UNITED NATIONS DEVELOPMENT PROGRAMME

MID TERM EVALUATION
PROJECT: SUPPORTING AN INCLUSIVE TRANSITION TO A "GREEN" ECONOMY IN THE AGRI-FOOD SECTOR AND DEVELOPMENT OF A "CLIMATE-SMART" UZBEK AGRICULTURE KNOWLEDGE AND INNOVATION SYSTEM (UAKIS)
FUNDING: EU-AGRIN

Project Number 00129151
Implementing Partner: Ministry of Agriculture, Government of Uzbekistan

EVALUATORS

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ACKNOWLEDGEMENTS

The consultants wish to thank the UNDP for its trust, the UNCO and UNDP team for their availability, kind support and relentless support and feeding with information, as well as the EU Delegation, FAO and all interviewees for their advices, support and guidance.

The vice-minister for Agriculture, and all representatives of the UAKIS, as well as heads and researchers of institutes have shared their time, dedication and vision, and deserve our grateful thanks.

Farmers, shepherds, fishermen, technicians, laboratory technicians, households and villagers have interrupted their work to provide a warm welcome and rich testimony; this report owes a lot to them, and we hope it sufficiently portrays their daily efforts and commitment.

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ACRONYMS AND ABBREVIATIONS

EU	European Union
EIP-AGRI	European Innovation Partnership for Agricultural Productivity and Sustainability
GoU	Government of Uzbekistan
IG	Innovation Group
INFS	Integrated National Framework Strategy
LNOB	Leave No One Behind
M&E	Monitoring and Evaluation
MTE	Mid Term Evaluation
NDC	Nationally Determined Contribution
SDGs	Sustainable Development Goals
TOR	Terms of Reference
UAKIS	Uzbek Agriculture Knowledge and Innovation System
UNCO	United Nations Country Office
UNDP	United Nations Development Programme
UNEG	United Nations Evaluation Group
UN-SWAP	United Nations System-Wide Action Plan
TVET	Technical and Vocational Education and Training

1. EXECUTIVE SUMMARY

The boxes below display the project information.

Project Information	
1. Project Title	**UNDP Uzbekistan ECA Cluster, "Supporting an inclusive transition to a "green" economy in the Agri-food sector and development of a "climate-smart" Uzbek Agriculture Knowledge and Innovation System" (UAKIS) Project**
2. Project Number (Atlas project ID)	00129151
3. Location (Global/Region/Country)	Republic of Uzbekistan
4. Project stage (Design or Implementation)	Design/PAC stage
5. Date	

<table>
<tr><td rowspan="5">Contributing Outcome (UNDAF/CPD, RPD or GPD):

CPD 2021-2025 Output 4.1: Innovation and sustainable climate change adaptation and mitigation initiatives designed and implemented.

UNSDF 2021-2025 Outcome 5: By 2025, the most at risk regions and communities of Uzbekistan are more resilient to climate change and disasters, and benefit from increasingly sustainable and gender-sensitive efficient management of natural resources and infrastructure, robust climate action, inclusive environmental governance and protection.

Indicative Output(s) with gender marker: GEN2</td><td>Total resources required:</td><td colspan="2">EUR 4,150,000</td></tr>
<tr><td rowspan="3">Total resources allocated:</td><td colspan="2">EUR 4,150,000</td></tr>
<tr><td>Donor: EU</td><td>EUR 4,150,000</td></tr>
<tr><td>Government / Ministry of Agriculture</td><td>In kind contributions (project office premises)</td></tr>
<tr><td>Unfunded:</td><td colspan="2">N/A</td></tr>
</table>

This report presents a Mid Term Evaluation (MTE) of the project "Supporting an Inclusive Transition to a "Green" Economy in the Agri-Food Sector and Development of a "Climate-Smart" Uzbek Agriculture Knowledge and Innovation System" (UAKIS) (hereafter "the Project"). The Project is funded by European Union (EU) and implemented by the United Nations Development Program (UNDP).

Project Description

The Project was designed to introduce a specific concept of promoting knowledge and innovation within the currently implementing Uzbek Agricultural Knowledge and Innovation System Strategy, which aims to provide effective solutions to overcome challenges faced by farmers and agri-food businesses.

The Project implements and tests European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) and Innovation Groups (IGs), as a proven concept of providing transfer of knowledge and technologies on climate resilient agriculture to the farming communities.

