GGGI | IMPACT AND EVALUATION UNIT

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

Evaluation Report

February 2025

Project and evaluation data	
Project ID	ROA02
Country	Uzbekistan
Programmatic Solutions	PS1. Green Investment PS2. Climate Action PS3. Climate Resilient Agriculture
Project Gender and Poverty Markers	1+P
Project duration	June 2021 – June 2025 (48 months)
Project budget	US$ 5.9 million
Funding type	Project earmarked and core
Resource partners	Korea International Cooperation Agency (KOICA)
Project manager	Aaron Russell: July 2021 - September 2022; August 2023 - October 2023 Jinha Kim: October 2022 - August 2023 Gi Un Kim: October 2023 - October 2024 Oyunchimeg Amartuvshin: October 2024 –June 2025
Program manager	Aaron Russell, Uzbekistan Country Representative (until December 2024) Seung Yeon Lee, Uzbekistan Country Representative, Directorate for Green Growth Implementation (from January 2025)
Portfolio manager	Jason Lee, Asia Deputy Director, Directorate for Green Growth Implementation
Evaluation type	End project evaluation
Evaluation timing	September 2024 - February 2025
Name of evaluator	Risk Frontiers in consortium with Juru, led by Fiona Lord
Evaluation budget	US$ 54,910
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List of Acronyms

Acronym	Written in full
BDP	Business Development Platform
CMRK	Council of Ministers of the Republic of Karakalpakstan
CRGG	Climate-Resilient Green Growth Assessment
CSA	Climate-Smart Agriculture
DSIK	Deutsche Sparkassenstiftung fur Internationale Kooperation
FGD	Focus Group Discussions
GGGI	Global Green Growth Institute
GIS	Green Investment Services
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GRIA	Green Recovery Investment Analysis
KEQ	Key Evaluation Question
KOICA	Korea International Cooperation Agency
M&E	Monitoring and Evaluation
MEEPCC	Ministry of Ecology, Environmental Protection and Climate Change
MIIT	Ministry of Investments, Industry and Trade
MoA	Ministry of Agriculture
MOU	Memorandums of Understanding
MSMEs	Micro, Small, and Medium-sized Enterprises
OECD	Organisation for Economic Co-operation and Development
PSC	Project Steering Committee
SMEs	Small, and Medium-sized Enterprises
SQB	Sanoat Qurilish Bank
ToT	Training of Trainers
UNICEF	United Nations Children's Fund

Executive summary

GGGI implemented the Aral Sea Green Rehabilitation Investment Program (GRIP) Project (the 'Project') from July 2021 to December 2024 in Uzbekistan, and it has been extended to mid-2025, with USD 5.6 million from KOICA, and USD 0.3 million from GGGI. The Project targeted the green rehabilitation of the Aral Sea region in the Republic of Karakalpakstan through the delivery of policy advice, capacity building, developing and piloting climate-smart agri-business models, and through mobilization of green financing for climate-smart agriculture (CSA) and sustainability measures more broadly. This independent evaluation of the Project was undertaken jointly by the firms Risk Frontiers and Juru, between September 2024 and February 2025, and was implemented through 36 stakeholder interviews, 6 Focus Group Discussions (FGD) comprising 72 participants in total, and a survey of 194 participants in the Project's capacity building program, alongside a review of 140 project documents.

The evaluation found that all of the Project's outputs were achieved and there were some significant benefits gained through the implementation of the Project. These included the following project highlights:

- Under Outcome 1, GGGI delivered strategic research and policy engagement providing policy recommendations on the need for climate-smart agricultural reforms and a broader range of measures for food security and managing water scarcity

- Under Outcomes 1 and 4, GGGI enabled green investment mobilization of ~1 billion USD for climate-smart agriculture through Sustainability/Green Bonds and designed a Green Finance Facility with local financial institutions

- Under Outcome 2, GGGI delivered capacity building for approximately 17,000 participants on resilience to climate change and disaster risks, tailored to the specific agricultural context of the Republic of Karakalpakstan and a media campaign that reached 280 million viewers

- Under Outcome 3, GGGI piloted climate resilient agri-business models through partnerships with farmers/agri-businesses.

There were some significant challenges faced by GGGI and its partners in implementing the Project. These challenges included starting up the Project during the COVID-19 pandemic, a changing political/policy environment, and administrative challenges associated with establishing an office in Uzbekistan. Furthermore, there were some perceived underpinning barriers to increasing the uptake of climate-smart agricultural practices, such as some farmer/agri-business beneficiaries having limited familiarity with the technologies and practices being introduced by the Project, and negative impressions of the technologies being deployed because of previous poor-quality implementation. Nevertheless, GGGI had a strong partnership with the local authorities and ministries, especially within the Republic of Karakalpakstan, and worked with several government agencies to implement the Project, including through providing strategic policy advice and evidence-based research, inclusive technical advisory consultations, and piloting of implementation measures.

The evaluation found that the Project had high relevance and directly responded to the priorities of many of its stakeholders. It was found to respond to the priorities of senior levels of government (as evidenced by the large number of Memorandums of Understanding (MOUs) that GGGI had with different ministries), aligned with and complemented the work of other development partners (as evidenced by MOUs that GGGI had with the United Nations Resident Coordinator Office (UN-RCO), GIZ, DSIK), and responded to the needs of beneficiaries. Government stakeholders and development partners also emphasized throughout the evaluation process that GGGI has a high level of visibility in Uzbekistan and is strategically aligned with the Government's focus on climate resilience and green growth, and should therefore expand its engagement across other sectors, and deepen its connections with the central government, especially with the Ministry of Economy and Finance. GGGI's expertise in delivering policy dialogue and technical consultations, under Outcome 1, was perceived as a key strength.

In a short timeframe, under Outcome 2, GGGI was able to roll out a large-scale capacity building program, primarily targeting youth and awareness raising on climate change and disaster risk reduction, while also

implementing a capacity building program for agricultural stakeholders. The evaluation data showed that the capacity building program had improved awareness and increased knowledge. GGGI also targeted specific capacity building activities to the priorities of women in the Republic of Karakalpakstan, focusing on agriculture and health aspects of resilience, as well as supporting a smaller-scale training program for women with disabilities, and training for unemployed people in agri-business development at the local Technical Vocational Training ("MONO") center. GGGI also supplemented this capacity building program with a media awareness campaign that has reached more than 280 million viewers to date across social media, television and radio.

There were some sustainability risks identified by the evaluation team, as some of the Project activities were delayed or were yet to be completed (with a project extension agreed until mid-2025 to enable their completion). Under Outcome 3, two of the seven pilot farm sites have yet to have completed their commissioning. Concerns were raised about the sustainability of these pilot projects in the evaluation due to the need for ongoing engagement with the Project beneficiaries to support their effective use of the infrastructure installed and adapt their farming practices. Ongoing monitoring is needed to evaluate the impact of these pilots and learn the lessons from them for scaling up this kind of investment. There were also concerns raised in the evaluation that the pilots could not be replicated due to their affordability and the technical skills needed, however, there are government subsidies available to support their replication and the GGGI team has been made aware of 31 local farmers and enterprises that have replicated these pilots. Continued GGGI engagement within the sector was perceived as necessary by most evaluation participants, to support replication and monitoring of these projects and to document their benefits, including through supporting access to green finance (e.g., through the partnerships and products established with the Sanoat Qurilish Bank (SQB) and Agrobank) and awareness raising about CSA practices. Similarly, there were concerns about the sustainability of the Business Development Platform (BDP) (see: https://greenaral.uz/en/about) that was developed under the Project. At time of the evaluation, registered users of the BDP were ~1600, well below the 4000 users initially envisioned. Furthermore, a sustainability plan for how this platform would have ongoing financing was yet to be agreed.

The Project had strong project governance, but would benefit from an increased investment in Monitoring and project administration/management support. The Project did not have a clear Monitoring and Evaluation (M&E) plan, especially for monitoring indicators in the Project's logical framework at an outcome level, making it difficult to evaluate the Project's performance based on these indicators. Enhanced M&E practices would support accountability, but could also improve organizational effectiveness and enhance learning, enabling greater adaptation of implementation methods, based on M&E insights. On the other hand, the evaluation found that informal feedback sought and provided to GGGI had enabled GGGI to adapt its implementation methods, especially in design and implementation of its capacity building modules. As this was the first project for GGGI in Uzbekistan, GGGI faced some challenges with recruitment and setting up the Project's organizational structure, and some positions under the project design were not permanently filled (e.g., M&E position). A relatively high turnover rate of staff was also perceived as resulting in some lack of continuity in some activities. On the other hand, the Project Steering Committee (PSC) was perceived to be well supported and provided an effective oversight platform to facilitate decision-making and track progress with the Project's implementation, mitigate risks, and provide advice.

Overall, the Project had a clear strategic alignment with the green growth priorities of the Government of Uzbekistan, by focusing on the green rehabilitation and resilience of the Aral Sea region and responded comprehensively to this priority through a multi-pronged approach. GGGI's Project has been well received by stakeholders, and it is anticipated that it should continue to be implemented and be scaled-up. To achieve sector-wide sustainability, the rehabilitation of the agricultural sector and resilience of the Aral Sea region needs to remain a priority for the government at national and sub-national levels, and whole-of-government policy and investment reform will be needed, aligned to the areas identified by the recommendations by GGGI and the United Nations Aral Sea Trust Fund, in its 'White paper: Policy recommendations on sustainable landscapes, climate smart agriculture, and forestry development in the Aral Sea region for human well-being'[1].

[1] https://www.greenpolicyplatform.org/sites/default/files/downloads/resource/WhitePaper_EN_digital.pdf.

Introduction

Risk Frontiers and Juru Consulting were commissioned to evaluate the Global Green Growth Institute's Aral Sea Green Rehabilitation Investment Project (GRIP), implemented between 2021 and 2024. The evaluation team has reviewed the Project's implementation documents, interviewed a wide range of program stakeholders and beneficiaries, held focus group discussions, and completed a survey of the Project's participants in its capacity building program. The evaluation is aligned with the OECD's DAC criteria of relevance, effectiveness, efficiency, sustainability, and covers cross-cutting issues, such as gender, youth, and disability inclusion. The evaluation team has prepared this report on the basis of a six-week document analysis and data collection period from 1 October to 15 November 2024. This evaluation report provides insights and recommendations, aimed at enhancing programmatic learning for future GGGI program design and implementation, and to provide quality assurance to GGGI's investors.

Aral Sea GRIP Project overview and context

The Aral Sea crisis is a profound ecological catastrophe, with the sea's surface area shrinking by 75% and its water volume dropping by 90% since the 1960s. This environmental collapse has wreaked havoc on both the ecosystem and the economy of Karakalpakstan, Uzbekistan, creating an urgent need for intervention. In response, the Green Rehabilitation Investment Project for the Republic of Karakalpakstan (hereafter referred to as the Project) was launched to address the far-reaching impacts of the Aral Sea disaster.

The Global Green Growth Institute (GGGI) was entrusted with managing and implementing the Project, which aimed to foster sustainable economic growth and environmental recovery in the Aral Sea region, particularly in the districts of Kegeyli, Bozataw, Chimbay, and Karauzyak in the Republic of Karakalpakstan (see **Figure 1**). The Project directly addressed the severe environmental degradation that had affected over 1.9 million people, caused by the desiccation of the Aral Sea.

Figure 1: The four districts selected for implementation of the Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea crisis.

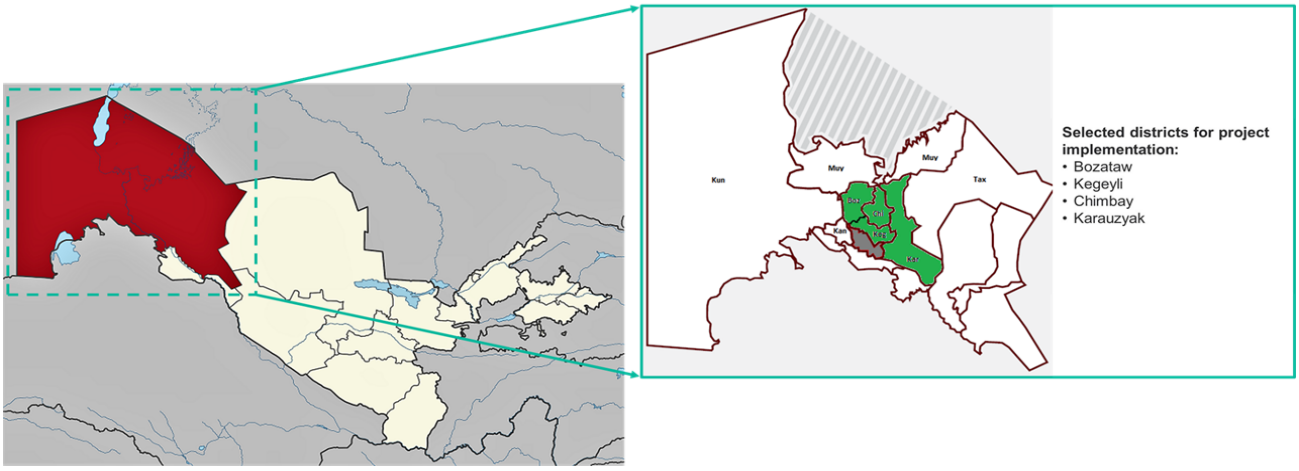

Image source: GGGI KOICA Aral Sea GRIP

Through initiatives focused on climate-resilient agriculture, strategic green investments, and supportive policies, the Project sought to rebuild the local economy, enhance the investment climate, and reduce rural communities' vulnerability to environmental risks. Key actions included setting green development goals, creating a supportive policy environment, and establishing financial mechanisms to support micro, small, and medium-sized enterprises (MSMEs) in the agricultural sector. These efforts were designed to increase agricultural productivity, improve food security, and enhance the health and livelihoods of local populations.

Aligned with Uzbekistan's national priorities and leveraging GGGI's expertise in green growth, the Project also focused on building a sustainable future for the region. The initiative commenced in July 2021 and was originally slated to conclude in June 2024, but its end date was extended to December 2024, and again to mid-2025.

Project strategy

The Project aimed to address human security issues, particularly food and livelihood security, for residents of Karakalpakstan. It focused on creating green jobs and enhancing the resilience of agricultural businesses to climate change and the Aral Sea disaster. The Project recognized women's vital role in food security, ensuring their inclusion in all activities, with 50% of capacity-building efforts and participants targeted toward women. Additionally, it aimed for 25% of participants in the capacity-building program to be youth aged 14 to 30.

The Project was faced by four main challenges:

(i) **Environmental and Food Security**: Desertification has caused severe salinization, affecting 45% of irrigated lands and leading to dust storms that degrade air quality and disrupt agriculture, heightening food insecurity.

(ii) **Economic Impact**: Despite some industrial growth, ecological stress has stunted key industries. Karakalpakstan has high unemployment and poverty rates (36.1%) due to underdeveloped agriculture, fisheries, and market infrastructures.

(iii) **Demographic Challenges**: High dependency rates, poverty among female-headed households, and significant out-migration complicate disaster response.

(iv) **Climate Change**: Hydrological shifts and melting glaciers are accelerating desertification, worsening existing issues.

Project Objectives and Outcomes

- **Objective 1**: Establish an effective green rehabilitation investment plan targeted at agriculture and agri-businesses that reduces disaster risk, enhances rural food security and sustainable livelihoods, and promotes equitable employment in green and climate-smart value-chains in Karakalpakstan.

- **Objective 2**: Respond to the most urgent needs of the workforce and MSMEs to tackle pressing human security needs, focusing on disaster related threats to health, livelihoods, productive assets, and agri-business risk management.

- **Objective 3**: Demonstrate viable climate resilient agri-business models to rebuild the economic foundation of Karakalpakstan's agrarian economy.

- **Objective 4**: Support the government and banks in mobilizing green/climate finance in support of green MSMEs development in Karakalpakstan.

To meet these objectives, the Project aimed to employ sustainable solutions focused on achieving the following four outcomes, supported by a series of outputs and activities designed under a logical framework.

- **Outcome 1** focused on adopting the Aral Sea Development Program through technical analyses and strategic guidance. Key activities included conducting Climate Resilient and Green Growth Assessments, prioritizing green investments, and developing a Green Bond Plan. The expected result was an enacted program with improved coordination and green employment assessments.

- **Outcome 2** aimed to rehabilitate livelihoods by enhancing small-holder agrarian communities' capacity to manage human security threats and develop climate-resilient agri-businesses. This involved training Dehkan farmers, creating disaster risk profiles, and conducting food security programs, targeting at least 25% of farmers in four target districts of Karakalpakstan to adopt climate-smart practices.

- **Outcome 3** sought to equip local entrepreneurs with climate-resilient agri-business models through value chain analyses, piloting models, and establishing a business development platform, aiming to mobilize USD 20M in investments and increase farmers' production.

- **Outcome 4** aimed to improve access to finance for climate-resilient agri-MSMEs through risk-mitigating solutions, including a credit guarantee facility and a grant scheme, with the objective of mobilizing USD 10M from government and climate funds for commercial lending.

Evaluation method

Evaluation criteria

The Evaluation Project follows the OECD Evaluation Standards and criteria, assessing the relevance, coherence, effectiveness, efficiency, impact, and sustainability of the Project (OECD, 2021). It adopts a strengths-based approach, emphasizing best practices to identify and build upon the Project's strengths, resources, and positive outcomes. Rather than focusing solely on challenges or issues, the evaluation seeks to enhance and support these strengths, using them to inform recommendations for future program development.

The evaluation matrix utilized for this Project is located at **Appendix I**.

Key Evaluation Questions (KEQs)

The project data collection tools were designed based on a set of Key Evaluation Questions (KEQs) and related sub-questions (see **Table 1**). These questions are organized into six evaluation themes, based on the OECD Evaluation Standards and criteria, which have been slightly revised from the original Terms of Reference (TOR) for clarity and to avoid redundancy.

Table 1. Evaluation Weight by Key Evaluation Question

Themes	KEQ	Weight
Relevance	KEQ1. How well did the Project's objectives align its relevance to the overarching goals and strategies of all key stakeholders?	15%
Effectiveness	KEQ2. Have project outputs and outcomes been achieved as intended, or are they on track to be achieved?	35%
Efficiency	KEQ3. Did the Project ensure the efficiency of the achievement of its objectives, and what mechanisms and/or factors supported this?	15%
Sustainability	KEQ4. How sustainable are the Project's outcomes, in terms of continued benefits for the targeted communities and stakeholders beyond the project lifespan?	15%
Cross-cutting	Did the Project consider gender equality and social inclusion in the planning and its delivery of its outputs and how did this influence the outcomes? How robust was the Project's Monitoring, Evaluation and Learning (MEL) framework, in capturing evidence of results? How adequately did the Project address key environmental, social, and fiduciary issues in its design and implementation?	20%

Data collection & analysis

The mixed-methods approach was utilized for this evaluation, including qualitative data collection and analysis (desktop review, interviews, focus group discussions) and quantitative data collection and analysis (surveys) to answer the KEQs. The data collection methods enabled the evaluation team to capture the insights, perceptions, and experiences of a diverse range of project stakeholders, and extrapolate conclusions from this data.

Desktop review

From 30 September 2024, the Evaluation Team reviewed 46 project management documents and 92 logframe documents supplied by GGGI, as well as publicly available reference materials such as GGGI Uzbekistan Insight Briefs, relevant website documentation and international best practice and policy references.

The GGGI-supplied documents provided important evidence relating to project design and process, monitoring and evaluation, and delivery of outputs, including partnerships, consultation processes and quality.

GGGI provided the initial list of references as an Excel spreadsheet, with the logframe documents set out under the relevant Outcome, Output and Activity, and this format was utilized to examine each document for evidence of outputs achieved and to answer the relevant KEQs. Similarly, the project management documents were carefully analyzed to contribute to evidence of output achieved and to respond to the KEQs. The list of documents is attached as **Appendix II.**

This evaluation project is somewhat unique in that the evaluation commenced prior to project conclusion. As mentioned above, the Project was originally slated to conclude in June 2024, but its end date was extended to December 2024, and then to mid-2025 (during the evaluation phase). This has somewhat limited the desktop review process, as key documents such as the End-of-Project Report, Annual and Financial reports for 2024 and other documentation were unavailable.

