.2.3

Develop the strategy for future funding to keep the business development platform operational

19. What are your thoughts on GGGI's future funding arrangements for the business development platform and will the strategy keep the business development platform operational?

20. Is there anything you would like to add about GGGI's project on the Aral Sea Crisis?

Appendix IX. Interview – Discussion guide 4 (Outcome 4)

Interview discussion guide 4 (Outcome 4)

Evaluation of the Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea Crisis.

Outcome 4 - Focuses on improving access to finance for successful climate-resilient agri-MSMEs through risk-mitigating financial solutions. This includes designing a Green Financing Facility and a Grant and investment project pipeline, alongside a capacity-building program on climate finance for local institutions. The aim is to mobilize US$ 10M from the government and climate funds, facilitating commercial lending for MSMEs.

Interviewee:

Organization:

Date / time:

Location:

Interviewer to read

You are invited to participate in a study on the Green Rehabilitation Investment Project for the Karakalpakstan Republic, aimed at mitigating the impacts of the Aral Sea Crisis. This study seeks to assess the Project's effectiveness in supporting farming families and micro, small, and medium enterprises in Karakalpakstan. Conducted by Risk Frontiers and Juru in collaboration with the Global Green Growth Institute (GGGI), the findings will help improve future Project facilitation.

If you choose to participate, the interview will last approximately 30 minutes to one hour and will be audio-recorded and transcribed.

All information collected during the study is confidential, except where required by law. No individual or organization will be identified in any publication of the results without prior agreement. Only the research team will have access to the data collected. A summary of the results can be provided upon request.

Participation is voluntary, and you may withdraw at any time without providing a reason and without consequence.

Do you have any questions?

Are you happy to continue with this interview?

Overarching questions

A. What do you see as the strengths of GGGI's program?

B. Building on these strengths, what do you consider could be improved?

Specific questions on outputs and activities (relevant to this stakeholder)

Activity 4.1 Risk mitigating financial solutions are developed to facilitate increased commercial lending for MSMEs utilizing climate resilient agri-business models identified in Output 3.1

Activity 4.1.1 - Green Financing Facility designed to facilitate commercial lending (undertaken with SQB)

1. How effective are financial solutions under the Green Financing Facility (designed with SQB) likely to be in boosting commercial lending for MSMEs, particularly in climate-resilient agri-businesses?
   a. What factors will likely influence their success?
   b. What measures with the Facility implement to ensure equitable access to financial solutions for women?

2. In what ways will the financial solutions of the Green Financing Facility support agri-MSMEs in adapting to climate and disaster risk challenges?
   a. How will the Facility measure their impact?

3. What barriers do MSMEs face in accessing financial solutions for CSA technologies?
   a. What unintended negative outcomes are likely to arise from these financial initiatives?
   b. How will the risk associated with these outcomes be mitigated?

4. What challenges were encountered in implementing the Green Financing Facility for agri-MSMEs, and how were they addressed?

5. How can access to commercial lending be expanded for more agri-MSMEs, particularly for women entrepreneurs?

6. How sustainable is the Green Financing Facility beyond the project, and what steps can be taken to enhance its long-term viability?

Activity 4.1.2 – Technical due diligence and financial scenario for grant and investment project pipeline (undertaken with the Ministry of Agriculture (MoA) recently in Sept/Oct 2024)

7. How has GGGI undertaken technical due diligence and developed a financial scenario for a grant and investment project pipeline with MoA? Please describe the processes.

8. How effective has the due diligence process for new projects been, and what improvements can be made?

9. How is this work expected to influence the adoption of Climate-Smart Agriculture (CSA) models and improve financial access for farming households for CSA technologies?
   a. How is the grant pipeline expected to influence green entrepreneurship?

10. What does the Ministry plan to do to ensure the projects under the pipeline are funded?
    a. Will they require ongoing GGGI support for pipeline to be implemented?
    b. Or does the Ministry have sufficient capacity to enable resource mobilization?