The overall objective of the EU-AGRIN project is to support broader transformation of Uzbekistan's food and agriculture sector towards climate resilient and low-carbon development by accelerating innovation and scaling up climate action across agri-food value chains through the operationalization of the UAKIS.

It ensures sustainability and introduces new opportunities as it lays the ground to furtherly pursued objective of portfolio of climate-relevant investments and by creating a scale-linking,

primarily through implementation of Innovation Groups, but also through other actions on the policy and field level.

Evaluation Purpose & Objectives

The objectives, audience, intended use, and key aspects of the evaluation were outlined in the Terms of Reference (TOR) and detailed further in this report. This Mid-Term Evaluation (MTE) was initiated by the UNDP Uzbekistan Country Office to review and assess the project's results, efficiency, stakeholder involvement, sustainability, and to provide recommendations for a smooth transition to the second phase. As per TOR, the evaluation aimed to provide comprehensive evidence to substantiate its findings and ratings.
Additionally, donor interviews highlighted an interest in better understanding the project's relevance and sustainability at both the IG level and overall.
Similarly, interviewed international organizations and the ministry expressed interest in assessing the potential for sustaining and scaling the project's impact and the IG approach.

Evaluation approach

The evaluation ultimately generated recommendations related to sustainability, replication, and scaling. This was achieved through a series of methodological steps in the evaluation process:

- desk review of Project Management Unit documents in UNDP
- preparation of an assessment guide for interviews
- field Missions and on-site validation of key tangible outputs and interventions
- continuous integration of human rights, gender equality and disability issues to meet the requirements of the United Nations System-Wide Action Plan (UN-SWAP) on Gender Equality and the Empowerment of Women Evaluation Performance Indicator, and the United Nations Disability Inclusion Strategy.
- data collection
- data Synthesis
- preparation of Evaluation Rating Tables
- recommendation Phase

The continuous triangulation of interviews and data enhanced the methodology, particularly in structuring the analysis of sustainability and innovation. The project operates on multiple levels, consisting of 18 Innovation Groups (IGs), each with its own rationale. Collectively, these groups have the potential to strengthen the Agricultural Knowledge and Innovation Systems (AKIS) and facilitate innovation. Moreover, the concept itself is innovative and holds the potential for replication. Consequently, the evaluation of sustainability, in conjunction with the assessment of "innovativeness"—encompassing aspects such as nature, degree, processes, and the development of various assets—was conducted at these three levels.

Principal findings, conclusions and recommendations

The generic finding is that Specific Objectives of the project are on the way to be attained or even surpassed. A key point of consideration is the project's ability to contribute to the development of agri-food value chains at a meaningful scale, which notably requires support from both the AKIS system and the private sector. To address this, it is recommended to conduct support workshops as the current project reaches completion. These workshops can

help bridge gaps, align stakeholders, and ensure the sustainability and scalability of value chain creation efforts.

Other key findings include:

The project was not dependent on present AKIS development, but rather independently contributed to AKIS, by bottom-up approach. Namely, as comes out form field visits, the project had par level of know-how, and often more advanced level of knowledge (being based on research centres skills), then local AKIS structures.

Innovativeness manifested at multiple levels: from laboratory to field, encompassing the transition from invention to innovation and the potential for future advancements based on new equipment. This process involved implementation, practice, and networks, all of which are integral dimensions of the Innovation Groups (IGs).

The key lesson from the IG projects transitioning from laboratory to field is that the process was bidirectional: field-to-laboratory feedback was just as crucial as the initial laboratory-to-field transfer.

Three key conclusions to highlight are:

Conclusion 1 – While the project has achieved significant and rewarding successes, it holds even greater potential with continued support. As a "patient innovation" initiative, the key lesson for UNDP, donors, partners, implementers, and the Government of Uzbekistan is to focus on analyzing its impact and replicability. This analysis will be essential in deciding whether to continue the project, extend it, or develop a scalable and replicable version.

Conclusion 2 – In assessment of IGs and of the project, sustainability -as well as impact- is to be envisaged at several levels: IG levels, project level, and national scalability levels.

Conclusion 3 – Several IGs have produced scientific and field results that could be effectively combined, warranting further scientific analysis and capitalization.