Data was initially analyzed to inform the in-country mission (see below) of any information gaps, allowing the Evaluation Team to craft the stakeholder engagement tools to best answer the Key Evaluation Questions.

The desktop review continued beyond the in-country mission as newly generated project management and logframe documents became available for analysis. The results of the desktop review have been integrated with those of the stakeholder engagement processes (detailed below).

Interviews

Between 20 October and 1 November 2024, the Evaluation Team carried out a two-week mission to Uzbekistan, including Tashkent and the Republic of Karakalpakstan, focusing on in-country data collection activities. The Team Leader (Risk Frontiers) worked alongside the Lead Monitoring and Evaluation Specialist and a Monitoring Support staff (from Juru) from October 20th to 25th to interview project stakeholders.

Interviews provided important context information, particularly on project adjustments, challenges and key results (e.g., degree of effectiveness and relevance of the Project).

Whenever possible, interviews were held in person. For stakeholders who were unavailable or located elsewhere, follow-up interviews were arranged and conducted remotely with Sydney-based staff from Risk Frontiers. Interviews varied in length from 20 to 90 minutes, following four unique discussion guides which were developed (see **Appendices VI-IX of the Inception Report**), focusing on the four project outcomes.

In-person interviews were conducted in the language most suitable to the interviewee, with the translation support of Juru into local language (Karakalpakstan and Uzbek), manually transcribed through note taking during the interviews, and audio-recorded for cross-checking and validation. Remote (online) interviews were conducted in English with translation support from GGGI/Juru where required. Online interviews were conducted via Zoom video conferencing and were recorded and transcribed. A total of 36 interviews were held, representing 90% of the stakeholders identified in the pre-mission stage for participation, as listed below.

Uzbekistan Government

- Ministry of Investments, Industry and Trade (F)
- Ministry for Ecology, Environmental Protection and Climate Change (official) (M)

- Ministry for Ecology, Environmental Protection and Climate Change (Ministerial level) (M)
- Ministry of Agriculture (M).

Republic of Karakalpakstan Government

- Council of Ministers of the Republic of Karakalpakstan (CMRK) (M)
- Ministry of Water Resources (MoWR) (M)
- Ministry of Investments, Industry and Trade (MIIT) (M)
- Ministry of Preschool and School Education (M)
- Committee on Environmental Protection and Ecology (CEPE) (M)
- Ministry of Employment and Poverty Reduction (MEPR) (M)
- Committee of Forestry (CF) (M)
- Monocenter under Ministry of Employment and Poverty Reduction (M)
- Bozataw Forestry Enterprise (M)
- Karaozek Forestry Enterprise (M).

Private sector / financial institutions / implementation partners

- Agrobank (M)
- Sanoat Qurilish Bank (SQB) (M)
- Chamber of Commerce and Industry of the Republic of Karakalpakstan (CCI) (M)
- Consult Group (M).

Farmers / Agri-businesses (beneficiaries/ implementation partners)

- Farmer - Aktuba Jaylau (Bozataw district) (M)
- Farmer – Jusbasi farm (Chimbay district) (M)
- Farmer - Askhat Rufat farm (Karaozek district) (M)
- AgroImpex farm (Kegeyli district) (M)
- Farmer beneficiary of capacity building program (Bozataw district) (M).

Development partners

- Korea International Cooperation Agency (KOICA) (F)
- United Nations Multi-Partner Human Security Trust Fund for the Aral Sea Region in Uzbekistan (UN-MPHSTF) (M)

- Deutsche Sparkassenstiftung fur Internationale Kooperation (DSIK) (M)
- International Innovation Centre for the Aral Sea Basin (M).

GGGI

- Country Representative (M)
- Program Staff (current and former) (8 staff in addition to the Country Representative) (5 M and 3 F).

Focus group discussions

The Focus Group Discussions (FGDs) (see **Appendix X of the Inception Report**) provided important information from trainers and other implementation partners implementing the capacity building programs as well as beneficiaries, under project outcomes 2 and 3. Feedback was gathered in the languages of the participants (Uzbek and/or Karakalpak).

Focus groups were facilitated by the Lead Monitoring and Evaluation Specialists from Juru in the Republic of Karakalpakstan during the field visit. They focused on trainers from the four target districts, and included schoolteachers, trainers for farmers, trainers for health (and climate change), and trainers of modules related to climate-resilient agri-business. FGDs were held in the Hakim offices of Bozataw (3), Karaozek (1) and Chimbay (1), and in Nukus (1), with the DSIK trainers of MSMEs/ green entrepreneurs. These six FGDs comprised 72 participants in total (including 48 teachers, 10 farmer trainers, 10 health care trainers and 4 DISK trainers of green entrepreneurs) (see **Table 2**).

Table 2: Description of FGD and survey activities conducted in Karakalpakstan

Focus group discussion and survey dissemination	Participants	Date
Bozataw district office – meeting at the District Khakimiyat Office to conduct FGDs and disseminate the survey to teachers. Teachers disseminated the survey to students.	4 schoolteachers 10 farmers 10 trainers on the health modules (nurses) 3 FGDs by participant group	24 October 2024
Karaozek district office – meeting at the District Khakimiyat Office to conduct FGD and disseminate the survey to teachers. Teachers disseminated surveys to students.	23 schoolteachers 1 FGD by participant group	29 October 2024
Chimbay district office – meeting at the District Khakimiyat Office to conduct FGD and disseminate the survey to teachers. Teachers disseminated surveys to students.	21 schoolteachers from Chimbay and Kegeyli 1 FGD by participant group	30 October 2024
Nukus GGGI office - to conduct FGD. Note: DSIK teachers noted that, because the training had been delivered some time ago, dissemination of the survey to students would be ineffective.	4 trainers for Module 6 (from DISK) 1 FGD by participant group	30 October 2024

Surveys

Survey questions were focused on the capacity building modules delivered under outcome two, and the extent to which these have been effective/impactful.

Two surveys were planned, for trainees of the:

- Capacity building modules delivered under Outcome 2
- Climate resilient agri-business models delivered under Outcome 3 (for MSMEs/ SMEs).

The first survey, on capacity building modules under Outcome 2, was disseminated to over 465 participants in the capacity building program via the network of trainers – teachers, healthcare workers, and farmer trainers. The survey questions are included in **Appendix V of the Inception Report**. The trainers received paper copies of the surveys in the Karakalpak language (three to seven questionnaires per trainer) during FGDs and were provided with a two-week period to distribute them in person to their students/participants. Once completed, the questionnaires were collected and photographed by the trainers who shared the images in Telegram groups (already established by GGGI for the Project.) The Evaluation Team gathered and entered the data into the online platform, Kobo Toolbox, in English, for analysis. 194 responses were received and analyzed (see **Appendix III**).

A second survey was developed to target participants in the capacity building modules under outcomes 2 and 3 (for evaluation of module 6), which focused on training in climate resilient agri-business models. However, this survey was abandoned, as the training was delivered two years previously and the implementation partner, DSIK, advised against it, as participants would have difficulty recalling specifics of the training.

Stories of change

In addition to the survey, the team aimed to capture "stories of change": case studies of positive benefits of the project outputs. During the FGDs, five short (one to one and a half-minute) video recordings were captured with trainers of Outcome 2, with the participants' free and informed consent. An additional five "stories of change" video recordings were captured by GGGI staff during the first week of the field visits. The intention was to use these narratives in a broader communications campaign to highlight the Project's results.

Data collection analysis

A thematic analysis of all data collection materials was conducted, centered on the Key Evaluation Questions (KEQs) and their sub-questions. The evaluation matrix is in **Appendix I**. The evaluation findings regarding the Project's overall performance are outlined below, focusing on its relevance, effectiveness, efficiency, sustainability, and cross-cutting objectives.

Findings and lessons learned

The following sections provide answers to each overarching KEQ and their sub-questions. Recommendations are provided at the end of this evaluation document, aligned to the analysis outlined in the responses to the KEQs.

Relevance

According to the DAC criteria, a project should be delivered through maintaining its relevance to the context and project stakeholders and adaptively managed to respond to changes in the local settings. In the following section, the KEQs are answered, and conclusions are drawn with corresponding recommendations regarding relevance.

How well did the Project's objectives align its relevance to the overarching goals and strategies of all key stakeholders?

The Project's objectives were highly relevant to the overarching goals and strategies of the majority of key stakeholders involved in the Project. Alignment with some key stakeholder documents is outlined in **Box 1**. The objectives were highly aligned with the objectives of the Republic of Karakalpakstan government, particularly in

shifting its policy and investment focus towards more climate-resilient agricultural productive activities. For the Republic of Karakalpakstan government, the Project's strategic focus on the rehabilitation of the Aral Sea region and targeting four vulnerable districts within the Republic was highly aligned with its socio-economic development strategy. While highlighting the Project's relevance, these officials also sought to expand the Project scope beyond the four target districts, to all districts within the Republic in recognition that all districts require assistance with rehabilitation and resilience to climate and disaster risks. At the central level of Government in Uzbekistan, key Ministries also noted the Project's strategic focus on the Aral Sea rehabilitation was well-aligned with their goals and strategies. The Government of Uzbekistan initially requested that GGGI develop an Aral Sea Development Program and Financing Framework and this request was incorporated into the project design (under Outcome 1). On the other hand, these national government stakeholders had been less involved at a day-to-day level on the Project, and it was unclear in the evaluation interviews as to whether there was alignment in the Project's relevance to their policy development cycle and legislative goals and strategies. However, written letters of endorsement from Ministries (including the Ministry of Agriculture) confirmed that these Ministries appreciated GGGI's research and policy advice as input to their work; for example, in the implementation of Uzbekistan's Strategy of the Development of Agriculture 2020-2030.

Box 1 – Relevance of the Project to overarching goals and strategies of key stakeholders

The Project aligns with KOICA's *Country Plan programs for Uzbekistan* number1: *Fostering future experts based on technology and strengthening competency in job creation and start-ups*. Some of the Project's outputs will also impact indirectly on KOICA's Mid-term Strategy for Health/Water (2021-2025), with respect to expected improvements in health outcomes for not only those who received training in module 2 (Health), but also all those who will benefit from the planting of tree breaks (decrease in air-borne pollutants) and the more efficient use of water resources.

The Project also assists the Government of the Republic of Korea to fulfil some of its responsibilities under the *Framework Agreement for Cooperation on Climate Change* between it and the Government of the Republic of Uzbekistan. This includes cooperation on:

- The reduction and/or removal of greenhouse gas emissions in agriculture and forestry;
- Capacity enhancement to adapt to climate change, especially by focusing on adaptation strategies;
- Promotion of green investment;
- Climate resilient agriculture.

The Project aligns with three of the five proposed programmatic solutions outlined in *GGGI's Uzbekistan Country Planning Framework 2021-2025*: Green Investment, Climate Action and Climate Resilient Agriculture.

Under GGGI's *Corporate Results Framework 2021-2025*, the Strategic Outcomes (SOs) related to this Project include:

- SO1.2: People supported cope with the effects of climate change
- SO2.1: Creation/ support of green jobs
- SO4: Improved air quality
- SO5: Accelerated Socio-Economic Development.

For the Project's beneficiaries, the Project was well aligned with their goals and strategies. The private sector - agricultural MSMEs and SMEs, as well as Chambers of Commerce, and banks/financial institutions lending to agri-businesses - shared the Project's objectives of increasing agricultural productivity and rehabilitation of the Aral Sea region, including through diversifying agricultural commodities produced in the Republic of Karakalpakstan, overcoming barriers to accessing finance for investment in climate-smart agricultural technologies, and increasing the uptake of practices and technologies that increase water use efficiency and increase resilience to increasing climate variability (especially increased drought and heatwaves). For the students and healthcare professionals (nurses) who participated in the Project's capacity building programs, the Project was relevant to their learning goals and professional development needs, in the context of the location being vulnerable to the risks associated with climate change and the ecological damage impacting the Aral Sea region. Students learned about climate change adaptation measures and environmental lifestyle choices, for example, on reducing plastic pollution, and the healthcare professionals trained people (especially women) with practical measures to increase their climate resilience and improve their household's health outcomes.

Are the Project-funded interventions relevant, strategic, and responsive to in-country stakeholder needs and priorities?

Yes, the Project-funded interventions were relevant, strategic and responsive to in-country stakeholder needs and priorities, on the whole. The Project funded a series of research publications that raised the awareness of policy makers and stakeholders to the priorities for green recovery from the Aral Sea crisis, including towards climate-resilient policy development and investment, backed by economic and financial analysis and extensive consultation processes. These flagship research publications included the 'Climate-Resilient Green Growth Assessment (CRGG) for the Republic of Karakalpakstan', published in July 2022, and the 'Green Recovery Investment Analysis' (GRIA), published in June 2022, the 'Risk Profile for Climate Resilient Capacity Development' published in October 2022, the 'Capital Expenditure for Infrastructural Adaptation Measures for Agriculture - Republic of Karakalpakstan', published in January 2023, and the 'White Paper: Policy recommendations on sustainable landscapes, climate smart agriculture, and forestry development in the Aral Sea region for human well-being', published in August 2024. However, the extent to which these publications will inform the development of climate-smart agricultural policies and investment decisions is yet to be seen. A risk and vulnerability profile was created through the Project to analyze the human security risks in the Republic of Karakalpakstan, with a focus on food and livelihood security. This risk profile informed the design of the capacity building program, ensuring it was tailored to the specific needs of the four target districts within the Republic of Karakalpakstan. Similarly, the Project developed a pipeline of 57 projects with ~USD 1 billion with the Ministry of Agriculture, to guide its future investment planning in climate-smart agriculture; however, it is not yet clear if this pipeline will inform the government's expenditure.

On the other hand, within the Republic of Karakalpakstan government, the Project-funded interventions of capacity building and investment in climate-resilient agricultural business models were perceived as highly strategic and aligned with their priorities. The capacity building program was perceived as important to up-skill local farmers and educate local students and households on resilience and adaptation practices, and was perceived as delivering best practice scientific knowledge, tailored to the local context and setting. Focus group participants highlighted that the capacity building modules were highly relevant and tailored to local settings:

> *"We noticed that the brochures they* [GGGI] *disseminated were very good… They were made by people who lived in Karakalpakstan, and know these places… It is great… All the knowledge is applicable to life, things that can be used in life… The materials disseminated by GGGI cover all aspects of life… health, water, everything… and it is written in simple and ordinary language…"*
>
> *Teacher trainers, Focus Group Discussion.*

The investments in the business models (e.g., drip irrigation, sprinkler irrigation, wind breaks, etc.), alongside strengthening human capacity, were seen as a necessary part of the reform of the agricultural sector, aligned to their priorities. However, Ministries highlighted that there were some areas of focus that GGGI had not covered, which could have strengthened the Project further, such as investments in greenhouses, solar photo-voltaic installations, and in Sesame production. Solar photo-voltaic installations and Sesame production were never considered as part of the project design, however, the distribution of greenhouses was planned and then abandoned due to sustainability concerns resulting from unsuitable technologies and insufficient resources for maintenance. Instead, focus was shifted to the demand-driven training program with the Monocenter, involving 40 participants and strong local government support. Officials interviewed from the Republic of Karakalpakstan were particularly supportive of the strategic focus of the capacity building component of the Project on having a practical focus, and also with the modules specifically designed for people with disabilities and the unemployed.

It was not clear whether the Business Development Platform (BDP) investment was strategically aligned with the objectives of agricultural stakeholders. The platform had been designed to connect experts with farmers/agri-businesses, and disseminate knowledge on climate-resilient agriculture practices, including through connecting farmers to agricultural consultants to provide technical advice on improving their farming practices. The BDP was developed through piloting and initial feedback from its users, through a collaborative approach between GGGI and its implementation partner. However, there were suggestions that farmers and agri-businesses were not generally using online platforms to enhance their capacity, and farmers were not in the practice of paying for technical expertise. As a result, the BDP had not yet generated significant interest (at the time of the evaluation), originally hoping to attract 4,000 users, the platform had around 1,600 registered users.

While this level of uptake of the BDP is not insignificant, the traditional methods of face-to-face knowledge sharing and training had gained more traction, with approximately 2,200 farmers having participated in the program's capacity building program under Outcome 2. However, amongst those that are using the platform, the user feedback has been positive for the E-learning services (70% of users found the content beneficial), agri-market information (which has had consistent usage and has been appreciated for pricing updates).[2]

The Project's partnerships with the banking and financial institutions were perceived as highly strategic as these interventions raised almost USD 1 billion through sustainability bonds and were enabling banks to increase their lending for climate-smart technology and infrastructure. Through GGGI's Green Investment Services (GIS), the USD 1 billion mobilized included the Project's support for SQB on a USD 575 million sustainable bond issuance (with 14 use of proceeds, including 10 green – including Climate-Smart Agriculture (CSA) - and four social), and support for Agrobank with a USD 455 million green bond issuance (with three use of proceeds, and 80% of the bond targeting CSA activities in Uzbekistan). GIS also supported SQB develop a Green Financing Facility (with a commitment of $28.75m seed funding by SQB, to be co-financed by national/international development banks) supporting CSA in Karakalpakstan and aimed at enabling the barriers to accessing finance for farmers/agri-businesses to be overcome. These finance-focused interventions were considered responsive to these stakeholder's needs, as these banks noted that they would not have focused on 'green' or 'sustainable' bonds without the support of GGGI, but that their objectives were closely aligned with the GGGI Project, and that they wanted to continue receiving support from GGGI to expand their lending/financing skills, expertise and portfolios in this area.

How did the Project adapt to the changes to stakeholder priorities and strengthen the program design to address these?

The Project was required to adapt to stakeholder priorities several times to address changes in the policy direction of partners and/or due to challenges with its execution, particularly in the context of the Project being established in 2021 and commencing in 2022 during the post-COVID-19 pandemic. These adaptations to the Project mainly strengthened the Project and demonstrated an effective use of an adaptive management approach. The main adjustments included:

- Shifting the focus of the Project from the "Aral Sea Development Program" under Outcome 1, toward the development of "Climate-Smart Agricultural Policy" recommendations and informing the development of a White Paper for a second phase of the UN-led Multi-Party Trust Fund for the Aral Sea. Initially, the Project aimed to support the design of an Aral Sea Development Program (as initially requested by the State Committee of Ecology and Environmental Protection), which was to provide a 5-year development strategy for the region; however, the government had changed its policy position on the need for this program.

- Shifting the focus of the Project on development of a Green Bond with the Government of Uzbekistan, towards the development of Sustainability/Green Bonds with the two banks (SQB and Agrobank), given that the Government declined GGGI's support on the design of the bonds.

- Shifting the focus on the coordination mechanism from the development of an Inception Action Plan for the Aral Sea Development Program (as initially requested by the State Committee of Ecology and Environmental Protection) coordination mechanism, towards a focus on contributing to a coordination mechanism for climate-resilience under the Multi-Party Trust Fund for the Aral Sea (as the primary platform for development partner coordination with the Government of Uzbekistan), given the Aral Sea Development Program was no longer proceeding.

- Revising the Project activities (under Outcome 3) to focus on production business models, instead of both production and processing business models, given that the Project's feasibility study found that there were no viable businesses ready to be involved in piloting of processing climate-resilient agricultural products in Nukus.

[2] Civitta, 2024, 'BDP Sustainability Strategy, prepared for GGGI', page 2.

- Shifting the design of the capacity building program (under Outcome 2) from being delivered in partnership with a non-profit non-state organization to being delivered in partnership with government ministries (i.e., Ministry of Preschool and School Education of the Republic of Karakalpakstan) through the train-the-trainer model and working with teachers and schools, as well as farmers and health-workers.

- Shifting the capacity building and awareness raising program from focusing mainly on working farmers in the agricultural sector towards, more broadly, awareness raising and education, particularly of youth through schools, but also through female-headed households, to increase awareness of climate change impacts and locally relevant adaptation strategies. In addition to providing direct training opportunities, the Project introduced an awareness raising campaign on climate change adaptation through the media (see **Box 2** below). The trainers also adapted their delivery of the training program to the needs of the training participants, for example by delivering the training programs in settings that were most suitable for them. The focus groups highlighted adaptations:

  "We organized trainings at different organizations, schools, kindergartens, makan kenes [in other parts of Uzbekistan it is called mahalla – community-based organizations] *and the chairmen helped us to gather local people; local leader women called koshe biy* [street leader] *would help us gather local women…".*

  Health care worker trainers, Focus Group Discussion.