Activity 4.2.1

Implementation of a Capacity Building Program for the NDA and financial institutions in the region

11. How many financial institutions participated in the Capacity Building Program?

12. Did participation meet expectations?

13. How can GGGI improve the Capacity Building Program for better outcomes? What successes or challenges were noted?

14. What measures have been taken to evaluate the Capacity Building Program's impact, and have these learnings been integrated to better achieve objectives?

15. Is there anything you would like to add about the GGGI's project on the Aral Sea Crisis?

Appendix X. Focus group discussion guides

FGD on 24th October, Bozataw Hakim's office

Focus group: Farmers, teachers, students

10 teachers - Bozataw,

10 teachers - Kegeyli

16 trainers for farmers (set 3) Boz-Keg

19 trainers on health (set 2) Boz-Keg

Total: 55 participants(?)

Moderator to read:

Thank you for agreeing to join the focus group, we appreciate your willingness to take part in this study.

Before we start, I will make a short introduction on the study. The study evaluates the Green Rehabilitation Investment Project for the Karakalpakstan Republic, aimed at mitigating the impacts of the Aral Sea Crisis. This study seeks to assess the Project's effectiveness in supporting farming families and micro, small, and medium enterprises in Karakalpakstan. Conducted by Risk Frontiers and Juru in collaboration with the Global Green Growth Institute (GGGI), the findings will help improve future Project facilitation.

The study will take the form of a discussion, with questions by specialists from Risk Frontiers and Juru. The questions relate to awareness-raising trainings/capacity-building modules you provided to students on climate change adaptation. There are no right or wrong answers; diverse viewpoints are welcome, and everyone is encouraged to share honestly, even if their opinions differ.

All information collected during the study is confidential, except where required by law. No individual or organization will be identified in any publication of the results without prior agreement. Only the research team will have access to the data collected. A summary of the results can be provided upon request.

Discussion will take about 30-60 minutes. Participation is voluntary, and you may withdraw at any time without providing a reason and without consequence.

Do you have any questions?

FGD guide for schoolteachers

Discussion

Engagement questions:

What capacity building modules have you taught under the GGGI program (e.g Climate Change Adaptation)? How many?

On training content:

1. To what extent was the training that you delivered **relevant** to the participants?

2. In your opinion, what **level of quality** were the training modules and materials designed by GGGI that you utilized to teach? What would you add/change?

3. To what extent were the training **modules and materials sufficient** to meet their purpose of raising awareness and acquiring skills in resilience to climate change and disaster risks?

4. Do you think that the implementation approach for the capacity building program was efficient (i.e. delivered through the schools and vocational training centres) for raising awareness?

5. In your opinion, was the length of the training program appropriate to build student awareness of the topic and enable your students to apply this knowledge in practice?

On support from GGGI:

6. To what extent was the support provided by GGGI to you in delivering these training modules sufficient? What additional support would you have expected?

7. In your opinion, was the training approach in the modules sufficiently interactive to enable students to learn from case studies and real-world examples?

On students' feedback:

8. What feedback did the students provide regarding the training? What factors contributed to their engagement in both the training and climate-related topics overall?

9. Do you believe students are sharing what they've learned with their peers and family? Was this encouraged during the training sessions?

On future improvements:

10. On what topics do you think there is need to have additional training modules on climate change and disaster risk resilience?

11. Please provide any other feedback you wish to on GGGI's modules that you taught or any other suggestions for GGGI's future capacity building programs.

Focus groups discussion guide for trainers (for farmers & on health)

Discussion

Engagement questions:

1. What capacity building modules have you taught under the GGGI program (e.g
   - Climate change and Aral Sea Region
   - Health: Environment Hazards & Prevention
   - Climate-Smart Household Farms
   - Drought-Adapted Farming & Water Management
   - Agroforestry, Horticulture and Viticulture in dry conditions
   - Basic Agri-Business and Entrepreneurial Skills)

How many?