The main Lesson Learnt is that, by integrating all findings and aligning them with a multi-level sustainability analysis, the project's achievements provide valuable insights and a solid foundation for feeding into and moving toward what the ProDoc refers to as “scale-out innovation.” These outcomes serve as capitalization material and offer lessons applicable to similar initiatives, both within and beyond Uzbekistan.

Evaluation Ratings Tables

Table 1: Evaluation Rating Table relating to the organizational aspects of the project[1]

Project Design/Formulation	Rating

[1] As per UNDP, Guidance for Conducting Mid Term Evaluation Rating follows this scale in Terms of Project Design/Fomulation & Implementation:

- 6 = Highly satisfactory (HS); 5 = Satisfactory (S); 4 = Moderately satisfactory (MS); 3 = Moderately unsatisfactory (MU); 2 = Unsatisfactory (U); 1 = Highly unsatisfactory (HU); Unable to Assess (UA).

The project Effectiveness, and Efficiency was rated for each component (outcome) as follows:

- 6 = Highly satisfactory (HS). The level of outcomes achieved exceeds expectations and/or there were no shortcomings.
- 5 = Satisfactory (S). The level of outcomes achieved was as expected and/or there were no or minor shortcomings.
- 4 = Moderately satisfactory (MS). The level of outcomes achieved more or less as expected and/or there were moderate shortcomings
- 3 = Moderately unsatisfactory (MU). Outcomes achieved somewhat lower than expected and/or with significant shortcomings
- 2 = Unsatisfactory (U). The level of outcomes achieved was substantially lower than expected and/or there were major shortcomings.
- 1 = Highly unsatisfactory (HU). Only a negligible level of outcomes was achieved and/or there were severe shortcomings
- Unable to Assess (UA). The available information does not allow an assessment of the level of outcome achievements

Analysis of Results Framework: project logic and strategy, indicators Assumptions and Risks	HS
Lessons from other relevant projects (e.g. same focal area) incorporated into project design	UA
Planned stakeholder participation	HS
Linkages between project and other interventions within the sector	S
Overall Quality of Project Design/Formulation	HS
Project Implementation	Rating
M&E design at entry	HS
M&E Plan Implementation	HS
Quality of UNDP Implementation/Oversight	HS
Quality of Implementing Partner Execution	HS
Overall quality of Implementation/Execution	HS
Assessment of Outcomes	Rating
Relevance	HS
Effectiveness	HS
Efficiency	HS
Cross-Cutting Issues	S
Overall Project Outcome Rating	HS

Table 2: Evaluation Rating Table : outcomes of IG/project, Sustainability, Impact of the IGs and overall project.

Sustainability	Rating
Financial resources	ML
Socio-political/economic	L
Environmental	L
Overall Likelihood of Sustainability	L
Impact	Rating
Socio-political/economic	S
Environmental	S
Potential for scalability	S
Potential for upbringing/aggregating additional / further innovation	S
Overall Impact	S

Rating is as per UNDP, *Guidance for Conducting Mid Term Evaluation*[2]

The Matrix of evaluation questions has been designed to directly feed into the UNDP standard evaluation tables.
Overall assessment was done based on the main rating across each categories provided dispersion was limited; should an evaluation criteria be low in comparison to the other the final evaluation would be one rating degree below the average of criteria ratings.
Final assessment of overall project sustainability / scalability was made based on totaling all ratings as well as on assessing the outcomes to specific objectives.
The assessments made on "scale out" innovation dimensions and, thereby, the most promising way towards feedbacks and capacitation of lessons learnt is based on triangulating outcomes in the field, project outcomes, and research outcomes.

[2] Sustainability is rated according to the following scale: • Likely (L) negligible risks to sustainability, with key outcomes expected to continue into the foreseeable future. There are little or no risks to sustainability. • Moderately Likely (ML) moderate risks, but expectations that at least some outcomes was sustained. There are moderate risks to sustainability. • Moderately Unlikely (MU) substantial risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on. There are significant sustainability risks. • Unlikely (UL) severe risk that project outcomes as well as key outputs will not be sustained. There are severe risks to sustainability. • Unable to Assess (UA): Unable to assess the expected incidence and magnitude of risks to sustainability.

Impact is rated according to the following scale:
- Significant (S), Minimal (M), or Negligible (N)

The following five recommendations are based on the findings, conclusions, and lessons learned outlined above.