  "The fact that the training was conducted with practical examples in the open air and in a greenhouse helped to make them more efficient and more engaging, more interesting for the students… It helped them to remember the things they learned…"

  Teacher trainers, Focus Group Discussion.

- Shifting the focus of the Green Investment Services (GIS) work on a financing facility (under Outcome 4) from any work on readiness and accreditation for the Green Climate Fund, towards design of the Green Financing Facility with SQB given that the Government and partner institutions were yet to determine if they would seek to be accredited as an Accredited Entity (AE) for the Green Climate Fund.

However, it was noted in interviews that formalizing these changes to the activities (and their amendment in the Project's log-frame) throughout the project implementation period was administratively challenging. While all adjustments made were necessary and enabled the Project to achieve its outputs/activities and manage its risks, the processes for communicating and agreeing on the Project's adjustments were not clear to all stakeholders (including GGGI and the funding agency). A smoother process could have been achieved through a communications and decision-making protocol regarding project modifications under the PSC.

On the other hand, adapting the Project in these ways did strengthen the Project's potential impact and its likelihood of sustainability. The Project's pivot to partner with the two banks on the Sustainability/Green Bonds proved to be highly successful, as it up-skilled these two banks in sustainable/green financing and significantly increased the scale of finance available for investment in climate-smart agriculture, renewable energy, clean transportation, and climate change adaptation. Furthermore, the pivot to focus on the implementation of the capacity building program in partnership with teachers (and the Ministry of Pre-School and School Education) and through the Monocenter (with the Ministry of Employment and Poverty Reduction) had the benefit of greater potential on-going impact, as these training programs could be repeated through these institutions. Furthermore, expanding the capacity building program to design a media campaign, through television in the Republic of Karakalpakstan and through social media, expanded the base of engagement/awareness raising (with approximately 4 million views on social media, and ~275 million potential viewers/listeners on television and radio.

What are the challenges faced and gaps to align its relevance to overarching goals and strategies with all key stakeholders?

The main challenges faced for GGGI in maintaining the relevance of the Project to the overarching goals and strategies of all key stakeholders were associated with changing government priorities, and potentially the

differences in perspectives between different stakeholders (including at national and sub-national levels of government). Periodic changes in Ministerial appointments and organizational structures in Uzbekistan, including within key partner Ministries (incl. MEEPCC, MIIT, MoA and CMRK), throughout the Project's implementation had resulted in periodic changes in ministerial goals and strategies, and a fluctuation of the relevance of the Project throughout its implementation.

To navigate this dynamic environment, GGGI adopted flexible approaches, including developing multiple MOUs with sub-national ministries and with specific ministries to facilitate direct engagement with each Ministry.

A closer relationship with central ministries, such as the Ministry of Economy and Finance, and/or the Office of the Cabinet of Ministers, could enable GGGI in Tashkent to become closer to the centres of policy making and budgeting in the country, and increase its impact on policy development. Recognizing the need to expand its footprint/influence within the national government, GGGI included the Ministry of Investment, Infrastructure and Trade (MIIT), which coordinates all development partner engagement in the Aral Sea Region in the Project Steering Committee. In addition, GGGI collaborated with the UN Multi-Partner Trust Fund that is co-chaired by MIIT to support the development of a longer-term strategy in the Aral Sea and to strengthen its engagement and coordination with other partners.

GGGI also established an MOU with the Ministry of Agriculture in January 2024, but potentially this could have been established earlier in the project cycle. As an independent international organization aiming to work in close partnership with its members, it is important that GGGI works with a range of ministries, not only its host ministry. Engagement with each ministry at both a Ministerial/Senior and operational level is also an advantage for increasing the capacity of government organizations, and the likelihood of the Project's policy recommendations being adopted. Building on GGGI's strength and expertise in delivering policy consultation processes and facilitating technical dialogue, the evaluation team found GGGI could work with central ministries in further strengthening their capacities through co-design of policy analysis and co-implementation of projects. The operational partnership of GGGI at a sub-national level was perceived as a strength by many interviewees.

GGGI established its office at the same time as setting up this Project in Uzbekistan and took some time to familiarize itself with protocols and requirements of the Uzbekistan Government which, alongside the challenges of working online only during the COVID-19 pandemic, led to delays in the Project's execution (due to late hiring of staff etc.). For example, it was reported that there was a six-month delay in the implementation of the capacity building modules in the Republic of Karakalpakstan due to administrative barriers (delays in decision-making) centrally. GGGI also experienced personnel-related challenges such as delays in recruiting staff and engaging consultants as well as difficulties in the procurement of some resources. Delays in opening a bank account was another administrative hurdle that delayed the Project.

One of the main challenges in ensuring alignment of the Project with the goals and strategies of the teachers/trainers involved in implementation of the capacity building program (under Outcome 2) was to ensure the Project could provide clear guidance on how the technologies/infrastructure that the farmers/students were learning about could be accessed and installed. The Project generated interest/awareness and 'know how' on drip irrigation, greenhouses, and sprinkler irrigation technologies, for example, across each of the farming villages, but very few of these villages in each district were involved in the pilot demonstration projects under Outcome 3. The delays in the installation of these agri-business model projects also meant that much of the capacity building program was completed before providing opportunities for the 'hands on' experiences of the pilot projects. The trainers were therefore left with the challenge of not knowing how their participating farmers could access the resources they needed for installing the technologies that they had learned about. Therefore, there could be a greater integration or communication of the program across each of the outcomes, whereby the financing activities could be communicated through the training program, to advise farmers of new CSA loan products.

How did GGGI ensure the Project was government-led and maximize the national and local government's involvement in decision-making, approval, and implementation?

The Project's Steering Committee provided a platform for the key government partners in the Uzbekistan Government – MEEPCC, MIIT and CMRK– to provide strategic direction to the Project. The Project sought to ensure the government had endorsed each of its outputs (including its research products) at the time of the

evaluation; this was yet to be achieved for most but not all of them (e.g., MoA agreement on the pipeline of 57 Green Recovery Projects). In the Republic of Karakalpakstan, the establishment of MOUs with a range of relevant ministries and co-locating the office of GGGI within the Ministry of Investment and Foreign Trade, was perceived as important for maximizing these agencies' involvement in the Project's decision-making, approval and implementation. In the Nukus office (in the Republic of Karakalpakstan), the hiring of local staff who had good relationships within these Ministries was also perceived as important for retaining close involvement with Ministries throughout the Project's implementation. The Project organized consultation processes for each of the flagship reports (e.g. the CRGG assessment and the GRIA analysis) and other outputs in both Tashkent and locally in Nukus, which has been important to retain the government's involvement at national and local levels. GGGI has also joined the Joint Coordination Group on Green Economy and Green Growth established under a Presidential Decree, organized by Uzbekistan's Ministry of Economy and Finance. As noted in the discussion above, building on GGGI's partnership with central ministries such as MIIT, there is potential for closer engagement in Tashkent (e.g., with the Ministry of Economy and Finance (MoEF) to more actively involve the government at the national level, alongside working with these ministries more closely at an operational (day-to-day) level. GGGI's signing of a Strategic Framework Agreement with MoEF in November 2024 demonstrates this relationship is already being strengthened.

Box 2

Relevance - Key Findings

- The Project was highly relevant to stakeholder priorities, tailored to the context of the Republic of Karakalpakstan, and adaptively managed.

Relevance - Recommendations

- Strengthen connections between GGGI to central agencies in Tashkent to enhance policy influence, especially the Ministry of Economy and Finance
- During an inception phase, formalize the project's stakeholder engagement strategies and implementation partnerships (e.g., through MOUs) to ensure these are agreed earlier in the project cycle
- Expand the GGGI program in the Republic of Karakalpakstan and retain the focus on the Aral Sea rehabilitation, building on the existing strong connections in Karakalpakstan and opportunity to scale-up
- Continue working with financial institutions as a strategic niche for GGGI on green financing, and seek opportunities to pursue and expand collaboration on AE capacity strengthening / finance vehicles
- Proactively discuss any pivots or modifications in activities and updates to the Project logframe with the Project's funding agency; allowing for an annual or mid-term revision of the Project logframe.

Effectiveness

The DAC criteria on 'effectiveness' is about whether a project is meeting its objectives (or intended outcomes). In the following section the KEQs are answered, and conclusions are drawn with corresponding recommendations regarding the Project's effectiveness.

Have the Project outputs and outcomes been achieved as intended, or are they on track to be achieved?

Yes, all the Project's outputs have been achieved, and the outcomes are on track to being achieved.

The Project has a comprehensive suite of outputs and activities, grouped under four inter-linked Project outcomes that support the green rehabilitation of the Aral Sea region and adaptation to climate change:

- Outcome 1: Climate Smart Agriculture related policy adopted
- Outcome 2: Dehkan and private farmers (fermers) have increased resilience to climate and Aral Sea disaster risks

- Outcome 3: Local Entrepreneurs of Karakalpakstan are equipped with climate resilient agri-business models

- Outcome 4: Successful climate resilient agri-MSMEs and farmers across Karakalpakstan have improved access to finance from commercial banks and government green financing.

The Project's logical framework provides the outputs and activities (aligned to the four Project outcomes), as well as their means of verification, and the baseline (2021) and end target (2024) indicators.

The progress made towards the Project's four outcomes is summarized in **Appendix IV: Project Performance**. This spreadsheet, based on GGGI's spreadsheet of the Project logframe, evaluates whether each of the outputs/activities have been achieved, with a supporting explanation.

Noting that 'outcomes' are longer-term goals that are often not achieved until (months or years) after a project has been completed, two project outcomes have been fully achieved already (Outcomes 3 and 4), and two outcomes have been partially achieved (Outcomes 1 and 2). All outputs have been achieved (seven out of seven) as intended (or adapted through program modifications) or they are on track to be achieved by the Project's recently agreed date of extension (to mid-2025). Twelve out of 17 activities have been achieved, with the remaining five activities being partially achieved (activities 1.1.2, 1.2.2, 2.1.3, 3.1.3, and 3.2.3). Of these five outstanding activities, three are expected to be achieved by the completion of the Project (1.1.2, 3.1.3 and 3.2.3), following the project extension. Some of the targets established for an outcome or activity (for 2024) have been exceeded (e.g., mobilization of the USD approx. 1 billion mobilized compared with the target of USD 10 million under Outcome 4) while, for other activities, a target set for the activity in the logical framework has not been achieved (e.g., training approx. 25% of the total working population in the agricultural sector from the four target districts, under activity 2.1.3 (which was 28,307 persons as of 2021)).

There were several barriers and challenges to the implementation of outputs and activities throughout the Project's implementation (e.g. changing political/policy priorities, COVID-19, and delayed procurement processes) as outlined in the response to the sub-questions below. Some of these barriers and challenges are preventing the achievement of the Project's outcomes, while others have been overcome through adjustments.

How effectively has the Project delivered its output and what progress has been made towards the outcomes? Please compare this based on the Project's logical framework.

The Project has delivered the majority of its output effectively and is on track to complete by the newly proposed project extension date of 1 June 2025.

Effectiveness of Outputs/Activities delivered under Outcome 1

Outcome 1 has been partially achieved; and both outputs under Outcome 1 have been achieved, and three of the five activities have been achieved (with activity 1.1.2 and 1.2.2 being partially achieved). It is anticipated that activity 1.1.2 will be completed by the end of the Project in mid-2025. The key achievements highlighted by interviewees under this Outcome were the CRGG Assessment (2022) and the Whitepaper (2024), with input from high-level policy maker consultations (under 1.2.3), alongside the development of two commercial bonds (the sustainable bond framework, under 1.2.1). The Intra-agency Coordinating Mechanism (ICM) consultations were also re-oriented to focus on supporting the coordination mechanism for the Aral Sea Trust Fund and the UN supported Aral Sea Investment Program, rather than the Aral Sea Development Program (which the government had shifted its focus away from), under an MOU with the UN-RO.

GGGI's policy-research work has been effective overall. Its research and policy analysis under Outcome 1 has informed policy work of the Government of Uzbekistan, in some cases indirectly. Interviewees from Government agencies, including at Ministerial levels, had noted that they had referred to GGGI's research - including the CRGG Assessment Report and the Green Recovery Investment Analysis (GRIA) - in advising the government on climate change and green growth policy development. Others noted that the top-down political nature of policy making processes has made it difficult for this kind of analysis to directly inform the development of government policy reforms. While the Government of Uzbekistan is yet to adopt a "Climate-Smart Agriculture Policy"

(Outcome 1) based on GGGI's recommendations, it is anticipated that GGGI's research and analysis, alongside the high-level consultation processes delivered by GGGI will inform:

- A Food Security Strategy by the Ministry of Agriculture (MoA)
- The Aral Sea Integrated Investment Program of the Ministry of Investment, Industry and Trade (MIIT)
- Other policy documents on environmental protection and climate change, of the Ministry of Ecology, Environmental Protection and Climate Change (MEEPCC).

Some interviewees noted that GGGI's policy engagement with Ministries is a strength. For example:

> *"GGGI's partnerships have been managed well, and their visibility campaign of GGGI is very good. They are well known to a very wide audience. They have good friends in many sectoral ministries of government, they have good partnerships with the Ministry of Agriculture, Water Resources, and with other key line ministries. They have very interesting round tables and presentations that we have participated in. The development agenda of GGGI is important for Uzbekistan."*

On the other hand, interviewees have also highlighted that there is scope to further strengthen GGGI's policy and research engagement with Government and research institutions, as GGGI is perceived as being well positioned within Uzbekistan. One interviewee said:

> *"GGGI could go deeper and even more extensively into different areas… It is first about the local capacities in research and policy advice… GGGI need to have a good relationship with the Ministries to go deeper and engage more."*

And furthermore:

> *"GGGI should be having a knowledge hub; GGGI could bring a lot of improvement to local capacities to research and academic institutions – research institutions under the government, NGOs – and provide policy research input to the government. GGGI can be on board with these research institutions."*

Effectiveness of Outputs/Activities delivered under Outcome 2

Similarly, Outcome 2 has been partially achieved, and the output and two of the three activities under Outcome 2 have been achieved. The majority of people interviewed in the evaluation considered the capacity building and awareness raising program delivered under Outcome 2 to be well designed and effectively implemented (see **Box 3** below), although there have been delays in its implementation and it could have been better integrated with other training programs provided by institutions, for sustainability, and linked to the Project's other outputs more directly (e.g., the pilot CSA projects and the financing solutions). However, the target for output 2.1.3 - that at least 25% of total population working in the agricultural sector from 57 village councils of 4 districts participating in the capacity building and awareness raising activities (which was 26,375 persons as of 2021 (28,307 at a later date)) (measured through their confirmation of increased awareness and skills acquired) - has not been achieved. This is discussed below.

Box 3 - Effectiveness of the Project's capacity building and awareness raising program on climate change and disaster risk reduction

Most interviewees considered that the training programs delivered under output 2.1 were effective and well targeted to the capacity building needs of the trainees. There were multiple different types of capacity building and awareness raising programs delivered under activity 2.1.3 "Conduct capacity building and awareness raising activities on climate change and disaster risk resilience, focusing on food security and livelihoods", including:

- Training for teachers and students (youth between 14-32 years old) in climate change and the Aral Sea region, climate change and health and climate-smart household farms (approximately 12,220 people)
- Training of female agricultural stakeholders on climate change and the Aral Sea region and climate change and health (approximately 2,160 participants)
- Training of small-holder farmers in climate change and the Aral Sea region, climate-smart household farms, and farming in dry

conditions (approximately 2,200 participants)

- Training of agri-businesses on climate change and the Aral Sea region, climate-smart farm management and climate-smart agri-business acceleration (approximately 440 participants)
- A media campaign to raise people's awareness on climate change and disaster risk resilience and to motivate behavior change, including 6 videos and 3 radio pieces (broadcast on TV, radio and posted on social media, which reached 280 million views and listens.[3]

Through focus groups and interviews, the trainers of these capacity building programs identified how these programs had increased the resilience of their participants to climate and Aral Sea disaster risks; for example, through demonstrating mulching (composting) techniques, increasing awareness of more efficient irrigation and greenhouse infrastructure, installing windbreaks (tree barriers), and demonstrating how households can adapt to increased water scarcity and heat. Most evaluation participants considered the capacity building programs to include a good mix of practical case studies and theory, and that it was scientifically rigorous while being tailored to the local context. The trainers noted that the 'on farm' approach to delivering the training provided for flexibility and for deeper levels of engagement (with on-going learning discussions), and that the training was coordinating with the local institutions (schools, village councils, monocentres etc.). Focus group participants highlighted how participants in the training programs had applied the knowledge gained:

"We see a lot of people planting trees, collecting leaves, garbage, collecting food waste to make compost, etc. Before, we would see smoke very often coming from across different parts of awyl [village], *but now we see that very rarely, people stopped burning leaves, garbage in general… plastic bottles, plastic bags, etc… They now throw it into the trash dump… There is no garbage in the streets anymore."*

Health care workers, Focus Group Discussion.

"The quality of the materials is very good… The students said that they showed the materials to their families at home and shared the knowledge they learned at the training sessions, and their families have said that the knowledge is useful, easy to do, like the filtering of water for example, and that they did apply the knowledge in practice at their homes…"

Teachers, Focus Group Discussion.

The trainers also provided feedback that access to resources for implementation of the training was a challenge and that there needed to be more investment in the technologies and financing available for farmers/households to access these CSA technologies, because the capacity building participants did not always have the financial means to implement the technologies/practices that they had been trained in. They also noted that there was an impression given by the training program to the participants that there would be finance available for the implementation of the training. On the other hand, interviewees provided examples of how training participants had established an agri-business or increased their resilience to climate and Aral Sea disaster risks through the knowledge gained in the training. Some interviewees also highlighted that more senior farmers who were trained were passing on their knowledge gained to their networks of farmers in their communities.

Our evaluation survey data showed that the majority of participants gained new knowledge and awareness from the training and to some extent applied this knowledge, enhancing their resilience to climate change and disaster risks. A majority of survey respondents (65%) said the training increased their knowledge and awareness to a large or exceptional extent. The most commonly cited barriers to application were a lack of financial or land resources (48%) and environmental circumstances such as disasters or climatic events (32%). Almost all respondents thought the training and materials quality was sufficient or better (96%), and most (69%) were satisfied with the length of the program in which they participated. Some 64% of respondents reported the training approach was sufficiently interactive to enable them to learn from case studies and real-world examples. More than half of the survey respondents (62%) indicated they would like to have additional training on climate change resilience and health. When analyzed by capacity building module participation, outcomes and training ratings were generally positive with very few negative outcomes reported; however, those who participated in the "Basic Agri-Business and Entrepreneurial Skills" module consistently indicated a degree of lower outcomes/ratings than those who participated in other modules. Overall, the results were driven by a high proportion of youth and student respondents and, thus, findings for most other occupations (e.g., farmers/ MSMEs) should be considered with a degree of caution, as they potentially may not represent the other groups who participated in capacity building training. A full analysis of the survey is in **Appendix III**.

To determine the effectiveness of the pilot capacity building program, GGGI conducted a "knowledge, attitude and practice" survey conducted pre- and post- capacity building module delivery in August 2022 [Annual report 2022, p.13], which showed that participants (78 post-module online respondents of 158) improved by 32% in knowledge, 28% in daily climate-smart practice (household-based actions such as 'saving water', 'home water filtrating system' or 'mulching instead of burning') and 18% in CSA practice (drip irrigation, greenhouse, agroforestry) post-module. However, this survey also demonstrated that some local participants would have challenges in using the online tool.

Two other pre- and post-module surveys were delivered, for modules 2 and 3. Positive results were that 74% of module 2 and 62% of module 3 respondents felt that training had reduced their risk of climate change. Also, 21% of module 3 respondents recorded an increased knowledge of climate-resilient farming measures. However, in neither group did the training significantly increase or decrease in intention to change health and farming behaviors; the module 2 survey author noted that most participants already had climate change adaptation methods for health and farming in place. The indicator for Outcome 2 is that at least 25% of the participants use CSA/ Disaster Risk Reduction (DRR) knowledge/have improved business practices in their SMEs; however, as training module 6 (Climate-resilient agribusiness) was not assessed (nor were modules 1, 4, or 5), it is not possible to report conclusively on this.