On training content:

2. To what extent was the training that you delivered **relevant** to the participants?

3. In your opinion, what **level of quality** were the training modules and materials designed by GGGI that you utilized to teach? What would you add/change?

4. To what extent were the training **modules and materials sufficient** to meet their purpose of raising awareness and acquiring skills in resilience to climate change and disaster risks?

5. Do you think the training program provided sufficient case studies and/or practical experiences?

6. Do you think that the implementation approach for the capacity building program was efficient for raising awareness? Do you think that it was also effective in building skills and capacities?

7. In your opinion, was the length of the training program appropriate to build student awareness of the topic and enable your students to apply this knowledge in practice?

8. What do you think the main challenges or barriers are with the design and implementation of capacity building programs for farmers and fermers on climate change and disaster resilience in the Karakalpakstan Republic? What engagement methods have been most effective?

9. Do you think that the training outcomes will be sustainable over the longer term? Do you have any suggestions on how these outcomes could be made more sustainable?

On support from GGGI:

10. What reflections do you have on GGGI as a training developer and/or provider in this area? Did GGGI have a unique value add compared to other potential training providers?

11. To what extent was the support provided by GGGI to you in delivering these training modules sufficient? What additional support would you have expected?

On participants' feedbacks:

12. What feedback did the participants provide regarding the capacity-building program? What factors contributed to their engagement in both the program and climate-related topics overall?

13. Do you believe participants are sharing what they've learned with their peers and family? Was this encouraged during the training sessions?

On future improvements:

14. On what topics do you think there is need to have additional training modules on climate change and disaster risk resilience?

15. Please provide any other feedback you wish to on GGGI's modules that you taught or any other suggestions for GGGI's future capacity building programs.

Focus groups discussion guide for agribusinesses/farmers on trainings and on BDP

Discussion

Engagement questions:

1. What event or trainings did you attended under GGGI project?

On training and consultations/events:

2. To what extent was the event or training that you attended relevant to you?

3. How would you rate the quality of the training modules and materials provided?

4. To what extent have the skills and knowledge gained from the capacity building program been applied in your day-to-day agri-business operations?

5. What aspects of the capacity building program were most beneficial in improving your agri-business practices? (E.g practical workshops and hands-on training, expert advice and mentorship, networking and others).

6. What barriers, if any, have you encountered when trying to apply the knowledge that you gained from the training to enhance your resilience?

7. Were GGGI's consultations for climate-resilient agri-business models effective in involving farmers and enterprises (30 farmers and 14 consultants)? How could participation be increased?

8. What barriers affected the consultation process, and how can GGGI address them?

On BDP:

9. Was the business development platform structure and curriculum sufficient to meet its objectives?

10. How well did GGGI manage the governance and oversight of the business development platform with stakeholders? Could this be improved?

11. How effective was GGGI in gaining support from farmers, MSMEs, and institutions for the business platform? How can buy-in be improved?

12. What measures can be taken to encourage registration and participation in BDP, improve usefulness of the platform?

On events:

13. How well did GGGI oversee business development events for farmers, MSMEs, and enabling institutions?

14. How did GGGI promote meaningful participation of women and youth in events? (Current gender ratio: 1:7). What could increase female and youth participation?

Additional questions for agribusinesses involved in pilot

15. How effective was GGGI's piloting process overall? How can it be improved?

16. Do you think the agri-business models for farmers and entrepreneurs will be sustainable long-term?

Please provide any other feedback you wish to on GGGI's training program for climate resilient agri-business models or the 'GreenAral Business Development Platform' (www.greenaral.uz).

ABOUT THE GLOBAL GREEN GROWTH INSTITUTE

The Global Green Growth Institute was founded to support and promote a model of economic growth known as “green growth”, which targets key aspects of economic performance such as poverty reduction, job creation, social inclusion, and environmental sustainability.

GGGI

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