Recommendation 1: As smooth transition to 2nd part of the project, it is recommended to conduct a sustainability feedbacks workshop. This workshop should include self-assessments and scenario planning by IGs, focusing on the level of ownership of results, technical capacity to sustain project benefits, and dependence on continued financial support.

Recommendation 2: To capitalize on lesson learnt, the project should organize a joint national seminar on "The Potential of Impacting Agricultural Needs Through Regional Innovation Hubs and Supportive Local Ecosystems for Scaling." The seminar should focus on capitalizing on cross-IG learning in the following areas:

- Land regeneration (science and field practices),
- Training of trainers (management and skills development),
- Scaling up (financial strategies),
- Database development, data exchange, and forecasting tools.

Recommendation 3: To capitalize on lesson learnt, conduct research to develop financial models (combining quantitative and qualitative approaches) at the level of targeted IGs, to evaluate their potential for strong and long-term sustainability.

Recommendation 4: Consider updating the theory of change of the project, by adding a few sentences to clearly reflect its achievements in concretely defining the "scale out innovation" attempted by the project (as an outcome of above workshops).

Recommendation 5: Recommendation to capacitate the ministry of agriculture and the AKIS system into implementation towards replication of the concept of IGs (Innovation Partnership).

Relevance: The project is aligned with key national strategic documents, and, in a cumulative manner, contributed with a very innovative and holistic approach to land regeneration, water scarcity, and other key challenges, notably serving the Natioanl Adaptation Plan as well as local governments and communities.

Cross-cutting - LNOB: The evaluation assesses the cross cutting issues and their relevance to the project, this included an analysis of gender considerations and human rights. By design, the selected IGs covered three regions, with the capacity to replicate findings and knowledge across other territories, each characterized by diverse natural ecosystems. The IGs simultaneously addressed the needs of socially disadvantaged communities and those with entrepreneurial potential. The project's LNOB approach was applied during stakeholder engagement to mitigate risks and negative impacts on marginalized populations, ensuring their human rights were upheld and preventing discriminatory outcomes. Key measures included safeguarding access to essential resources and services while addressing potential conflicts. Gender considerations were integrated into the project's design and monitoring, although the project operates at the intersection of two sectors—science and agro-industry—that typically exhibit gender disparities.

Effectiveness: Most of the activity KPIs have been achieved, and the objectives are within reach. This has enabled a focused effort on (i) strengthening value chain development and (ii) exploring various levels of project scaling to support national policy development. Notably, scalability is inherently embedded in the DNA of this innovation-driven project, which goes

beyond merely addressing pilot initiatives. The achieved efficiency further reinforces the project's progress and support.

Efficiency: Transcribing laboratory research into the field requires equipment (new or mobilised one), and it makes it a commendable that IGs operate within a budget lower than 40,000 USD. Assessment is positive that this amount is well utilised as per the work plans accepted by the special technical committee. These allowed in return to positively transform earlier effort investment by institutes that remained theoretical research into actionable research. On the latter, and beyond micro outputs of each IG, cofounding exists from the institutes in bringing intellectual assets in kind, as well as time, which gives a good long term investment strategy. In sum, efficiency was ensured by clearly visible and documented repeated visits and cooperation (visits, technical assessments, workshops) in the field.

Impact and sustainability are the most variable factors across individual IGs. Especially as sustainability may be understood at each IG level, at program level (replicability), at national level (scalability) or deep-sustainability. These must be evaluated in relation to the form and degree of innovation, the scientific protocols employed, and the duration of field experiments. It is unrealistic to expect an innovative project to achieve *both* direct impact at scale and deep sustainability within the first cropping season or sometimes the first couple of years, particularly when dealing with higher degrees of innovation, such as policy advancements, extraordinary innovations, or programmatic innovations.

From this eased perspective, it is very commendable that IGs *already* fall into one of the following categories:

- Sustainable and impactful,
- Substantially innovative, and locally impactful,
- Substantially innovative, and sustainable in itself,
- Combining all three qualities of innovation, impact, sustainability

A majority has the potential for straight replication based on consolidated innovation (feedback to institutes) and measured local impact.

Overall, the project can be considered extraordinary innovative, sustainable under specific conditions, impactful, and with significant potential for large-scale, inclusive outcomes.