In addition to formal capacity building modules and training programs, GGGI delivered a media campaign, which was perceived as highly successful, under Outcome 2. The goal was to raise public awareness on climate change and disaster resilience measures and inspire behavior change, particularly for communities that might lack access to expensive technology or formal education on these topics.

[3] see further details at 'Building Climate Change Awareness and Capacity in the Aral Sea Region | Green Policy Platform'.

Under this campaign, GGGI developed six videos aimed at educating the general public on simple, accessible climate adaptation measures. These videos were part of a broader awareness-raising media campaign. The videos covered:

- Do-it-yourself water filtration: a tutorial on how to make water filters using cheap, accessible materials to reduce the impact of heavy metals in local drinking water
- Fresh air and degradation: addressing air quality and environmental degradation
- Windbreaks: explaining what windbreaks are, their uses, and how they can help local farmers protect crops from harsh winds
- Mulching: improving soil and water retention
- Biological pest control: a method of using natural predators to control pests instead of chemical pesticides; beneficial for local agriculture
- Drip Irrigation: a water-efficient technique to improve irrigation in a water-scarce region.

The videos were broadcast on local television and radio in Karakalpakstan for one month, targeting local viewers. The primary platforms for dissemination included Karakalpakstan TV and various local social media channels, including Telegram and popular bloggers. The videos were also published on YouTube and some were shared by the Ministry of Ecology, Environmental Protection and Climate Change in Uzbekistan. The campaign reached an impressive 280 million views and listens across the various platforms during the month of dissemination.[4]

Effectiveness of Outputs/Activities delivered under Outcome 3

Outcome 3 has been achieved, and both outputs under Outcome 3 have been achieved. Four of the six activities under Outcome 3 have been achieved (with the remaining two activities expected to be achieved by mid-2025 at the Project's completion (activities 3.1.3 and 3.2.3)). Under activity 3.1.3, "*Pilot validated climate resilient agri-business models with farmers and MSMEs*", two of the target of eight enterprises and/or entities were yet to have their agri-business infrastructure installed and commissioned at the time of writing (November 2024), and evidence of completed delivery/installation was found for only five pilots, although the Project has been extended to mid-2025 to accommodate this, and the BDP funding strategy under output 3.2.3 was yet to be finalized and endorsed by the Government of Uzbekistan. An opportunity for an additional initiative focusing on providing skills in microgreens cultivation and management for Women with Disabilities was also implemented. **Box 4** gives more details around the pilot program rollout and microgreen initiative under Outcome 3.

Box 4 - Piloting of the climate-resilient agri-business models with farmers and MSMEs

Of the six agri-business models developed, four were piloted, through co-financing as summarized below. The feasibility study did not find any potential enterprises suitable for piloting the remaining two business models. Three main aspects were considered for selecting potential areas for piloting the models identified.

- Financial, social, environmental, and technical feasibility for implementing the technologies;
- Participation and investment sharing from potential beneficiaries;
- Alignment with local government plans, priorities, and willingness to support.

A series of consultations were held on the proposed agri-business models and the project sites with the local government stakeholders, including Ministry of Investment, Industry and Trade, Ministry of Employment and Poverty Reduction, Forestry Committee, and four district khokims (governors) in Karakalpakstan, and the presented ideas were endorsed.

Agri-business model 1 - Crop production with trees for windbreaks

The feasibility study identified 128 hectares of wheat and 8 hectares of fruit orchards vulnerable to the harmful effects of regional winds, distributed in Karauzyak, Chimbay, Bozataw and Kegeyli districts. The study identified the financing need of USD 23,500 to be co-financed [63% by GGGI / 15% beneficiary / 23% Local Authority]. Stakeholders involved in the implementation of this Project were the Karakalpak branch of the Forestry Committee (under the MEPCCR) and the local Khokimiyats. The main beneficiaries will be the farmers adjacent to the rows of tree windbreaks.

Agri-business model 2 - Agroforestry production with tree nursery

The Project's feasibility study identified the following potential areas: Nuruntebek: 35-36 ha, Karauzyak district, with a financing need of USD 485,263 to be co-financed [25% GGGI / 13% beneficiary / 62% Local Authority]. Stakeholders involved in the implementation of the Project were the Karakalpak branch of the Forestry Committee (under the MEEPCC). Estimated 800 households to be benefited.

Note that this business model was not selected due to the participants withdrawing.

[4] as per footnote 4.

Agri-business model 3 - Fruit orchard with trees for windbreaks and drip-irrigation

The Project's feasibility study identified the following potential areas:

- Agroimpex farm, Kegeyli district, 7.18 ha fruit orchard, with a financing need of USD 85,630 to be co-financed [38% GGGI / 61% beneficiary / 0.5% Local Authority]
- Aszat Nusxat farm, Karauzyak district, 2.04 ha of fruit orchard, with a financing need of USD 33,750 to be co-financed [33% GGGI/ 66% beneficiary / 0.9%]

Stakeholders involved: AgroImpex farm, Aszat Nusxat farm, and district authorities.

Agri-business model 4 - Winter wheat production with sprinkle irrigation and tree windbreaks

Potential areas identified:

- Kaip Maishi farm, Kegeyli, 8.9 ha wheat, with a financing need of USD 51,800 [42% GGGI / 57% beneficiary / 0.6% Local Authority]
- JuzBasi farm in Chimbay district, 202 ha wheat, with a financing need of USD 1,007,700 [15% GGGI/ 85% Beneficiary/ 0.1% Local Authority]
- Aktuba Jaylay farm in Bozataw district, 166 ha wheat, with a financing need of USD 418,448 [18% GGGI/ 52% Beneficiary/ 0.07% Local Authority]

Stakeholders involved: Kaip Maishi farm, JuzBasi farm, Aktuba Jaylay farm, and district authorities.

Note that this business model was not selected due to the participants withdrawing.

Agri-business model 5 - Green processing and commercialization of products

There were no potential sites for this agri-business model identified in the feasibility study of the Project. There was one potential opportunity with melon processing but there are no plans from the government to support an initiative like this, or any private interest for investment.

Agri-business model 6 - Crop production under controlled systems – greenhouses

There were no potential sites for this agri-business model identified in the feasibility study for the Project. Farmers listed as potential investors were contacted, however no willing participants were identified in any district for the implementation of greenhouses, despite the potential support to be provided. Furthermore, sustainability concerns resulting from unsuitable technologies and insufficient resources for maintenance contributed to the abandonment of this initiative.

Additional initiative– Microgreens cultivation and training for Women with Disabilities

GGGI, in collaboration with the IICAS, organized a microgreens management training course for 16 women with disabilities. The training included both theoretical and practical components and a home visit by GGGI and a microgreens expert visited participants' homes to deliver equipment and provide usage instructions. Microgreens were chosen due to their suitability for small spaces, making them ideal for individuals with limited mobility. They also offer income opportunities through local markets and cafes, promoting financial independence with minimal resources required for cultivation.

There were challenges with the implementation and potential to replicate or scale up some of these agri-business pilots that impacted on their effectiveness:

- *Overcoming socio-cultural barriers to the uptake of CSA technologies*: Some interviewees highlighted that beneficiary farmers lacked familiarity with CSA technologies and, for example, favored traditional methods like field flooding over drip irrigation. Their perception of these technologies as tools for immediate water savings, rather than as part of a comprehensive climate adaptation strategy, was perceived as limiting broader adoption. This could lead to an underutilization of the installed equipment.

- *High up-front costs of installing this technology*: Some interviewees noted that the irrigation equipment installed under the Project was expensive and likely to be unaffordable for other farmers/enterprises. One interviewee noted, *"very few farmers are going to be able to pay for the kind of equipment that we* [GGGI] *are bringing. The technology is too expensive"*. On the other hand, *"The windbreaks are very cheap to have and they have a good impact"*, an interviewee noted. However, GGGI has evidence that at least 31 local farmers and enterprises have invested in the technology and practices, following the GGGI pilot.

- *Uncertainty of profitability and capacity to repay loans*: Farmers' uncertainty as to the profitability of implementing the pilot initiatives and their capacity to meet loans repayments was noted as a barrier by an interviewee who said *"but we don't know if the returns are going to be enough to pay that equipment later to make it keep working… to be able to pay a loan for paying for the equipment that you are buying… ."*

- *Lack of on-going support for, and monitoring of, beneficiaries*: Although there is a degree of operational support available for each pilot farm for three years, the costs of maintaining the drip/sprinkler irrigation technologies were perceived as the greater barrier for the beneficiaries who received the equipment. Without longer term support for the implementation of these projects beyond this three-year period, it is also difficult to evaluate their profitability or monitor the expenses associated with their ongoing maintenance.

- *Transparency of the selection process for the project beneficiaries*: There were differing views from stakeholders interviewed as to the transparency of the processes for selecting farms to pilot the agri-business models (via the district offices). Many stakeholders involved in the Project were unclear about how the process was managed. However, a GGGI staff member explained that the organization's selection criteria aimed at ensuring the initiative's sustainability, and GGGI had been working with the district officials in finding potential farmers to participate. Some interviewees suggested that all farmers in the region should have been notified about such opportunities, and that there should have been a general announcement of the opportunity for other farmers. It was reported that there was no tender or contest that could help to find the right farmer for the right project etc. Farmers watch TV and use Telegram channels for news - these could be utilized for promoting opportunities in the future.

- *Limited stakeholder interest in agri-processing model or the installation of greenhouses*: In the feasibility study, there was a lack of opportunities found to pilot the remaining two agri-business models identified, which demonstrated a limited level of interest amongst local stakeholders for these models. In lieu of a rollout of greenhouse installations, resources were re-directed to the Climate Resilient Agri-Business training on the use of greenhouses of 40 people through Monocenter.

Effectiveness of Outputs/Activities delivered under Outcome 4

Outcome 4 has been fully achieved, including the three outputs and three activities. GGGI was considered to be highly effective in its technical assistance to the financial institutions and the Government of Uzbekistan in developing a green financing facility (under activity 4.1.1) with SQB, and in developing a grant and investment project pipeline for CSA with the Ministry of Agriculture (under activity 4.1.2). Under output 4.1.2, the original Green Climate Fund proposal was deemed not feasible within the Project timeframe; instead, 57 green grant investment pipeline projects worth USD 974 M were in progress with MoA and MIIT (as reported in the PSC Minutes, Nov 2024). Furthermore, the capacity building program for financial institutions (and potential National Designated Authorities) and representatives of government agencies involved in the implementation of green economy programs was delivered in 2023, under activity 4.2.1, and interviewees confirmed that this training program was beneficial.

What were the major factors influencing the achievement or non-achievement of the Project outputs and outcomes?

The major factors that influenced the achievement or non-achievement of the Project outcomes and outputs were the broader socio-cultural-political barriers to uptake and reform, as well as some practical implementation challenges, which led to delays or project modifications, as discussed below.

Factors influencing the achievement of outcomes

For Outcome 1, Government adoption of a “Climate-Smart Agricultural Policy” would require a transformative shift in agricultural practices, investment and policy settings. The Government of Uzbekistan has started this process through its publication of the Presidential Resolution "On measures to create a sustainable agri-ecosystem in relation to climate change and to increase the adaptability of agricultural producers to the risks associated with climate change”, dated 24 Jun 2024, which approves Uzbekistan’s National Program for Adaptation of Agriculture, amongst other initiatives. However, currently there remains a focus in Uzbekistan and within Uzbekistan, including in the Republic of Karakalpakstan, on farming cotton and wheat, which are water intensive crops, under the traditional farming methods. Government interviewees at both national and sub-national levels said they are seeking to shift towards a diversification of crops and less water intensive farming practices. However, there are sunk costs in existing infrastructure and difficulties in shifting agricultural practices. One interviewee from the Republic of Karakalpakstan government noted:

"The issue with the diversification of crops beyond cotton (and wheat) is that we have the processing of cotton here and we are now producing the fabric – value-adding; so we have sunk investment in these production facilities, and we cannot move away from cotton farming."

For Outcome 2, which aims for at least 25% of capacity building program participants (Dehkan and private farmers (fermers)) to have increased resilience to climate and Aral Sea disaster risks - there were several factors contributing to the partial achievement of this outcome:

- The scale of the capacity building and awareness raising program events that were actually delivered (17,000+ participants) was less than the target number (to reach 28,307 people), because GGGI was not able to partner with local institutions (non-state non-commercial organizations) to deliver the program as events as events across the 57 village councils for 28,307 participants; however, the trainings and events were supplemented with a successful awareness raising campaign through the media that reached more than 280 million views.

- The re-orientation of the capacity building and awareness raising program (under Outcome 2) to focus primarily on students (rather than dekhan and private farmers (fermers) as the primary cohort of trainees (~12,000 out of ~17,000 participants) , meant the initial focus of the outcome on the working population of dehkan farmers and fermers had been adjusted, although the focus on youth was still strategic and impactful

- The extent to which participants in the capacity building and awareness raising activities had gained an increased level of awareness and acquired new skills is not fully known (due to the limited number of post-implementation surveys conducted after these activities, as planned under the Project design); however, the evaluation's survey of 194 participants found that most of the participants reported that they had increased knowledge and awareness of climate change and disaster risks (see **Appendix III**).

For Outcome 3, the piloting of validated agri-business models with farmers and MSMEs (activity 3.1.3) under this outcome is currently ongoing, with agri-business pilot projects yet to be commissioned (and the Project having been extended to 2025 to accommodate these delays).

Outcome 4 has been achieved because of the high quality of technical assistance that GGGI has provided to the beneficiaries (financial institutions (and potential AEs) and MoA) in designing the sustainability/green bonds, green financing facility with SQB Bank and in developing a grant and investment project pipeline with MoA. Feedback was consistently positive on the support provided by GGGI under this outcome. For example:

"We rate GGGI's support to us as perfect in terms of quality – there is nothing to improve. GGGI's involvement has been 100% - every single step; we asked them what steps that we need to do, and they were actively involved in every step."

Financial Institution.

"GGGI was really efficient… They were always there whenever we picked up and made up our minds; sending the consultant; working on the document; passing on the document SPO [Second Party Opinion] *– for us as beneficiary this was really fantastic…. We want them* [GGGI] *to be as close to us as possible."*

Financial Institution.

A number of factors influenced the achievement of the Project outputs. Major challenges and barriers included:

- Delays in Government of Uzbekistan approval of the 5- year Aral Sea Development Program (see KEQ 4.1.1-b), which led to modification of Outcome 1, and its outputs and activities to focus on the development of policy recommendations on CSA, and cooperation with the United Nations office in Uzbekistan regarding the next phase of the UN Human Security Trust Fund for the Aral Sea in Uzbekistan

- Challenges in identifying quality local implementing partners (e.g., for the Health module), which delayed the Government's approval of the selected local implementing partner and the implementation of training programs. This was addressed through revising the TOR and pursuing partnerships with local government partners to accelerate implementation [ref: PSC Apr 2024]

- Limited interest from Korean experts in joining the bidding process for the installation of CSA technologies, which delayed procurement processes, implementation and financial delivery. This was addressed through broadening scope of potential implementation partners for Outcome 3 by inviting other international and national experts [ref: PSC Apr 2024]

- Challenges in hiring six national and one international staff (GGGI Tashkent office) due to the limited qualified applications for positions. This led to only 54% of the 2021 budget being executed, and the underspent budget being reallocated for execution in 2022 [ref: 2021 Financial Report]

- COVID-19 delayed relocation of the international staff and led to challenges in collection of field data. It also delayed visits to project sites for the design of Green Business models and CSA intervention activities and meant that physical workshops and conferences were not allowed. These risks were communicated to the key project stakeholders (e.g., KOICA), and resulted in delays in the implementation of activities under Outcome 3 and some in-person events replaced with virtual or physical but of smaller size [ref: 2021 Financial Report]

- On 3 July 2022, a State of Emergency in Karakalpakstan resulted in internet restrictions, limits in travel to and within Karakalpakstan, and limits on public gatherings.[5] To address the situation, GGGI Uzbekistan closely monitored developments, temporarily relocated three staff members from Nukus to Tashkent (July 18-22, 2022), and informed Project stakeholders, including KOICA, about the risks. Following lifting of the SoE on Jul.20, 2022, international partner engagement and service providers participation in procurements were negatively impacted for an extended period of time. GGGI adapted to this situation through close consultations with government counterparts to seek alternative partnerships and means for implementing activities. This also strengthened direct cooperation noted through the signing of several MOUs with Ministries in Karakalpakstan in early 2023.

- Lack of quality local service providers, which delayed five procurement cases (mainly design-related work) with a cascading impact on larger scale procurement related to equipment for pilot activities. To address this, GGGI engaged local government entities directly in design and activity implementation and identified and verified suitable service providers through local networks [ref: 2022 Financial Report].

Were there any unintended consequences or negative outcomes resulting from the project's output?

The only unintended consequences or negative outcomes resulting from the project outputs were arising from miscommunication challenges or project delays.

One example was the delayed installation of irrigation equipment in one of the agri-business model pilot sites, whereby the beneficiary had prepared the land, but the installation of the equipment was delayed and there were installation issues (leaking pipes) and the installation was occurring in the wrong season. For this beneficiary, there was a clear misunderstanding about the extent of support that GGGI would provide for the installation of the equipment and ongoing maintenance support, as GGGI would provide a one-year warranty on the equipment and three years of maintenance support. This miscommunication/misunderstanding could result in a negative perception of the technology being installed, which the Project was seeking to demonstrate would be beneficial for the farmers and MSMEs.

Another example was that the capacity building program had created a perception, for some participants, that GGGI would be providing financial assistance for the investment in more CSA technologies, or providing some direct pathway to financial assistance for those farmer participants. As one focus group of farmer trainers noted:

[5] See: DP-164-сон 02.07.2022. On the introduction of a state of emergency in the territory of the Republic of Karakalpakstan

"The training program was well appreciated by the farmers. However, the trainees needed to install the drip irrigation technology and did not have the funds to afford this technology. The farmers who were being trained kept asking the question of where the financing would come from to install this technology."

"GGGI did make an announcement that there would be financing. So, participants in the training keep calling the trainers expecting there will be funding, but there is no news from GGGI on this."

This focus group feedback indicates that there had been a miscommunication as to the extent of GGGI's role (primarily in providing training, and not in facilitating access to finance for each of the participants), but also illustrates a broader issue that, as the pilot projects were implemented after the training had occurred, these could not be used as demonstration sites for the Project. Furthermore, the farmers were not aware of the work that GGGI was doing to increase access to finance for climate-resilient agri-business models (under Outcome 4). At the time the training was held, however, GGGI's efforts to facilitate access to financing (under Outcome 4) were reliant on third party banks (SQB and Agrobank), and promoting this opportunity would be reliant on the marketing strategies of these banks. Further, opportunities were not taken to inform participants that participation in the agri-business model pilot projects (under Outcome 3) would be available, although these would be limited due to the small number of demonstration farms. Therefore, increased integration of the project outputs and coordination/cross-referencing each of these, through their delivery, would likely lead to greater impact.

Have there been any significant changes or adaptations made to the project design in response to unexpected circumstances or lessons learned?

As noted in the previous section, changes in stakeholder priorities in combination with a number of challenges faced (as described in the Efficiency KEQ below) meant that the Project had to pivot from some of its original outputs and indicators. These were updated and agreed with the Project Steering Committee and KOICA in July 2024 and prompted the CMRK to formally request KOICA to agree to a second No Cost Extension (to June 2025) to accommodate delays with agri-business pilot projects yet to be commissioned (under Outcome 3). This significant change occurred during the PSC meeting in November 2024, which was approved by KOICA in December. The Project's first extension adjusted the original Project conclusion date six months from June 2024 to December 2024.

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)?

GGGI provided a unique value-add compared with other implementation models, because of its comprehensive approach of four components targeting different but related barriers to achieving climate-resilient green growth the Republic of Karakalpakstan - (i) policy/research and policy-influencing; (ii) capacity building; (iii) business model demonstration and (iv) increasing access to green finance for climate resilient agri-business models. These interlinked components address the full suite of potential impediments to scaling up resilience and green growth.