2. INTRODUCTION

Purpose of the evaluation – Motivations and timeliness of the evaluation

The Mid Term evaluation of UAKIS project has been commissioned primarily to assess project operation and progress since its implementation, in accordance with implementation strategies outlined in the ProDoc. As per Terms of reference, “Based on internal assessment and continuous positive feedback of the stakeholders and project beneficiaries, it is envisaged that UNDP Uzbekistan remains committed in continuing its efforts in this field. Therefore, it was anticipated that the outcomes of the evaluation will be a clear source for future planning and prioritization of UNDP Uzbekistan activities in the field of agriculture. It should provide the basis for learning and accountability for managers and stakeholders.”

The MTE is an independent review of the progress made in achieving the expected Project outcomes; the relevance, effectiveness, efficiency, and timeliness of project implementation; the issues requiring decisions and actions; and lessons learned about the project design, implementation, and management.
This evaluation was conducted in line with the evaluation policy of UNDP (https://popp.undp.org/policy-page/evaluation-policy) and the UNDP Evaluation Guidelines (http://web.undp.org/evaluation/handbook/index.html).
Importantly, the evaluation adhered to the principles outlined in the UNDP Evaluation Guidelines:
• Independence, • Impartiality, • Transparency, • Disclosure, • Ethical, • Partnership, • Competencies and Capacities, • Credibility, • Utility

The methodology of this Mid-Term Evaluation (MTE) primarily assesses the project's performance since its implementation, with a particular focus on the establishment of Innovation Groups (see Annex 3 for further details).
The project operates at various layers:

- Not only, it is composed of 18 Innovation Groups (IGS) each with its distinct rationale;
- Collectively, these groups possess the potential to enhance the Agricultural Knowledge and Innovation Systems (AKIS) system and its support to innovation;
- Finally, the concept in itself is innovative and has the potential to be replicated.

Consequently, the evaluation of sustainability, in conjunction with the assessment of "innovativeness"—encompassing aspects such as nature, degree, processes, and the development of various assets—was conducted across these three levels.

Evaluation scope and objectives

The methodology of this Mid-Term Evaluation (MTE) primarily assesses the project's performance since its implementation, with a particular focus on the establishment of Innovation Groups (see Annex 3 for further details).
The Mid-Term Evaluation (MTE) assessed results through the framework of UNDP evaluation criteria, specifically relevance, effectiveness, efficiency, sustainability, and impact, in relation to the objectives, expected outcomes, and associated indicators achieved through project activities. This evaluation offers a comprehensive assessment of the project as a whole, along with recommendations for an exit strategy and potential follow-up activities.

Project performance was measured based on Project’s Results and Resources Framework, which provides clear indicators for project implementation. The Report of the Evaluation was stand-alone document that substantiates its recommendations and conclusions.

An assessment of project performance was carried out, based on expectations set out in the Project Logical Framework/Results Framework, which provides performance and impact indicators for project implementation along with their corresponding means of verification.

Face-to-face meetings were conducted with the project's key personnel, stakeholders, and beneficiaries. Additionally, evaluators took part in field missions in the project target regions of Tashkent, Fergana Valley, Kashkadarya, and Samarkand city in the Republic of Uzbekistan. These missions included visits to facilities, academic and educational institutions, and Innovation Groups where the project outcomes have been implemented.

Audience of the evaluation

Donors, both current and prospective, may use this report to fund an extension of the project; the management team can leverage various innovation outcomes at the multiple scales at which innovations occur within the project; the government may utilize it to refine the Agricultural Knowledge and Innovation Systems (AKIS) structure and enhance the scalability of Innovation Groups; and finally, the global community can benefit from a well-documented example of multi-level innovation.

Intervention being evaluated

The Project was designed to introduce a specific focus on promoting knowledge and innovation within the currently implementing Uzbek Agricultural Knowledge and Innovation System Strategy, which aims to provide effective solutions to overcome challenges faced by farmers and agri-food businesses.

It is a National Implementation (NIM) Project executed by UNDP Uzbekistan which works closely with the Ministry of Agriculture of the Republic of Uzbekistan which is the National Implementing Partner for this project. UNDP served as the Implementing Entity for this project. UNDP’s services were provided by staff in the UNDP Country Office (Tashkent).

It has 3 specific objectives (SO):
SO1 - To facilitate a phased and knowledge-based development and operationalization of policies and regulatory frameworks conducive to the promotion of 'green' investments across agri-food value chains.