Key strengths highlighted by interviewees included:

- GGGI's technical assistance provided under its Green Investment Services, which was perceived as "perfect"; especially the work that GGGI undertook on the Second Party Opinions for the two Sustainability/Green Bonds;
- GGGI's close cooperation and coordination with its government partners, especially within the Republic of Karakalpakstan, where GGGI maintained a close working connection with key ministries;
- GGGI's stakeholder engagement approach and coordination of research/policy analysis, and information sharing events ("*They have very interesting round tables and presentations*");
- GGGI's media engagement and visibility, including through local media outlets and social media;
- GGGI's effective approach to coordinating and implementing its capacity building activities, which were perceived as being delivered to a high quality and were well organized.

Regarding GGGI's engagement with the Government of Uzbekistan, GGGI was perceived by interviewees as being well placed to scale up its work program, because of the close alignment between GGGI's objectives and the Government's objectives on green growth. One interviewee noted:

> *"The government is now speaking about climate change, green growth, green energy, water saving technology, green economy – discussing this everywhere both internally and externally… GGGI is in a very good position".*

Furthermore, other interviewees remarked that GGGI was the first agency working with financial institutions on the Environmental and Social Governance (ESG) and climate finance agenda in Uzbekistan, and other development partners have since come in to support this agenda, through collaboration with GGGI.

Box 5

Effectiveness - Key Findings

- Through adaptive management, the Project was able to effectively achieve all outputs
- The sub-national engagement of GGGI was highly effective, with GGGI staff embedded in the offices of the government of the Republic of Karakalpakstan
- GGGI was highly effective at mobilization of green financing for climate-smart agriculture and sustainability more broadly through its work on green/sustainability bonds
- GGGI effectively implemented its awareness raising campaigns to reach a high number of people.

Effectiveness - Recommendations

- Implement demonstration projects in advance of the capacity building program wherever possible, so that these pilots can provide practical case studies for the training participants to learn from
- Consider how best to promote a more inclusive pilot selection process, and which media, such as TV or Telegram, might reach the widest audience
- Link each of the components of the Project more directly so that beneficiaries of one component have knowledge of the other components (e.g. linking access to finance to capacity building)
- Collaborate more closely with central ministries and the research institutions that work with them on policy development, recognizing that their political/policy priorities have changed, but that a whole-of-government engagement approach is needed for maximizing policy influence
- Carefully plan the implementation of demonstration projects with buffer periods and being cognizant of seasons (e.g. sowing and harvesting seasons in the case of agricultural projects) and include a longer timeframe for project implementation (beyond 3 years) if necessary, to mitigate risks of delays in implementation
- Partner with local universities and/or vocational training centers (at a larger scale) to enable greater access to farmers/fermers to implement the capacity building programs.

Efficiency

The DAC criteria on 'efficiency' is about how well a project's resources are being used. In the following section the KEQs are answered, and conclusions are drawn with corresponding recommendations regarding the Project's efficiency.

To what extent did the Project ensure efficiency of the achievement of its objectives, and what mechanisms supported to ensure this?

Overall, the Project ensured efficiency in meeting its objectives through its project governance and management structures, and generally efficiently managed its resources, with some areas for improvement. The Project's mechanisms to support its efficient coordination included its Project Steering Committee, MOUs with a wide range of stakeholders, and using its Logical Framework as the coordination mechanism to track progress internally and externally.

Project planning and execution could have been improved, as there were several delays in the hiring of staff and in procurements (some of which were due to external factors discussed below), and in forming strategic partnerships for implementation. A longer 'scoping and set up' phase, prior to implementation, could have

improved planning, especially as this was GGGI's first project in Uzbekistan, and it takes time for a new team to build relationships and networks. Some key partnerships were only established in the final year of the Project. These included the MOU with the Ministry of Agriculture at a national level, and GGGI's partnerships with the two financial institutions GGGI supported for the development of sustainability/green bonds, noting that discussions with these partners had occurred for years prior to the formalization of an agreement.

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?

GGGI has made efforts to manage both human and financial resources efficiently, despite facing challenges such as recruitment delays and unexpected circumstances like the COVID-19 pandemic and emergency situations in 2022-2023.

GGGI effectively tracked its financial status (budget, expenditure) through Financial and Biannual Reports, with regular updates provided at PSC meetings. Moreover, to maximize resource utilization, GGGI created synergies through partnering with other organizations on the delivery out activities, such as collaborating with:

- DSIK and GIZ on capacity building programs;
- United Nations Resident Coordinator Office (UN-RCO) in policy work on the development of the White Paper;
- 15 partner institutions that contributed content to the BDP;
- UNICEF on scaling capacity building;
- Co-financing implementation projects with the agri-business demonstration projects with the local authorities and beneficiaries.

In 2021, the Project faced several challenges that resulted in budget deviations, including delays in staff recruitment due to limited qualified applications and COVID-19 restrictions, which also hindered the relocation of international staff. These delays impacted key Project activities such as baseline survey completion, office setup, and publication development, leading to underspending in several budget categories. As a result, only 52% of the budget was executed in 2021. The underspent amounts were carried over to 2022, with plans for accelerated implementation once the recruitment and Project activities were completed.

In 2022, the Project continued to face challenges, leading to further deviations in the budget. Delays in procurement were exacerbated by COVID-19 and a State of Emergency in Karakalpakstan, which hindered field visits, bidding processes, and local service provider participation. Additionally, a lack of quality local service providers caused delays in five procurement cases, including feasibility studies and capacity-building activities. Despite these setbacks, the Project took mitigating measures by engaging local government entities and identifying suitable service providers, allowing for some activities to proceed. As a result, only 69% of the budget was executed in 2022, with underspending reallocated for future use in 2023.

In 2023, the Project achieved 96% of the planned budget implementation despite several challenges that caused deviations. Personnel costs exceeded the budget due to the recruitment of two junior technical staff instead of a senior officer, leading to higher-than-expected expenses. Outsourcing activities were delayed because of difficulties in finding qualified service providers, both locally and internationally, compounded by political sensitivities and the impact of the Russian war. Additionally, the pilot agri-business projects faced delays due to governance issues, including cancelled land allocations and challenges in securing contracts, banking, and insurance guarantees for equipment imports. Despite these setbacks, the Project took mitigating measures by engaging local government entities and reallocating underspent funds for future use in 2024.

In 2024, the Project reached a budget implementation rate of only 97% (as of December), with procurement activities, particularly for pilot equipment and technologies, still pending. Deliverable payments are currently in process and, as of December 2024, the Project had achieved a cumulative expenditure rate of 87.76%. Internal stakeholders noted that delays in the disbursement of funds and untimely delivery of technology affected the

installation and delivery of equipment. External stakeholders noted that additional delays were also linked to challenges such as the readiness of farmers for project implementation and the time required for land processing.

Regarding human resources, internal stakeholders noted that staff turnover and challenges in recruiting qualified personnel significantly impacted the Project's delivery. The recruitment process was particularly slow in the beginning, as there was a need to recruit and onboard staff, which delayed key activities. Additionally, external stakeholders observed that the Project experienced three changes in project managers which, at times, affected the continuity and smooth execution of certain tasks. The evaluation team suggests that the absence of an internal HR manager may have contributed to the challenges in recruitment and staff management/retention.

Despite these setbacks, stakeholders emphasized that the delays did not compromise the overall quality and efficiency of the Project. The majority of external interviewees and survey respondents highlighted that the activities delivered were of sufficient quality and reliability, and some stakeholders confirmed that the technical assistance provided by GGGI staff had been adequate, with some even describing it as exceptional.

Could similar results have been achieved with fewer resources or a lower cost?

As this evaluation did not undertake a financial audit, this question can only be answered through a general value for money analysis based on qualitative data, as outlined below.

Overall, the Evaluation Team observed that GGGI's partnership with local authorities had maximized the efficiency of the Project and enabled the team to deliver activities at a lower cost. For example, delivery of capacity building modules through a 'train-the-trainers' approach with the Ministry of Pre-School and School Education in the Republic of Karakalpakstan provided a cost-effective way to implement capacity building activities. GGGI's collaboration with UN-agencies and other development partners also meant that it had leveraged the resources of these organizations; for example, through drawing on the resources of agencies in delivering the Business Development Platform. Costs had been reduced through the co-location of staff in government offices and through the implementation of some of the consultation/engagement processes online.

GGGI was also able to draw on its network of internal professionals to deliver high value for Uzbekistan, as it provided additional support for the delivery of activities through its headquarters, and through its secondment of staff from other country offices to the Uzbekistan office. Furthermore, the use of GGGI's internship program in the Project provided a means to attract local talent, leading to recruitment of staff through its talent pool.

Other cost-saving measures could potentially include delivering more advisory work in-house (although GGGI staff in Uzbekistan did deliver most of it, especially in the Nukus office where the capacity building modules and training program was delivered in-house), reducing outsourcing. Another cost saving measure could be to pay the suppliers for transport and events management directly, rather than through an intermediary, but this would require GGGI to be able to make cash payments to suppliers in most cases (which current procurement systems, as we understand through GGGI staff feedback, do not allow) and it would also add a further administrative burden for GGGI staff in undertaking events related logistics. There could also be ways to reduce the cost of the equipment/infrastructure supplied for the CSA pilot projects, for example through sourcing it more locally including from other parts of Asia (to reduce freight costs, while ensuring it is of sufficient quality). However, the risk is that any savings gained from procuring local technologies may be at the expense of farmer confidence to adopt them, due to their perception that local technologies lack the same quality as technologies from overseas.

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)?

The delivery of the Project was significantly impacted by both internal and external factors. These factors delayed the delivery of some outputs and required other outputs to be modified.

Internally, challenges such as staff turnover, procurement delays, and inefficiencies in decision-making were cited as obstacles to efficient and effective implementation. Examples of some internal challenges included:

- Delays in hiring staff in GGGI offices, especially at the Tashkent office, due to the limited qualified applications for positions, leading to only 54% of the 2021 budget being executed

- Delays in decision-making regarding use of implementation partners for the capacity building program

- Delays in five procurement cases (mainly design/feasibility-related work) with a cascading impact on larger scale procurement related to equipment for pilot activities

- Focusing, initially, on Korean service/technology providers only for some activities, rather than going out to the full market, thus delaying procurement activities, as there were no interested Korean suppliers.

Some interviewees noted that bottlenecks were created by internal approval and validation processes, leading to delays in project execution. Procurement issues, especially in contracting local implementation partners, were perceived as being complicated by bureaucratic processes and lengthy approval timelines. Some interviewees highlighted instances of miscommunication between the local and national offices, which hindered coordination and slowed the delivery of some activities, and some interviewees perceived the management approach within GGGI as "rigid". Hence, consideration could be given to how to implement adaptive and flexible management and devolve authority to lower levels, to ensure efficient and effective implementation, while maintaining oversight.

Externally, factors such as changing government priorities, challenges in decision making for designating, approving, preparation of land for pilot sites and the impact of COVID-19 were highlighted by interviewees as significant contributors to delays. For example, the external challenges included:

- COVID-19, which led to delays in the relocation of international staff, the collection of field data, and visits to project sites for the design of Green Business models and CSA intervention activities, and impacted on physical gatherings (meetings, workshops, and conferences). GGGI addressed the latter issue by replacing in-person events with virtual or smaller sized events

- A State of Emergency in the Republic of Karakalpakstan in 2022 enforced restrictions on internet access and people's gathering and limited the GGGI's operations in Nukus at this time. GGGI closely monitored the situation, and temporarily relocated three Nukus office staff to Tashkent

- Political/Ministerial changes and corresponding changes in policy direction could hinder the Project's timeline and effectiveness (*"The lack of formal ministry mandates and bureaucratic competition often lead to a "silent rejection," leaving the Project to adjust its approach accordingly."*). One example was the six-month delay in rolling out the capacity building program (Outcome 2), due to delays in government approvals.

Governmental scrutiny, particularly in the Republic of Karakalpakstan, hindered partnerships with local non-state actors, and delayed crucial processes like contract approvals. The COVID-19 pandemic exacerbated challenges by limiting on-the-ground assessments and the organization of in-person training sessions. Local farmers' unfamiliarity with the new technologies being proposed under the Project, coupled with shifting government priorities, also slowed the project rollout. Despite these setbacks, stakeholders mentioned that GGGI adapted many of the activities (as discussed in KEQ 4.1.2 (b)) and shifted the focus of some outputs and activities. For example, on awareness raising, GGGI collaborated with media outlets like Karakalpak TV to disseminate climate change adaptation campaigns, helping to mitigate some challenges and expand outreach.

How effective was GGGI's own project management structure for the management and oversight of the Project?

GGGI's project management structure had both strengths and weaknesses. Overall, GGGI's project management was perceived externally as efficient and effective, but internally, it was perceived as needing improvement.

Many interviewees perceived GGGI's project management as being well-organized and flexible enough to adapt to changing circumstances, with good communication established with stakeholders. They found the management structure to be efficient and praised the strong communication ties between the Nukus team and

local government stakeholders, which facilitated smooth project coordination. Collaborative efforts with technically strong partners and the Project Steering Committee (PSC) were also recognized for fostering trust and regular progress updates with government partners. Internally, a project management strength highlighted by interviewees was the coordination processes, such as detailed task lists and monthly reports against the Project's logical framework, which ensured consistent tracking of progress and outputs.

The main project management concerns raised by interviewees were about high staff turnover and internal communications. Some external stakeholders interviewed expressed uncertainty regarding the frequent changes in project managers and high staff turnover, which may have contributed to some challenges in maintaining consistent leadership throughout the Project. Some staff positions were also not permanently filled, as outlined in the project design document (e.g., a monitoring and evaluation officer), and others were filled with more junior personnel than anticipated by the project design. One stakeholder suggested that the Project could be more effectively managed with a greater role for local staff. As noted above, interviewees also highlighted that there were challenges in the project communication between the Nukus and Tashkent offices, which led to some coordination difficulties, delays in decision-making and administrative inefficiencies.

How did the project governance arrangements support coordination and decision making among the Government of Uzbekistan, GGGI, and KOICA?

The PSC's role was to coordinate the decision-making and oversight of the Project between the government, GGGI, and KOICA (the funding agency). It acted as a regular platform for all stakeholders to share updates, discuss challenges, and align project priorities. This platform helped maintain transparency and fostered trust among the partners. The PSC aimed to ensure that all key stakeholders, including both the Government of Uzbekistan and KOICA, were regularly informed about the Project's progress, which contributed to a shared understanding of the Project's goals and activities. Interviews confirmed that GGGI's communication with the government at both national and sub-national levels was effective, especially in the beginning, in defining the project scope and roles. While there were some challenges, the Project benefited from a clear structure and regular communication with relevant ministries, ensuring it aligned with national priorities.

While the governance arrangements were generally effective in fostering coordination and oversight, there were areas for improvement. Interviewees noted that the PSC served as a valuable platform for information sharing, but there were occasions where a more flexible approach to coordination, especially at the local level, could have fostered better engagement and responsiveness. The PSC meetings often focused on information sharing, with little to no issues raised. GGGI took the initiative to follow up individually with PSC members to discuss with them changes to the Project's logical framework, for example. It was identified that having more local staff members for more direct communication with the government would have been advantageous.

Box 6

Efficiency - Key findings

- GGGI was able to draw on its in-house expertise (including within headquarters) and flagship products (such as the GG Potential Assessment) to efficiently deliver high-value outputs
- GGGI's coordination was perceived as efficient and smooth by government and development partners
- GGGI's resources were generally perceived as being utilized efficiently, although there were delays in the execution of the budget, for a range of reasons.

Efficiency - Recommendations

- Lengthen the project scoping and set-up phase for projects that are in a new country for GGGI, allowing additional time to ensure stakeholder buy-in and develop strategies for implementation. Making connections with in-country potential implementation partners may assist initial set-up
- Improve project coordination and communication between GGGI offices through reviewing decision-making responsibilities and decision-points, and devolving responsibilities where possible
- Investigate changing procurement systems to allow direct cash payments to suppliers, in order to avoid delays and increase financial efficiencies
- Deliver technical advisory services in-house rather than through outsourcing to consultants to reduce costs, to the extent possible

- Ensure all procurement processes are competitive and open to allow for a wider selection of bidders and avoid delays (for example, by only focusing on a subset of the market)
- Expand implementation partnerships with local institutions (e.g. universities/ vocational training centers) in capacity building, to draw on their local expertise and leverage their structures
- Consider upgrading HR capabilities in country offices to support staff management, employ staff in a timely fashion, make the best use of a potential local workforce, and increase staff retention
- Ensure all positions within the project design are filled (e.g., a M&E position).

Sustainability

The DAC criteria on 'sustainability' is about whether the Project's benefits will last. In the following section the KEQs are answered, and conclusions are drawn with corresponding recommendations regarding the Project's sustainability.

How sustainable is the Project in terms of continued benefits for the targeted communities and stakeholders beyond the project lifespan?

Assessing the benefits of the Project beyond its lifespan is difficult without (i) any impact assessment, and (ii) without the project activities being completed. The likelihood of the benefits continuing are evaluated below, per outcome.

Outcome 1 - Policy Engagement and Research

The extent to which research focused, and evidence-based activities will inform policy and encourage policy recommendations remains to be seen. Nevertheless, the engagement of key ministries and partners in each of these processes has raised awareness of the challenges around resilience and the potential for green growth, as well as providing them with tailored analysis to guide decision making, including on the costs for infrastructure adaptation investments. For this work to have a lasting impact, whole-of-government policy/investment reform is required, shifting towards a climate-resilient approach to the agricultural sector, and for Uzbekistan to prioritize the strategies/options set out in the CRGG.

Outcomes 1 and 4 - Green Financing and Banking Partnerships

GGGI's interventions with Uzbekistan's banking institutions have established a strong foundation for sustainable financing, particularly in climate-smart agriculture (CSA) and green technologies. By enhancing institutional capacity, developing innovative financial frameworks, and addressing barriers to market access, GGGI has positioned its banking partners to drive long-term sustainability in providing access to finance for Dehkan and private farmers (fermers) and MSMEs beyond the life of the Project. These collaborations, which include sustainability bonds and the Green Financing Facility, have demonstrated potential for long-term impact.

Significant achievements with the potential for lasting benefits include:

- *Mobilizing funds*: GGGI's support enabled SQB and AgroBank to issue sustainability and green bonds, raising nearly USD 1 billion to fund climate-smart technologies and infrastructures. GGGI has assisted in securing Second Party Opinions (SPOs) for these sustainability/green bonds, and in building the banks' capacity to manage these bonds independently

- *Potential for scaling:* Both the national and sub-national governments have expressed an interest in investing in CSA and the sustainability/green rehabilitation of the Aral Sea region

- *Design of financing vehicle:* with SQB, a green financing vehicle has been designed for CSA financing, including with a USD 28 million commitment from SQB and a goal for the facility of around USD 18 million; this facility will provide farmers with increased access to financing for CSA through competitive interest rates and loan conditions (e.g., extending loan repayment periods, using equipment as collateral

instead of land, and making the financing options more borrower-friendly and aligned with their needs). Supporting documentation describing the Financing Facility's development and objectives underscores 'sustainability' as a central guiding principle, with the aim of ensuring that "credits issued under the facility promote practices that maintain the health of land, water, and biodiversity, enabling sustained agricultural productivity over the long term[6]." The planning documents further highlight the fundamental role of sustainability in the facility's design in its roadmap, which describes the facility's strategic long-term focus (beyond ten years), plans for expansion into additional regions, and pool of possible investment partners.

Private sector and financial institution stakeholders recognized that sustaining the benefits of green/sustainability financing beyond the Project's duration will require their ongoing support (to their clients). Agrobank and SQB have committed to strengthening the achievements made so far by implementing targeted measures to sustain these benefits. They emphasized the need for promotion of green financing products to ensure lasting impact. Both banks are implementing Environmental and Social Governance (ESG) policies; for example, Agrobank has introduced an environmental and social management system assessing the climate risk on borrowers and what the borrowers are facing and ensuring that green finance is aligned with sustainable and resilient investments.

Outcome 2 - Capacity building and awareness raising on climate change and disaster risk reduction

The sustainability of the capacity building and awareness raising program benefits are uncertain, because of the 'one off' nature of the program for the participants who were farmers and women (trained by healthcare workers). As GGGI delivered the training directly through a 'train the trainer' module, without a partnership with a local university or vocational training center (aside from the students in schools), there are limited opportunities for on-going follow-up to the training with the participants, unless there is a further phase of funding for this Project. A university partnership could have enabled ongoing follow-up and support to farmers/women.

Without linking the farmers who were trained to sources of funding for the installation of the equipment that they were being upskilled in (e.g., drip irrigation systems and greenhouses), the participants reported that they were not able to implement their knowledge gained, and the training benefits were therefore not likely to be sustainable. Furthermore, participant stakeholders expressed the need for continuous support with specialist knowledge and expertise to provide practical skills training for agri-business development and management. For example, interview respondents raised the issue that trainees under module 6 (delivered for SMEs/MSMEs in partnership with DISK) lacked post-training support in terms of technical or financial assistance. Under this module, the trainees were trained on the legal and financial aspects of starting and running an agri-business, and those participants that wanted to start their own small business did not receive any follow-up consultation or mentoring support in that area.

Positive responses in terms of sustained community benefits were heard from those who participated in GGGI's training (delivered under a separate activity, 3.1.3) on the use of agri-business models, greenhouses and drip-irrigation. For example, training delivered to 40 unemployed people (including 8 women) at the monocentres, on the use of greenhouses and drip irrigation equipment), improved their livelihoods. According to one interviewee, approximately half of the participants started their own agri-businesses, cultivating and selling produce like tomatoes, cucumbers, and flowers. Those people who started their own business reported to the Ministry of Employment and Poverty Reduction that they had employed people and created more jobs for other people.

Outcome 3 - Climate Resilient Agri Business model pilots

The sustainability of the benefits derived from the Climate Resilient Agri-Business model pilot projects is uncertain because of delays in their implementation. Out of the seven pilots, there were two project sites that were still being installed and were yet to be commissioned (at the time of writing). To address these delays, the PSC requested KOICA to extend the project end date from 31 December 2024, to mid-2025, to enable GGGI to complete the installation, testing, training, commissioning, and ownership transfer of the remaining pilot projects.

[6] GGGI, KOICA and PWC, Supporting the Establishment of a Credit Financing Facility for Climate Smart Agriculture (CSA) for Karakalpakstan, Uzbekistan Component 2: Development of Regulations for the Facility

The work on these pilots is expected to conclude by spring 2025, at which point a more comprehensive evaluation of the program's potential to deliver sustained benefits to stakeholders could be conducted.

A lack of continued oversight and monitoring of these pilot projects by GGGI, post-2025, could put at risk their sustainability. Beyond the three-year warranty for the infrastructure installation, the project beneficiaries will be responsible for the operation and maintenance of the infrastructure and may not have the funds or the knowledge to effectively do so. GGGI also will not have any additional budget, after project end, to support any of the pilot sites if the infrastructure breaks down. GGGI aimed to mitigate this risk through the pilot project selection process, which aimed to identify beneficiary farms with strong financial health, and a willingness to co-finance the initiative; "*Co-financing serves as a quality assurance mechanism to ensure the technology remains in use sustainably*," an interviewee noted. But without any ongoing oversight of these projects, GGGI also will not be in a position to assess their performance and effectiveness, and to understand what can be learned from these pilots (including assessing if the incomes of the agri-businesses and farmers have increased as a result of these investments). A development partner interviewed emphasized the risks to the Project's sustainability:

> *"Regarding the financing of the agri-business models – drip irrigation, sprinklers, tree wind-breaks – tree planting – what is the sustainability plan for these projects (hand-over and discussions about the sustainability)? Did GGGI consult widely with the stakeholders, and take time for the new project to be implemented effectively?"*

The greatest risk to the long-term sustainability of this Project's benefits is the lack of sufficient farmer buy-in. This primarily resulted from an inability to clearly link (for participant farmers) the Project's capacity-building objectives and their practical application using CSA technologies (particularly water-saving technologies such as drip irrigation.) Stakeholders suggested that factors influencing farmer buy-in included:

- *Inadequate mentoring on CSA business models*: The training sessions on CSA technologies installed on farm were brief, lasting only one day, and were perceived to be overly theoretical. Some interviewees noted that this approach left farmers ill-prepared to apply CSA technologies in real-world scenarios. It was noted by GGGI that ongoing support for participants was provided through the development of a range of training videos during the commissioning of pilot sites that captured important aspects of equipment operation and maintenance, and ongoing support for maintenance of equipment would be provided by the technology providers under GGGI contracts. However, greater practical, on-farm training would have been more effective in building the necessary skills and confidence in CSA practices.

- *Delayed installation reduced confidence*: delays in the installation of infrastructure on project sites had necessitated the testing of equipment now (at the time of writing) with winter approaching and stakeholders report that many of the hoses are bursting and unserviceable, reducing confidence. This stakeholder said:

  > *"If it would have been working about a month before the winter, and if we had prepared the land and the soil, and we irrigated the soil it may have worked, but now it is too late – one and a half months late. They* [hoses] *are leaking like a regular tap. I am not sure if it is commissioned now, or whether it will still be operational in spring. It needs to be run for at least one day for the whole day. It is winter and it will not work."*

There were also miscommunications with some of the project beneficiaries as some interviewees were not aware of the warranty periods agreed with the technology/infrastructure providers and others were uncertain as to their level of ongoing responsibility. One interviewee highlighted their uncertainty:

> *"There was a verbal discussion, and they* [GGGI] *said there would be one year of support. But I didn't see it in the agreement, in the contract, and they promised to provide the Russian version, but I didn't see it. I asked what happens when the Project closes down, when the GGGI Project is finished?* [I was told that] *the company that did the installation will provide ongoing support, and that CMRK and the Committee for Forestry will also support me. But I haven't seen anything written yet."*

Farmers and enterprises seeking advisory services beyond the 3-year warranty periods for the installation of the technologies deployed under the pilots, may also be able to draw on the technical advisory services offered through the Project's Business Development Platform for a service fee, to continue their CSA business models.

Outcome 3 - Business Development Platform

The sustainability of the Business Development Platform (BDP) is uncertain despite its potential to support local agribusinesses, farmers, and MSMEs (through provision of tools, resources, and information about agri-business loans). Throughout its development, the BDP struggled to secure consistent private sector engagement (e.g., consultants offering services through the platform) and was perceived as lacking sufficient site management from its contract manager. An interviewee noted that the 'experts' to be accessed by BDP users through the platform were expected to provide their services free-of-charge, which is an unsustainable business model.

At the time of the project evaluation, the BDP had few registered users compared with its target of over 4,000 (approximately 1,600 users in Sept 2024), casting doubt as to the sustainability of the platform in its current form. A 2024 assessment report of the BDP found that its functionality and support performance were lacking, with outdated content, minimal social media presence, and low outreach effectiveness. The report noted there were 878 users (12% female) registered by Dec 2023 (target: 4,000), 907 by April 2024 (13% female), and 1,402 by July 2024; and that 745 consultancies were provided by Dec 2023 (target: 1,600), 772 by April 2024, and 863 by Nov 2024.

The evaluation interviews confirmed that at the time of the BDP's release (believed by many stakeholders as too early), there were issues with platform usability (due to technical issues and the content being in English), and some users struggled to engage with the full range of resources. The result is reported to have delivered many subscribers a negative user experience, resulting in disengagement from the platform. Furthermore, whilst Karakalpakstan has reported a high level of smart phone usage, farmers/fermers are reported to have preferred in-person training, as many farmers in particular were unfamiliar with digital platforms.

There is some hope that discussions with potential funding partners, such as the United Kingdom and the Asian Development Bank, may secure future support for the BDP. GGGI has developed a sustainability plan for the BDP, which assesses financing scenarios and models, and will present this to the Government of Uzbekistan in early 2025 to determine the best path forward for the BDP. This sustainability plan includes options for the BDP to be financed through ongoing support from international development partners (for which there is interest), or partially commercially through the private sector or through a hybrid model. Furthermore, GGGI's latest Quarterly Report (October 4, 2024) reported that, despite the platform's challenges, work to attract participants was continuing and having some impact. Ultimately the BDP's sustainability depends on improving platform usability and customization, securing dedicated resources, fostering private sector collaboration, and diversifying its funding base. Without these adjustments, many stakeholders consider the platform's long-term impact and viability remain at risk.

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?

As noted under KEQ 4.1.2, one outcome has been fully achieved (Outcome 4), two outcomes have been partially achieved (Outcomes 2 and 3), and one has not yet been achieved (Outcome 1). Outcome 4 (regarding increasing access to green financing) is likely to lead to impacts, as the beneficiary farmers/businesses with increased access to finance are anticipated to have a greater capacity to invest in CSA technologies/infrastructure, which is expected to, in turn, lead to increased farm resilience and profitability. The extent to which these impacts eventuate will depend on the uptake of the green finance available, and the extent to which some of the barriers (social/cultural) to installing these technologies and updating farming practices can be overcome; for example, through ongoing training and education of farmers, as access to finance is only one barrier to rolling out CSA technologies and practices in Karakalpakstan. It is too early to determine whether there will be ongoing impacts of outcomes that were partially achieved (outcomes 2 and 3), and for Outcome 1 (to adopt a climate-smart agriculture policy), which is not yet achieved. The key potential negative risks of the partial implementation of Outcome 3 - on piloting the CSA business models - is that the farmers/businesses benefiting from the pilots may not have the skills or resources to continue operating and maintaining the infrastructure and equipment installed. The three-year warranty period on these installations will mitigate this risk to the beneficiaries.

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?

GGGI implemented measures to ensure project stakeholders, including the Government of Uzbekistan, could move the elements of the Project forward independently from GGGI, beyond the project lifecycle. For example:

- Capacity building activities of Outcome 2 aimed to build the capacity of teachers in schools in delivering curriculum on climate change and the Aral Sea crisis, to continue this training independently from GGGI

- The BDP was developed with a strategy to keep the BDP operational, to promote continued development of climate-resilient agri-businesses after the expiry of the Project (although this strategy is yet to be finalized and endorsed by the government partner of GGGI involved in the strategy for the BDP)

- The high-level policy consultations were undertaken jointly with the UN Resident's Office to inform a White Paper (under Outcome 1) to inform the future work program of government and development partners in the Aral Sea region (for example, under the United Nations Multi-Party trust fund of the Aral Sea Basin).

The extent of financial and economic resources available to sustain the benefits achieved by the Project will depend on the extent to which other donors and/or the Government of Uzbekistan finances further capacity building and technology development projects, supporting CSA and climate resilience. While private funds have been mobilized through the Sustainability Bonds and the Green Finance facility, these resources are unlikely to cover the full remit of interventions needed to sustain these reforms (e.g., overcoming barriers to technology uptake and changes in farming practices through ongoing training and education, and policy reforms).

Are there any potential social, political, financial, and environmental risks or barriers to the long-term sustainability that the evaluation should consider?

There are several social, political, financial and environmental factors that could impact on the sustainability of the Project's activities, which are discussed below.

Social barriers

Limited familiarity with new CSA technologies and practices - some interviewees highlighted that farmers are going to use the traditional flooding system because they are concerned their equipment doesn't work; however, the main impediment is the lack of/limited familiarity with the breadth of agricultural practices and operations required in respect of the CSA models.

Political barriers

Maintaining the political commitment to the reform at national and sub-national levels - the key political risk to long-term sustainability is the need to maintain political momentum on the climate-resilient and green growth reforms initiated through this Project after GGGI exits. With a continuously changing political environment (new ministers and policy mandates, as discussed above), it could be difficult for the Government of Uzbekistan to sustain its focus on CSA and the resilience of the Aral Sea region.

Financial barriers

- Limited financial literacy - a key financial risk which should be considered is the general low level of financial knowledge of project beneficiaries. One interviewee emphasized that farmers and entrepreneurs often feel intimidated by banks and may not have the necessary skills to engage with financial institutions. Improved linking bank representatives with local education programs and seminars would help build trust and ensure that both parties (banks and farmers) are better positioned for collaboration.

- Financial institution knowledge barriers - banks are also seen as requiring further education as to a deeper understanding of the needs of their clients in terms of providing finance for green agricultural projects and for farming in general. An interviewee suggested that greater involvement by banks in remote areas would build trust with farmers and provide a better understanding of their businesses for banks, noting that:

> *"Banks must come outside of their house, they must go on in the regions and people. You must bring it to the people. The banks to the people, to the farms and businesses so they have more knowledge about the people and their farming."*
>
> *Implementation partner stakeholder.*

- Limited ongoing support tools - although the BDP has faced implementation challenges, it is seen by many stakeholders as having significant potential for farmers as a farm management tool. If funding uncertainty and usability issues cannot be resolved for the BDP farmers and agri-businesses needing this kind of platform for assistance, they will find themselves without a potentially valuable tool.

Environmental barriers

- Inadequate environmental education - Climate resilience and water scarcity - some stakeholders saw the greatest environmental risk to sustainability of the Project as being the inadequate education and addressing of water scarcity issues across the Republic of Karakalpakstan. Some interviewees believed that this issue had not been shown the importance it should have, considering the close linkages between water scarcity and business planning for agricultural production in Karakalpakstan. One interviewee highlighted the importance of integrating business development with climate resilience education to enhance the sustainability of the progress being made in agribusiness in the region. Educational efforts could focus on educating farmers, the general population and institutions about sustainable water management with future seminars targeting water security issues relevant to the Karakalpakstan region. This stakeholder said:

> *"Given the environmental challenges in regions like Karakalpakstan, there is an urgent need to integrate education on climate resilience, particularly water security, into business development programs. This is considered vital for the long-term sustainability of agribusinesses."*

- *Poor syncing of project management implementation to seasonal realities* - a further environmental risk to the sustainability of the Project's benefits was identified by stakeholders as a misalignment of seasonal climate factors, such as harsh winters, and management expectations. A good example was the installation and required testing of expensive drip irrigation equipment at the Climate Resilient Agri-Business pilot farms being delayed until the approach of winter, with one implementation partner reporting leakages and hose bursts. This lack of synchronization between decision makers and on-site seasonal realities was highlighted by this Karakalpakstan Government stakeholder, who said:

> *"Our seasons* [in Karakalpakstan] *are 15-20 days later than in other regions. For example, if apple tree fruits are in Tashkent now, it will fruit in Republic of Karakalpakstan after 20 days. Sometimes, government targets do not consider this and there is little pressure to implement projects as proposed for all the regions. These all should be considered."*

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?

As many of the activities under the Project have only recently been implemented, GGGI is still developing its exit strategy with its partners. As GGGI intends to continue its presence in-country with other projects, GGGI will have the opportunity to follow up and continue monitoring its activities, if it can secure a budget to do so. There is no planned second phase of this Project with the donor, KOICA.

As per the response to KEQ 4.1.4c, outputs were designed to enable the Government of Uzbekistan and other project stakeholders to carry them forward independently from GGGI. In reference to outcomes:

- The Climate-Smart Agricultural Policy recommendations (delivered primarily through the whitepaper) remain with the government to support policy making and investment decision making into the future

- The capacity building activities aimed to build the capacity of schools and monocenters in delivering training on CSA and resilience, and to share lessons learned from the processes with other agencies

- The business development platform, along with its financing strategy, was designed to promote continued development of climate-resilient agri-businesses after the expiry of the Project. However, as discussed above, the absence of a clear direction in terms of future management, platform usability, and a client engagement strategy suggest that there was no clear exit strategy for the BDP

- The mobilization of green/climate finance was designed such that, once a letter of intent is signed between the financing institution and the Government of Uzbekistan, GGGI could step away from the process [Project Document, pp. 87-88]. The financing for a green facility was to be designed to increase access to finance green SME/MSME businesses beyond the lifespan of the Project.

Box 7

Sustainability - key findings

- It is too early to assess the likelihood of sustainability for outputs that have only recently been implemented or are still under implementation, such as the CSA pilot projects
- However, some risk factors are present that have the potential to limit the sustainability of the Project's outcomes and outputs, including potential social, political, financial, and environmental barriers to the realization and continuation of the project benefits
- Activities that were designed from the outset for continuation by the Project's partners - e.g., the Green/Sustainability Bonds and the Green Financing Facility - have the highest likelihood of benefits being sustained, once the Project ends
- GGGI's adaptive management of its policy and research engagement through expanding its partnerships to multiple national and sub-national level government authorities, and partnering with the United Nations, has maximized the likelihood of its policy-related interventions being sustained.

Sustainability - key recommendations

- Future GGGI projects should plan for project follow-up and monitoring periods for any piloting interventions, to enable beneficiaries that have participated in pilots to receive some post-installation support from GGGI and enable the lessons learned from these pilots to be documented and shared
- GGGI should finalize the financing/sustainability plan for the Business Development Platform, with a view to potentially commercializing the platform, so that it is no longer reliant on donor funds
- GGGI should plan future capacity building programs as an integrated program wherever possible, linking its service offerings around financing and pilot projects to its capacity building program, for greater coherence, and ensure that the training participants benefit from these other components of the projects
- Partnering with more local institutions, such as universities and other vocational training centers, would likely increase the sustainability of GGGI's capacity building programs
- Further engagement on policy/research with central ministries could also increase GGGI's influence.

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?

The aim of the Project was to help address human security issues, particularly in food and livelihood security of the residents of the Republic of Karakalpakstan. The Project, by educating and building capacity, supported its beneficiaries to create green jobs, to climate-proof agri-businesses and farms, and to become more resilient to the challenges posed by the Aral Sea disaster. Beyond this, there were some specific measures undertaken by the Project to target gender and disability inclusion, as well as to target youth engagement - such as tailoring training programs for women in agriculture and women with disabilities, discussed in the sub-questions below. The Project also faced challenges in ensuring gender balance in decision-making and mainstreaming gender and

youth inclusion across the Project's activities/outputs and did not set up any specific oversight mechanisms to ensure that women had an equal opportunity for participation in oversight of the Project.

To what extent has the Project met relevant needs of women and youth, as identified in the original proposal?

Most stakeholders acknowledged significant gender inclusivity throughout the Project, with many believing that GGGI have made reasonable efforts to increase engagement with women by encouraging their inclusion in programs and by addressing women's health issues. There has been notable female participation in capacity building training sessions and stakeholders reporting efforts to give attention to women's specific needs in agriculture and health. However, satisfaction with the level of women's inclusivity was not universal, with one Karakalpakstan Government stakeholder expressing a desire to see more engagement. This interviewee believed that the insufficient engagement of women and people with disabilities in agricultural and processing projects risks limiting the long-term impact and inclusivity of these initiatives. The stakeholder emphasized:

"Priority is for inclusion of women and people with disability; The Women's council needs to be more involved. They should be more involved in agriculture projects."

Karakalpakstan Government stakeholder.

Some stakeholders noted that without sustainable employment opportunities (e.g., in agricultural processing), women's engagement and, more broadly, community engagement in green resilience initiatives, may diminish.

The Project aim was that 50% of the target participants would be women and 25% youth (defined variously as 16-34, 18-30, etc.). Generally, the capacity building programs were gender balanced (see **Table 3**), with the largest cohort of trainees were school students, which included both boys and girls (gender balance was achieved organically through the ratio of students in classrooms). Some capacity building programs emphasized inclusivity; for example, the workshops organized with DISK on "how to develop a business plan and talk with banks", involving 30 seminars, had over 61% of participants who were women. There were also training activities specifically designed to target women - e.g., the training regarding climate change and health, for female agricultural stakeholders, and the training on micro-greens at home for women with disabilities. However, there were some examples of training activities that included a lower percentage of women (e.g. the CSA training for farmers held in December 2023, which included just 23% women).