SO2 - To establish a suite of 'Agri-food Innovation Support and Brokering Services' integrated into the Uzbek Agriculture Knowledge and Innovation System, playing a pivotal role in mobilizing public and private funding, galvanizing local knowledge and capacities, and scaling up climate-smart investments.

S03 - To realize innovative projects at the 'farm level,' with a primary focus on smallholder and family farmers, farmer cooperatives, and micro-agri-businesses. These projects aim to pilot and demonstrate effective strategies for mitigation, adaptation, and, where applicable, post-COVID-19 'green' transformational recovery pathways.

Ethics

In accordance with the Terms of Reference (TOR), this section provides a brief review of UNEG's Guidance on Integrating Human Rights and Gender Equality in Evaluation (https://www.uneval.org/document/detail/980). Notably the MTE evaluated:

Towards UNEG Guidance (women/men, class, ethnicity, religion, age, location, etc. 15) duty-bearers of various types, and rights-holders of various types in order to assess whether benefits and contributions were fairly distributed by the intervention being evaluated. The evaluation acknowledged who the stakeholders are and how they are affected, finding no negative effects.
Regarding measures taken to protect the rights and confidentiality of informants, in the short account of interviews given in Annex no name was associated to any statement; on statement that invited to points of attention, these are summarized in a generic way in the account to each interview, but were mobilized more in extenso in the generic analysis of this document when they were relevantly mentioned in several interviews, without associating them to any particular one.

• Limitations to the evaluation - evaluability

An evaluability analysis was conducted during inception phase based on formal (clear outputs, indicators, baselines, data) and substantive (identification of problem addressed, theory of change, results framework) approaches, and the implications for the proposed methodology was identified and addressed, and covered 16 out of the 18 IGs, with access to field.
The evaluation included quantitative and qualitative analyses of Project achievements as related to baseline conditions. It draws upon the conclusions and recommendations of the Project Implementation reports to provide advice on follow-up action needed to support project results.
In all discussions, an emphasis was placed on collegial and constructive dialogue and compiling reliable observations, project performance, and lessons. The interviewers were assisted by an Interview Guide which will provide lead questions that facilitate consistency and coordination of responses from those interviewed. The evaluation involved an objective and independent review of the weight of evidence compiled from reports, interviews/group discussions, and site visits. Reasons for conclusions, ratings, and recommendations was provided based on the evidence. The evaluation drew out key lessons from the project that have implications for the exit strategy and/or for future projects.
Time and money considerations for the evaluation were adequate. Many interviews lasted much monger than planned when the material was there, and all met with fruitful conversation, often continued at lunches or dinners; logistics constraints were thereby turned into opportunities to sustain the exchanges. While consultants had to be constantly on the move, the project team ensured a good follow up on obtaining support material an efficient timing.
As many IGs integrate an experimentation site in a different province to the province hosting the institute, the organization of the two weeks mission was efficiently carried so at to first meet the institutes then meet again in the provinces; allowing for logistics efficiency and for enough time to analyze the documents ahead of the field visits. This, combined with two IGs representatives moving towards the project office, allowed to meet a vast majority of IGs.
Finally, the only ‘limitation’ may have occurred through the fact that first interviews had to jointly grasp the contents of interviews themselves (dedicated IGs) plus the complexity of the project. This however was, t the best of knowledge of the consultants, mitigated by the facts that these interviews were matched few days after with field visits. The risk of stringent limitations appears to be, itself, quite limited.

3. DESCRIPTION OF THE INTERVENTION - PROJECT DESCRIPTION

Context and Challenges

The main objectives of Uzbekistan's transition agenda to Green economy are: (a) improving energy efficiency of the economy and rational consumption of natural resources through technological modernization and development of financial mechanisms; (b) inclusion in priority areas of public investment. Together with various international partners, it aims to support environmentally sustainable economic growth of Uzbekistan through green growth projects, based on the development initiatives of the government at the national and local levels, in alignment with national goals and priorities expressed in National Development Strategy (Action Strategy) for 2022-2026, Nationally Determined Contribution (NDC), and Strategy for Uzbekistan's Transition to Green Economy 2019-2030, covering 1) Green Investment, 2) Climate Action, 3) Climate Resilient Agriculture, 4) Waste Management, 5) Green Buildings.