Table 3: Number of participants and percentages of females (F) and youth (Y) reached in trainings

Number of trainees	Training module/s	Trainee type	Training dates	% of females (F) and youth (Y)	GGGI Reference document
121	Pilots of modules 1 - Climate and 6 – Agri-business		Aug 2022		2022 Annual Report
446	Modules #1, 5 - Climate- smart farms & 6, with DSIK: Agribusiness: "How to develop a business plan and talk to banks"	Young dekhans, farmers, agricultural entrepreneurs (30 workshops)	Nov-Dec 2022	61% F, 51% Y	Monthly update_2022_12; PSC minutes_2023_04
132	ToT, Household for youth: Modules 1 - Climate, 2 - Health, 3 - Households	Teachers	May 2023	67% F	
5927	Household for youth: Modules 1 - Climate, 2 - Health, 3 - Households	Youth (middle/ high school students aged 14+)	May 2023	51% F, 100% Y (14+)	Monthly updates_2022_06&07, 2023_04&05 & 10; PSC minutes_2023_11
20	ToT: Health for women: 1 - Climate, 2 - Health	Trainers	Jul-Aug 2023	95% F? (trainers)	Survey report, Module 2

Number of trainees	Training module/s	Trainee type	Training dates	% of females (F) and youth (Y)	GGGI Reference document
2160	Health for women: 1 - Climate, 2 - Health	Female agriculture stakeholders	Jul-Aug 2023	99% F, 34% Y	Survey report, Module 2; Monthly update_2023_10
16	ToT, Farming for household gardeners and dekhans: Modules 1, 3, 4 - Dry conditions	Trainers	Jul 2023		Survey report, Module 3
2200	Farming for household gardeners and dekhans: Modules 1, 3, 4 - Dry conditions	Smallholder farmers	Jul-Aug 2023	Of the 1700 surveyed: 49% F, 34% Y	Survey report, Module 3; Monthly update_2023_10
??	CSA training: Efficient land and water management in tree nurseries, and demo of commercial tree propagation technologies	Tree nursery professionals in the Karakalpak Institute of Technology	26 Oct 2023		2023 Annual Report
20	Outcome 3: Greenhouses and drip irrigation adapted to climate change	5 unemployed people from each of the 4 target districts	Nov 2023	20% F	Monthly update_2023_11; 2023 Annual Report
378	CSA training: Water saving, agroforestry, tree nursery, and Karatal business models/ how to improve winter wheat/fruit crop quality and yield	Farmers from the four target districts	28 Nov-2 Dec 2023	24% F, 43% Y	Monthly update_2023_11 [n=386: 2023 Annual Report; Monthly update_2024_1]
75	refresher ToT, Household for youth: Modules 1 - Climate, 2 - Health, 3 - Households	School teachers from Kegeyli, Bozataw, Chimbay, and Karauzyak	4-6 Dec 2023		Monthly update_2023_12
11 (?)	Development and promotion of green finance mechanisms in Uzbekistan for CSA, with DSIK	Government agencies involved in implementation of green economy programs; banking sector of Uzbekistan	11-12 Dec 2023		2023 Annual Report
651	Household for youth: Modules 1 - Climate, 2 - Health, 3 - Households	youth	Jan 2024	51% F	Monthly update_2024_1
20	Outcome 3: Greenhouses and drip irrigation adapted to climate change	5 unemployed people from each of the four target districts	Jan-Feb 2024	20% F, 45% Y	Monthly update_2024_1
937	Household for youth: Modules 1 - Climate, 2 - Health, 3 - Households	youth	Mar 2024		Monthly update_2024_3
1557	Household for youth: Modules 1 - Climate, 2 - Health, 3 - Households	youth	Apr 2024		Monthly update_2024_4

Number of trainees	Training module/s	Trainee type	Training dates	% of females (F) and youth (Y)	GGGI Reference document
1780	CCA training for youth: climate change and how to adapt (composting etc)	Vocational school students, Karauzyak district & secondary school No. 20, Chimbay	May 2024		2.1.3-a. Student training article; Monthly update_2024_5
16	Microgreens at home, with IICAS	Disabled females	May 2024	100% F	Microgreen training article
~ 16,451	Total number of participants				

How were gender-specific needs and priorities identified and incorporated into the Project's design? In what ways did the Project address the distinct needs and priorities of women and men throughout the implementation?

The Aral Sea Green Rehabilitation Investment Program considered gender and social inclusion throughout its design and implementation.

The Project's capacity building program was designed based on a Risk Profile developed under Outcome 2, which analyzed the vulnerabilities and risks of the local population, associated with climate change and disasters. Data analysis in the Risk Profile identified an income gap between men and women, and the Project's activities recognized the role of women in food security and agricultural production. The Risk Profile provided gender-responsive recommendations for the design of the capacity building curriculums, and the Project's CRGG Assessment considered issues faced by women (e.g., the out-migration of men for work, leaving women in charge of household agricultural incomes and activities). Sex-disaggregated data were collected throughout the Project, in relation to Technical Advisory Consultations (TACs), training, public outreach and use of the BDP.

Activities were designed to reach at least 50% women and 25% youth, under the capacity building program (in Outcome 2). The health curriculum was first delivered to women only, based on the Risk Profile's analysis, which showed that women are the health decision-makers of the family, and it was implemented in partnership with women's health care workers (nurses).

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?

The Project did not directly set up any specific processes for meaningful engagement with women and youth in decision making, planning or project oversight, aside from in Focus Groups established under the Risk Profile study (discussed below). Many of the representatives interviewed for the evaluation were in leadership roles in their organizations and were men (32 out of 27 interviewees), and these representatives participated in the Project oversight functions (through MOUs or through the Project Steering Committee). The Project arranged many Technical Advisory Consultation (TAC) sessions with project stakeholders, including development partners and government ministries to consult and validate research findings and recommendations. Under these TACs, men usually had a greater representation than women (see **Table 4**).

Table 4: Number of participants and percentages of females in TACs

Date	Location	Total	% female
7/4/2022	Tashkent	45	29%
12/4/2022	Nukus	47	55%
13/4/2022	Kegeyli	30	33%
14/4/2022	Karauzyak	28	18%
14/4/2022	Chimbay	28	25%
15/4/2022	Bozataw	23	22%
14/6/2022	Nukus	44	16%
22/6/2022	Tashkent	53	23%
4/4/2024	Nukus	69	29%

While Uzbekistan does have guarantees for equality between men and women in its Constitution and laws, and has adopted a *National Gender Strategy* (2021-2030) to strengthen women's roles in public life and in leadership, there appears to be some potential barriers to ensuring that women are meaningfully participating in the oversight of projects, policies and legal processes, including within GGGI's Project. Such barriers could include concepts of traditional gender roles and societal expectations, limiting women's participation in leadership roles, and economic inequality, which limited women's access to resources and opportunities for leadership. Furthermore, the agricultural sector is likely to be dominated by men in the more senior farming positions. Nevertheless, the Project to some extent sought to challenge these societal norms through specific initiatives targeting women in agriculture, women entrepreneurs in agri-business, and also women with disabilities. In a future phase of the GGGI's work in Uzbekistan, GGGI could seek to ensure its project has gender-balance within its decision-making processes and seek to engage both women and men equally in planning for and oversight of its activities with partners (including from government, financial institutions, and other development agencies), including through its technical advisory consultation processes.

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?

Project Steering Committee meetings and coordination meetings with the funding agency, KOICA, highlighted gender-related issues under the Project, and discussed coordination on gender mainstreaming. However, there was no clear evidence from the evaluation that there was a similar coordination on gender mainstreaming with all the implementation partners in the Project, or with community representatives who were beneficiaries of the Project (for example, through establishing a project community advisory committee or through GGGI's participation in a coordination platform with development partners on gender mainstreaming). However, the Project's work to analyze disaster risks for the target population - the Risk Profile (developed under outcome 2) - ensured representation of women, youth and other disadvantaged groups by setting up Focus Group Discussions (FGDs) for targeted groups in each of the four districts. In preparing this study, FGDs were held with youth farmers, female farmers and women stakeholders in the Karakalpakstan Republic, and a female moderator oversaw the women's FGD. The Project sought to partner with an NGO women's association in the delivery of capacity building under outcome 2; however, this did not proceed, due to procurement/approval constraints.

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?

Some smaller scale training programs were specifically designed for more marginalized groups, such as the micro-green training for women with disability and the training program of the Monocenter on the use of greenhouses and drip irrigation equipment, which targeted unemployed people and supported them in starting a business. Interviewees highlighted the inclusiveness of these training activities and emphasized that these should be

replicated and scaled up. For the participants in the micro-green training, many were able to use the training program to gain an income and have meaningful work at home. GGGI supplied high-quality training and materials to the 16 participants in this training program, including shelving with lamps. One participant in this training program was interviewed, and expressed her appreciation for this training:

> *"I'm very thankful that this training happened. Now I have a hobby, I grow microgreen for our family and also share with my neighbors. This is very interesting, finally I have something meaningful to do at home when alone."*

On the other hand, while the Project targeted vulnerable farmers in training activities, some farmers were excluded from implementing what they had learned, because of financial constraints and high-interest loans. While the Project included co-financing mechanisms (e.g., in partnership with the district offices that provided subsidies), broader financial inclusion strategies might have further benefited underprivileged farmers. There could be a closer linkage between the work undertaken by GGGI on increasing access to green financing under Outcome 4 and the capacity building initiatives under Outcome 2, to foster social inclusion in the agricultural sector and provide greater access to financial resources for those who have been trained with CSA practices.

Box 8

Gender equality and social inclusion - key findings

- The overall objective of the Project was to address vulnerability and risks, including human security risks associated with climate change and the Aral Sea crisis
- Gender responsive capacity building was undertaken under the Project, with specific modules being delivered that were tailored to the priorities and needs of women
- More men than women participated in the Project's oversight, and the Project did not have any specific processes or mechanism to ensure gender equity in decision-making for the Project
- Specific measures were undertaken to support social inclusion, including a large-scale awareness raising program with youth, and smaller-scale targeted interventions for people with disabilities.

Gender equality and social inclusion - key recommendations

- Ensure meaningful participation of women and youth through project decision-making and oversight mechanisms; for example, through a community representative advisory committee, ensuring there is gender balance in technical advisory consultation processes, and partnering with women's organizations (e.g. women's business associations)
- Consider how participants in the Project's capacity building initiatives can have increased access to finance to ensure they can utilize the knowledge gained and implement the training, including through access to resources for equipment and technical support for operating an agri-business.

Monitoring and evaluation

How comprehensive and effective is the Project's M&E (M&E design, implementation, and utilization) in capturing progress towards its objectives?

The Project's M&E design, implementation and utilization processes require some improvement. The Project design included reference to an M&E Plan (see **Table 5**, below); however, this M&E Plan primarily focused on reporting processes, and did not meaningfully provide for plans around the information needs and data collection processes and costs for indicators (such as variations in farmer income, agricultural productivity changes), or clear tracking of data on the capacity building programs (data on number and type of participants, formal feedback mechanisms, etc.). M&E activities were reported to informally feed into project improvements, with feedback being sought verbally from capacity building participants, throughout the implementation of the Project; however, such M&E processes were rarely documented. Implementing improved M&E practices throughout the Project would have the potential to improve GGGI's internal capabilities and provide insights on the Project for GGGI and its partners.

How has the Project drawn upon the knowledge and lessons from previous development initiatives – not limited to those outlined in the project proposal?

GGGI has sought to draw knowledge and lessons from previous development initiatives, and coordinate their efforts, through collaboration with partners working in a similar field. The Project's Annual Report (2022) states that GGGI has worked closely with other development partners in Uzbekistan to create synergy in related activity areas, including with the International Fund for Saving the Aral Sea, the Interstate Commission on Sustainable Development (Outcome 1); the UN Multi-Partner Human Security Trust Fund for the Aral Sea Region in Uzbekistan (Outcome 1 and 2); GIZ (Outcome 3); DISK (Outcome 2 and 3); and Human Asia and Green Asia Network (implementation partners listed in the project design). An example of drawing on lessons learnt was an experience sharing session by Green Asia Network December 2022, on a successful CSA project experience in Mongolia.

Interviewees acknowledged that GGGI's staff had drawn on their extensive networks and experience of delivering other development-related agricultural projects within the Republic of Karakalpakstan, especially within its Nukus office, to ensure that the Project was tailored to context and settings. For the capacity building initiatives, the evaluation feedback received from both participants (through the survey) and through the focus groups with the trainers indicated that this tailored approach to the design and implementation of the capacity building was well received. The capacity building modules, and particularly their practical activities to support learning, were perceived as well targeted to the context. Other interviewees also highlighted that the CSA models being piloted drew on the lessons learned from other local pilot projects; for example, those which had installed greenhouses that were not durable, resulting in an ineffective pilot.

Development partners interviewed highlighted that GGGI had been the first organization that had identified the need to work with financial institutions in Uzbekistan on green financing and had brought this unique capacity/knowledge to the country, drawing on its broader experience across its project portfolio elsewhere.

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?

A 'theory of change' for the Project was not articulated in the Project's design document, but it is clear from the design of its outcomes, outputs and activities that the Project aimed to address the four main barriers to scaling up investment in climate-smart agriculture to support the green rehabilitation of the Aral Sea region: policy gaps, capacities gaps, technology and infrastructure gaps, and green financing/investment gaps. This multi-pronged approach in the Project's design was also supported by an awareness raising and knowledge sharing campaign, targeting Karakalpakstan to promote adaptation measures and resilience to climate change and disaster risks. This implicit theory of change was therefore comprehensive and ambitious in its approach, as it addressed all the main factors underpinning the reform processes. The only gap the evaluation team identified within the Project's theory of change, was the need for ongoing research into the barriers and enablers for this reform process, so that multi-stakeholder reform measures toward resilience and CSA implementation are well targeted.

The Project's M&E design was provided through its logical framework, which sets out indicators, means of verification, a 2021 baseline and 2024 targets that are, in the main, comprehensive, specific, measurable, and relevant. For example, for output 1.1.1: 'Undertake a Climate Resilience Green Growth (CRGG) Assessment for the Republic of Karakalpakstan focusing on agriculture and agroforestry sectors', the indicators/targets are 1 CRGG Assessment (endorsed by Government) and three workshops conducted on baseline setting, stocktaking of CRGG practice and validation of CRGG recommendations. The indicators and targets are timebound only in the sense that the end target was set for end-of-project (currently 2024; and is being extended to June 2025).

The issue of achievability of many of the indicators is problematic. The targets for the indicators were set in 2021 with the background of what was known at the time with respect to potential issues that could impact upon the deliverables. Although some indicators and targets were revised in July 2024, due to factors beyond control of the Project, such revisions were hard to make as the initial agreements, in terms of funding and governmental cooperation, were set around that specific, initial logframe. Therefore, it has been impracticable to achieve several of the initial indicators within the duration of the Project (see **Appendix IV** on 'performance

assessment'). Many of the outputs, activities, and indicators were adjusted, with agreement from the funding agency, KOICA, by July 2024, for reasons set out in the response to KEQ4.1-b.

In future project designs of GGGI, the achievability of the Project's targets should be carefully calibrated given the project context and settings. As this was the first project for GGGI in Uzbekistan, the level of ambition could have been reduced or modified and longer lead times could have been given for activities, to allow for project scoping and set up with implementation partners (e.g., signing MOUs and establishing agreed workplans and implementation arrangements, and hiring necessary staff). More achievable targets for activities and indicators could have been set once the Project's implementation modalities were agreed with stakeholders. e.g. for the capacity building program, the target for activity 2.1.3 of strengthening the capacity of 25% of the working population of farmers/fermers was an ambitious target for the GGGI, which needed to be recalibrated after the implementation arrangements for the capacity building program were agreed with government stakeholders.

How rigorously are M&E data collected and analyzed to reflect accurate, reliable outcomes, and how effectively methodological flaws are addressed and corrected throughout the project lifecycle?

There was some room for improvement in the Project's approach to M&E. The logical framework deployed a "results-based M&E" approach, as it set up an approach that involved specific, measurable, "achievable", relevant, and time-bound (SMART) indicators for the Project, which would enable tracking progress against these indicators; and therefore, provide insights as to whether the Project had achieved its goals and whether its strategy was effective. However, the Project's M&E Plan (see **Table 5**) did not outline how data will be collected for these indicators (by whom specifically, and how it would be resourced), and there were no processes established to monitor the indicators that would have required specific data collection activities, for example:

- Under Outcome 2, the indicator is set that "*at least 25% of capacity building program participants from 4 districts use CSA/ Disaster Risk Reduction (DRR) knowledge, and at least 25% of capacity building program participants from 4 districts have improved business practices in their small and medium sized businesses*" - to monitor this indicator, a specific measurement and monitoring approach is required, and needs to be resourced (e.g., what do the key terms in the indicator mean? How will they be measured? How will data be collected? How frequently should the data be collected and reported?)

- Under Outcome 3, the indicator is set that "*Farmers and MSMEs have incorporated climate resilient agri-business models and participate in the business development platform; and 20M USD investment commitment mobilized from demonstrated business models*" to be verified through "*financial statements of beneficiary enterprises*" and through "*household incomes surveys of farmers*". To implement a monitoring framework for this indicator, a specific measurement and monitoring approach needed to be designed and resourced, with clear responsibilities assigned for monitoring and reporting (e.g., what do the key terms in the indicator mean? How will they be measured? How will data be collected? How frequently should the data be collected and reported?)

Without these indicators being monitored, it is difficult to track the Project's performance (against its outcomes), and for the project team to adjust the activities accordingly, and for the evaluation to assess the Project's performance. There were also not any processes for, or resources allocated to, tracking indicators related to organizational effectiveness (aside from budget execution), or monitoring the effectiveness of the M&E approaches implemented (to inform how M&E processes themselves could be improved).

Key M&E personnel and planning frameworks for M&E were missing for the Project. The Project Design document outlines that "*A KMCO [KOICA Multilateral Cooperation Officer] will be recruited to support implementation of M&E activities for the Project. Human Asia will also provide M&E support. As part of its co-financing commitment, GGGI will cover the annual M&E costs, with a total budget of USD 30,000 for the Project*." However, this M&E position from KMCO was not permanently filled and Human Asia provided this M&E support temporarily, leaving M&E responsibilities to the Project Manager. The M&E plan provided focuses predominantly on project reporting on the implementation outputs and activities (see **Table 5** and M&E activities in **Box 9**), without the monitoring systems set up for indicators under the project logical framework, discussed above.

On the other hand, the progress reporting undertaken was systematic, as progress was reported regularly to the main government stakeholders, the funding partner, and other implementation partners via a series of monthly

updates, biannual Project Steering Committee (PSC) meetings and quarterly and annual reports. Annual reports included an annual work plan for the preceding year and a "challenges and mitigation measures" section; PSC Minutes and Financial Reports also contained sections on risks and how they were managed.

Table 5: M&E Plan (after 2022 Annual Report[7])

M&E	Activity	Timeline	Reports sighted
Monitoring	Weekly coordination meeting: project implementation status, risks and countermeasures discussed in a GGGI team meeting facilitated by Project Manager (PM)	Weekly	
	Project implementation status: updated on a monthly basis on the GGGI Online[2] system and reported to GGGI HQ	Monthly	
	Project financial status: updated on the GGGI finance system and reviewed by GGGI HQ	Monthly	
	Project Implementation Unit (PIU) update: detailed project implementation status, including risks and issues, reported and discussed	Quarterly (meetings)8; Monthly (written)	Minutes 2021-12, 2022-1, 2, 3, 4, 6-7, 8,9 11, 12, 2023-4-5, 10, 11, Reports 2022-12, 2023-4-5, 6-7, 10, 11
	KOICA Quarterly Report	Quarterly	2022 Q1, Q3, 2024
	KOICA Biannual Report	Biannually	2022, 2023, 2024
	Project Steering Committee (PSC) Biannual Review: Work Plans, including potential risks, are reported, for guidance or approval	Biannually	2022-4, 10, 2023-4, 11, 2024-4, 11
	KOICA Annual Financial Statement	Annually	2021, 2022
	KOICA Annual Report	Annually	2022, 2023
	End of Year Reporting (EOYR): project implementation status and achievement throughout the year are reported to GGGI HQ	Annually	
	Synthesis Report	Within 180 days from end of project	
Evaluation	Baseline assessment	December 2021	2021-22
	Outcome 2 Capacity Development (Pre/Post)	Weekly basis	
	Outcome 3 Smart Agri-business Model (Pre/Post)	Annual basis (One farming cycle)	
	Endline assessment	Within 90 days from end of project	Not yet produced

The consistent tracking of progress and outputs against the Project's logical framework was noted as a strength by some interviewees. The PSC was seen to maintain transparency and accountability, as it received regular information on progress, challenges and any changing priorities. In addition, weekly coordination meetings were held between the two GGGI offices in Uzbekistan. However, one interviewee noted that there were errors in the budget reports which, whilst usually just minor figures, was an issue, and suggested that a larger GGGI team

[7] GGGI, 2023, Annual Report: Green Rehabilitation Investment Project for Karakalpakstan Republic to address impacts of the Aral Sea Crisis – Republic of Uzbekistan, 1 January - 31 December 2022, The Global Green Growth Institute – Uzbekistan Office, 31 January 2023.
[8] From November 2022, a written monthly update replaced PIU monthly meetings, which were held quarterly due to project implementation being on track (agreed by all parties at the PIU meeting – October 2022).
[9] Annual Report 2022 notes there was also a PIU meeting held Oct 2022 (p.6); nil held in May or Sep 2022.

was needed to support the project administration (project management, monitoring, reporting, financial accounting etc.). The challenges described by GGGI regarding staffing and engaging consultants throughout the Project (and previously outlined in this report) are likely to have contributed to this finding to some extent.

However, as discussed above, there was only limited monitoring and evaluation of project indicators. The M&E Plan did not systematically monitor and evaluate the effectiveness of the capacity building training (for example), or of project methodology or management structures, and lessons learnt. As noted above, without filling the in-country GGGI staff position of an M&E officer, there were insufficient resources allocated to monitoring. Without a clear M&E plan and processes, confusion was evident in the interviews with GGGI staff, as to who was responsible for what, and, with respect to the implementation of the Project, one interviewee noted:

"We [GGGI staff] didn't know what we have completed, what is still missing, what were the indicators of the Project."

Furthermore it is important to evaluate the impact of pilots - such as the business models being piloted on the CSA farms, to learn the lessons of these pilots, and understand if these models could be scaled-up for system-wide reform; if we know the extent of improved agricultural productivity and water savings for example, these projects could be replicated by other farmers/agri-businesses, but clear evidence of their results is needed. Moreover, there is currently no mechanism for the long-term monitoring and evaluation of the impacts on farming productivity of the agri-business pilot models after the Project's conclusion. The accurate assessment of the effectiveness of these models is assessed over years—1 year for wheat, 1-2 years for tree nurseries, 5-7 years for fruit crops, and 7-10 years for windbreaks. Without formal agreements with key MOU partners (including Forestry Enterprises, Ministry of Agriculture, and Chamber of Commerce) to establish long-term monitoring processes, key lessons from the ultimate successes or failures of these initiatives will not be captured.

One of the consequences of the relatively weak collection of metadata (numbers and types of participants, the training cohort and their connections to the agricultural sector) around the capacity building training was the difficulty in determining whether or not project outputs had been achieved. For example, Outcome 2 was aimed to directly benefit 25% of the total population working in the agricultural sector of the four target districts which, at the time of researching the Program Document (2021), was 26,375 people, of which females comprised 50%. Outcome 3 was aimed at directly benefiting 79% of registered dehkan farmers/fermers (n=767) and 87% of MSMEs and individual entrepreneurs (n=500) in the four districts. The numbers of people trained (and, in many cases, the percentages of females and youth) for most trainings have been reported across a variety of documents but some totals differ slightly, percentages of females and youth who participated were not always reported, and it is difficult to reconcile the totals of the specific training sessions with the grand sum of all those trained (17,000+, according to the latest PSC Minutes reviewed (November 2024)).

Some of the project output M&E activities verified by the Evaluation Team are set out in **Box 9**.

Box 9 - M&E activities carried out under the Project

The **Technical Advisory Consultations** held in April and June 2022 and in April 2024 gave stakeholders the opportunity to contribute feedback on the CRGG Assessment, GRIA, Risk Profile, Capacity Building Modules, and the concept presentation of the Business Development Platform.

With regard to **training schoolteachers** on delivering training, a Karakalpakstan Government stakeholder noted that all concerns and questions on content and training methods were addressed during training sessions, and that Telegram groups with participants addressed any ongoing issues and reporting.

A **pilot 'Knowledge, Attitude and Practice' survey** (pre- and post-module delivery) was conducted in August 2022 amongst the participants of the five capacity development modules delivered to provide a baseline for future assessment of the impact of capacity development activities. An example of taking on board feedback was the decision to deliver separate training sessions for women, due to socio-cultural norms limiting their participation in community activities: evidenced in Module 2 (Health) training being delivered to women only by (mainly) women. The online delivery of the post-training survey highlighted that some local participants would have challenges in using the online tool.

Pre- and post-module delivery surveys were also carried out for the training delivered for modules 2 and 3, in Jul-Sep 2023, and the results were analyzed and reported. Feedback taken on board was to use simpler language; larger font sizes for training module survey materials; and that fewer women participated due to socio-cultural norms on women's participation in community activities, so it was planned to improve women's participation by organizing separate training sessions [August 2022 Project Implementation Unit minutes]. The survey authors noted that "whether the participants use the knowledge attained, needs to be assessed." This could be accomplished,

in future iterations, by a field survey some months after the training, rather than directly post-training. This would provide data on the actual use of knowledge and/ or improved business practices because of training.

The **Business Development Platform was piloted** (with 30 farmers and 14 consultants); the piloting indicated there were areas for improvement and lessons learned (see Minutes of Aug 2022).

M&E activities were reported to informally feed into project improvements, with feedback being sought verbally from project stakeholders such as capacity building participants, however, such M&E processes were rarely documented. Some interviewees reported a great deal of verbal feedback. For example, regarding the training of trainer (ToT) sessions, it was brought up that the verbal feedback received in implementing the training program was used to improve the delivery of the training sessions. The handout materials were modified based on student feedback (with more visual aids), and the classes included more hands-on experiences, with trainers demonstrating real-world adaptation measures, and with student participation. As one interviewee highlighted:

"When we get it [receive feedback], we try to improve the next sessions. We try to improve what we've already done before."

However, no records of receiving such feedback, or what the planned response was, were located by the evaluation. Feedback from CSA farmers was also received verbally, as discussed in the evaluation interviews and focus groups; however, no written evidence was found that any learning was applied to improve the Project.

The provision of verbal feedback reflects the broader socio-cultural context of Uzbekistan, which could be adapted to the context of future M&E plans and resourcing. As one interviewee noted:

"One example is that we, as an international organization, always manage everything with letters, contracts. Everything is written. And when you arrive in Uzbekistan, you face that everything is managed by verbal communication, oral communication."

In this case, there could be a way to formally modify monitoring and learning processes to be more based on verbal/informal feedback and processes (avoid the bureaucratic overlay of paperwork), while still providing accountability.

To what extent are lessons learned being documented by the Project team on a continual basis and shared with appropriate parties who could learn from this project?

Documentation of lessons learned throughout the project cycle was not systematically practiced in this Project.

GGGI staff participated in many knowledge sharing events and hosted consultation meetings with a range of stakeholders from government and development agencies, for example, in the event for the development of GGGI's Country Planning Framework for Uzbekistan (see: Final Validation Workshop for CPF, held on 27 August 2024). At these consultation meetings and events, GGGI facilitated dialogue on climate resilient green growth, and directed policy engagement, gathering insights from stakeholders to improve its analysis and project activities (e.g., in the CRGG Assessment, GRIA, Risk Profile, and the Capacity Building Modules). However, while these consultation processes and events contributed to knowledge sharing, they did not systematically capture and share the lessons learned to interested parties on the lessons learned from this Project.

The Project did, however, share project insights and reference documents broadly through the Green Growth Knowledge Partnership and a specific project website (Aral Sea GRIP | Green Policy Platform).

In one instance where recorded documented lessons learnt were shared, the Project's training materials developed for youth were shared with UNICEF [acknowledged by UNICEF at the November 2023 PSC meeting].

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 Monitoring, Evaluation and Learning (MEL) data, if so please describe them?

There were many adjustments made to the Project; however, these adjustments were made on the basis of the context and circumstances that required different implementation approaches, rather than being based on M&E data. However, as noted above, informal feedback was captured verbally and was reported to have ensured that project implementation was improved (particularly for capacity building), and TAC processes and piloting of capacity building modules and the BDP informed management decisions, improving the implementation of these activities.

Box 10

Monitoring and Evaluation - Key findings

- Formal M&E plans and practices in the Project were focused on activity and output reporting rather than on outcomes and impact indicators, and did not focus on learning lessons from implementation
    - With the exception of some surveys (a "Knowledge, Attitudes and Practices" survey) that were implemented and analyzed before and after training programs and piloting processes for some activities, which provided information to improve activity implementation
- Informal M&E practices were reported to be continuously implemented, as feedback was sought and provided from capacity building training participants to improve the implementation of training
    - However, this feedback was rarely documented as a formal monitoring of implementation
- Project M&E planning did not provide a capability to evaluate the long-term impacts on farming productivity of the climate resilient agri-business models (under Outcome 3) beyond the life of the Project.

Monitoring and Evaluation - Key recommendations

- Future projects should prepare a more comprehensive M&E plan that includes data collection activities for indicators related to outcomes and impacts (such as on farmer incomes, agricultural productivity, water consumption and scarcity, food security and disaster resilience)
    - Such M&E plans should be properly resourced and implemented throughout the project
- Future projects should prioritize the incorporation of ongoing and long-term M&E practices in agreements with MOU partners to accurately assess the impacts of project programs/ initiatives where they extend beyond the life of the project
- M&E should also focus on improvement in organizational effectiveness and operations, for example, by providing indicators on workforce engagement, teamwork, partnerships, efficiency, etc.
- M&E plans should also consider target countries' cultural practices, norms and sensitivities - Monitoring, Evaluation and Learning (MEL) processes may need modification to, for example, encompass a more verbal/informal base for regions where verbal rather than written communication is the norm
- Systematic monitoring and evaluation of all capacity building programs is needed, for example, through distributing surveys to participants immediately before and after training
    - Emphasize to the trainers the importance of the participants completing them;
    - Also to administer a third survey, possibly via Telegram, some months after the training, to better assess if the theory is being put into practice, and to improve future training programs;
    - Recording training metadata into a central location, with fields such as date and location of training, name, theme of training, number of participants and inclusion of all relevant demographic indicator fields.

Safeguards

How did the Project address key environmental, social, and fiduciary issues that arose during project design and implementation?

The main safeguard issues that arose during the implementation of the Project were associated with the state of emergency in the Republic of Karakalpakstan in 2022 that restricted movement and gathering at the time. To address social and political risks associated with this emergency, GGGI adjusted the Project implementation arrangements to ensure that capacity building activities were sensitive to the political climate.

How did the Project consider safeguards – including labor and working consideration, politically exposed persons – in its engagement with the agri-MSMEs, for instance?

The Evaluation Team did not identify any safeguard risks or issues associated with the implementation of project pilots or any of the Project's partnerships, such as labor or working condition risks or risks associated with politically exposed persons. GGGI hired experienced and networked local staff (especially in the Nukus office for the Republic of Karakalpakstan), which provided some assurance that safeguard risks - e.g., political exposure and/or alignment with the legal regulations and protocols - would be appropriately managed. There could have been some risks and issues identified that were managed internally by GGGI, or through decision-making processes within GGGI and its PSC; however, these were not raised in the evaluation processes.

What were the methodologies, implementation plan, and results for this?

There were no safeguards assessment issues or risks raised in the evaluation processes, and potential risks that could have been identified were screened and/or managed through internal communications of GGGI, rather than through a formal safeguard methodology or implementation plan. As the Project provided technical assistance, primarily, rather than investing in infrastructure, this approach is perceived as appropriate. For the on-ground pilot projects (CSA farms under Outcome 3), a project risk assessment or screening tool for safeguards could have been developed and used, to more formally document and assess any safeguard risks.

Box 11

Safeguards - Key findings

- There were no major safeguard issues that arose in the Project
- Safeguard risks were managed through project communications and reporting processes on risks, for example, in the Project's reporting to the PSC.

Safeguards - Key Recommendations

- For design and implementation of the 'on-ground' pilot projects by GGGI, safeguard screening tools could be used to assess and manage safeguard risks (environmental, social, political and fiduciary).

Conclusions

Overall, all outputs of the Project have been achieved, and there are key components of the Project that were perceived to have been highly successful (e.g., the mobilization of finance through the Green/Sustainability Bonds). There are some risks to the sustainability of some of the project outputs and activities - particularly the Business Development Platform, for which there is no clear pathway to sustainable continuation beyond the completion of the Project; and the seven CSA pilot projects under Outcome 3, some of which are currently still being installed and are yet to be completed. There is a risk that, without continued engagement with and monitoring by GGGI of these pilot projects, the business models will be undermined (i.e., new equipment will not be used, or used properly) and their 'pilot' lessons may not be captured or integrated into future programs or policies; for example, monitoring and evaluation data in the future will enable an understanding of whether the new technology investments and agricultural practices have increased productivity and farmer incomes.

Agricultural practices in the Republic of Karakalpakstan remain predominantly focused on the production of cotton and wheat, which are traditionally water-intensive crops, and the adaptation of farming practices and infrastructure is urgently needed to address water scarcity and enable resilience to climate change; however, a significant barrier remains that there is not a clear investment plan or policy of the government at national or sub-national levels to reorient the agricultural sector, and there appears to be some perceived socio-cultural barriers to adopting the more water efficient farming practices and technologies, as well as some financial barriers (given many still cannot afford a low interest loan). Many government stakeholders interviewed agreed with the strategic focus of this Project and its modalities of support and were seeking continued support from GGGI to reform the sector, especially in response to the Aral Sea crisis. A wider adoption of water efficient technologies and practices, and resilient farming practices in general, will require a systemic reform.

New knowledge has been delivered through this Project to a wide range of stakeholders, especially to youth, farmers and women in agricultural households through the capacity building programs. These stakeholders have gained important insights on how to adapt to climate change and improve their livelihoods and health. There is significant scope to replicate and scale up this capacity building program and integrate it into the educational curriculums of local institutions, including schools and agricultural-focused universities or vocational training centers. GGGI was perceived as providing a significant source of knowledge on climate resilience, which was shared between community members; and the dissemination of this knowledge was perceived as underpinning cultural change towards an ecological mindset, especially for the youth engaged in the activities. Moreover, GGGI's media campaign on climate change adaptation measures to be implemented in Karakalpakstan was perceived as having a high impact, including its outreach through local television channels and social media.

Recommendations

The following table provides recommended actions and their associated timeframes and priority, resulting from this evaluation. GGGI is responsible for implementation of all recommendations in either finalizing the current project or in its design of future investments/partnerships.

	Priority	Timeframe
Relevance		
1. Strengthen connections between GGGI to central agencies in Tashkent to enhance policy influence, especially the Ministry of Economy and Finance	High	Short-term
2. During an inception phase, formalize the project's stakeholder engagement strategies and implementation partnerships (e.g., through MOUs) to ensure these are agreed earlier in the project cycle	Medium	At the start of the next project
3. Expand the GGGI program in the Republic of Karakalpakstan and retain the focus on the Aral Sea rehabilitation, building on the existing strong connections in the Republic of Karakalpakstan and opportunity to scale-up	Medium	Medium term
4. Continue working with financial institutions as a strategic niche for GGGI on green financing, and seek opportunities to pursue and expand collaboration on National Designated Authorities (NDA) capacity strengthening / finance vehicles	Medium	Short term
5. Proactively discuss any pivots or modifications in activities and updates to the project logframe with the Project's funding agency; allowing for an annual or mid-term revision of project logframe	High	Throughout the next project cycle
Effectiveness		
6. Implement demonstration projects in advance of the capacity building program wherever possible, so that these pilots can provide practical case studies for the training participants to learn from	Medium	In the design of the next project
7. Consider how best to promote a more inclusive pilot selection process, and which media, such as TV or Telegram, might reach the widest audience	Low	In the design of the next project

		Priority	Timeframe
8.	Link each of the components of the Project more directly so that beneficiaries of one component have knowledge of the other components (e.g. linking access to finance to capacity building)	Low	In the design of the next project
9.	Collaborate more closely with central ministries and the research institutions that work with them on policy development, recognizing that their political/policy priorities change, but that a whole-of-government engagement approach is needed for maximizing policy influence	Medium	Medium term
10.	Carefully plan the implementation of demonstration projects with buffer periods and being cognizant of seasons (e.g. sowing and harvesting seasons in the case of agricultural projects) and include a longer timeframe for project implementation (beyond 3 years) if necessary, to mitigate risks of delays in implementation	High	In the design of the next project
11.	Partner with local universities and/or vocational training centers (at a larger scale) to enable greater access to farmers/fermers to implement the capacity building programs.	Medium	In the design of the next project
Efficiency			
12.	Lengthen the project scoping and set-up phase for projects that are in a new country for GGGI, allowing additional time to ensure stakeholder buy-in and develop strategies for implementation. Making connections with in-country potential implementation partners may assist initial set-up.	High	In the design of the next project
13.	Improve project coordination and communication between GGGI offices through reviewing decision-making responsibilities and decision-points, and devolving responsibilities where possible	Medium	Short-term
14.	Investigate changing procurement systems to allow direct cash payments to suppliers, in order to avoid delays and increase financial efficiencies	Low	Short-term
15.	Deliver technical advisory services in-house rather than through outsourcing to consultants to reduce costs, to the extent possible	Low	Throughout the next project cycle
16.	Ensure all procurement processes are competitive and open to allow for a wider selection of bidders and avoid delays (for example, by only focusing on a subset of the market)	Medium	Throughout the next project cycle
17.	Expand implementation partnerships with local institutions (e.g. universities/ vocational training centers) in capacity building, to draw on their local expertise and leverage their structures	Medium	Throughout the next project cycle
18.	Consider upgrading HR capabilities in country offices to support staff management, employ staff in a timely fashion, make the best use of a potential local workforce, and increase staff retention	High	Throughout the next project cycle
19.	Ensure all positions within the project design are filled (e.g., a M&E position).	High	Throughout the next project cycle
Sustainability			
20.	Future GGGI projects should plan for project follow-up and monitoring periods for any piloting interventions, to enable beneficiaries that have participated in pilots to receive some post-installation support from GGGI and enable the lessons learned from these pilots to be documented and shared.	Medium	In the design of the next project
21.	GGGI should finalize the financing/sustainability plan for the Business Development Platform, with a view to potentially commercializing the platform, so that it is no longer reliant on donor funds.	Medium	Short-term

		Priority	Timeframe
22.	GGGI should plan future capacity building programs as an integrated program wherever possible, linking its service offerings around financing and pilot projects to its capacity building program, for greater coherence, and ensure that the training participants benefit from these other components of the projects.	Medium	In the design of the next project
23.	Partnering with more local institutions, such as universities and other vocational training centers, would likely increase the sustainability of GGGI's capacity building programs.	Medium	In the design of the next project
24.	Further engagement on policy/research with central ministries could also increase GGGI's influence.	High	In the design of the next project
Gender equality and social inclusion			
25.	Ensure meaningful participation of women and youth through project decision-making and oversight mechanisms; for example, through a community representative advisory committee, ensuring there is gender balance in technical advisory consultation processes, and partnering with women's organizations (e.g. women's business associations).	Medium	In the design of the next project
26.	Consider how participants in the Project's capacity building initiatives can have increased access to finance to ensure they can utilize the knowledge gained and implement the training, including through access to resources for equipment and technical support for operating an agri-business.	Medium	In the design of the next project
Monitoring and Evaluation			
27.	Future projects should prepare a more comprehensive M&E plan that includes data collection activities for indicators related to outcomes and impacts (such as on farmer incomes, agricultural productivity, water consumption and scarcity, food security and disaster resilience) o Such M&E plans should be properly resourced and implemented throughout the project	High	In the design of the next project
28.	Future projects should prioritize the incorporation of ongoing and long-term M&E practices in agreements with MOU partners to accurately assess the impacts of project programs/ initiatives where they extend beyond the life of the project	Medium	In the design of the next project
29.	M&E should also focus on improvement in organizational effectiveness and operations, for example, by providing indicators on workforce engagement, teamwork, accountability, efficiency, etc.	Medium	In the design of the next project
30.	M&E plans should also consider target countries' cultural practices, norms and sensitivities - Monitoring, Evaluation and Learning (MEL) processes may need modification to, for example, encompass a more verbal/informal base for regions where verbal rather than written communication is the norm.	Low	In the design of the next project
31.	Systematic monitoring and evaluation of all capacity building programs is needed, for example, through distributing surveys to participants immediately before and after training o Emphasize to the trainers the importance for the participants completing them; o Administer a third survey, possibly via Telegram, some months after the training, to better assess if the theory is being put into practice, and to improve future training programs; o Recording training metadata into a central location, with fields such as date and location of training, name, theme of training, number of participants and inclusion of all relevant demographic indicator fields.	Medium	Throughout the next project cycle

	Priority	Timeframe
Safeguards		
32. For design and implementation of the 'on-ground' pilot projects by GGGI, safeguard screening tools could be used to assess and manage safeguard risks (environmental, social, political and fiduciary).	Medium	Short-term

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.

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