Climate change implications for agricultural systems in Uzbekistan are already evident. Adaptation measures now in use in Uzbekistan, mostly part of individual efforts, will be insufficient to prevent impacts on agricultural production over the coming decades. Notably, Climate change is expected to have a significant impact on agriculture in Uzbekistan, including: Decreased water availability, Declining soil fertility, Crop yield decrease, Increased intensity of extreme rainfall events, Negative feedback loops as higher temperatures lead to an increased need for water, which leads to increased water scarcity.

Project start and duration, including milestones

Starting Date:	1 November 2021
End Date:	30 September 2025
Duration:	48 Months

Development context: environmental, socio-economic, institutional, and policy factors relevant to the project objective and scope

Uzbekistan's environmental context faces several main problems of priority importance, included in the Environmental Action Program, which provides a large part of the environmental policy and program actions in the country:

1. Environment in regional relations - taking the environmental status of the country into account in international relationships and integration processes;
2. Environmental legislation - establishment and further development of environmental legislation regulating environmental protection and management;
3. Environmental planning and programming - planning and prediction of environmental management needs, carrying out environmental programs and schemes of environmental protection and sustainable environmental management;
4. Economically-driven environmental technology - development and introduction of resource economics and environmentally sound technologies, improvement and upgrading of current processes of production;
5. Environmental monitoring - introduction of an integrated environmental monitoring system for assessment of environmental quality and environmental zoning;
6. Environmental regulation - improvement of environmental control and regulating systems;
7. Environmental education - development and further improvement of environmental education and care systems;
8. Science and environmental policy - creation and introduction of scientifically grounded economic and legal mechanisms for environmental protection and natural resources management;

9. International cooperation for environmental management - development of international cooperation programs on environmental protection problems, environmental management and natural disaster protection;
10. Market-based incentives for industrial environmental management - formation of a system of economic incentives instruments to apply environmental principles to industrial production;
11. Risk assessment - taking environmental risk factors into consideration when making economic decisions;
12. Economic incentives for innovation - establishment of environmental-economic mechanisms to encourage innovation;
13. Transboundary environmental management - working out and approving mechanisms for international relationships to deal with transboundary impacts on the environment.

The main objectives of Uzbekistan's transition agenda to Green economy are: (a) improving energy efficiency of the economy and rational consumption of natural resources through technological modernization and development of financial mechanisms; (b) inclusion in priority areas of public investment. Together with GGGI and other partners, it aims to support environmentally sustainable economic growth of Uzbekistan through green growth projects, based on the development initiatives of the government at the national and local levels.

The government is supported by GGGI in developing and updating policies to create an enabling environment for green investments and prepare projects to directly mobilize investments for climate-resilient agriculture, waste management, and green buildings. These efforts will align with national goals and priorities expressed in National Development Strategy (Action Strategy) for 2022-2026, Nationally Determined Contribution (NDC), and Strategy for Uzbekistan's Transition to Green Economy 2019-2030. The proposed programmatic solutions are as follows: 1) Green Investment, 2) Climate Action, 3) Climate Resilient Agriculture, 4) Waste Management, 5) Green Buildings.

Climate change in Uzbekistan implications for agricultural systems and rural economies are already evident. Adaptation measures now in use in Uzbekistan, largely piecemeal efforts, will be insufficient to prevent impacts on agricultural production over the coming decades.

Notably, Climate change is expected to have a significant impact on agriculture in Uzbekistan, including: Decreased water availability, Declining soil fertility, Crop failures, Increased intensity of extreme rainfall events, Negative feedback loops as higher temperatures lead to an increased need for water, which leads to increased water scarcity.

As one notices different impacts on different crops (for example, a 1°C rise in temperature could lead to up to 60% losses for wheat, but increased temperatures are beneficial for cotton, to sustain food production, Uzbekistan will need to implement sustainable agriculture principles and properly manage all risks. This includes improving irrigation techniques and increasing the availability of water.

In Uzbekistan, a concept for the implementation of national goals and objectives in the field of sustainable development for the period up to 2030 was developed in response to changing climatic conditions, increased droughts, changes in river flow, and an increase in water demand. A comparative analysis of the costs of agricultural land was carried out using the example of cotton production employing drip irrigation technology in some regions of the republic, based on the study of the experience of effective management of water and land resources in arid regions.

Uzbekistan Strategy for the Development of Agriculture for 2020-2030, based on an extensive review of the main constraints and opportunities in agricultural land, water resources, forestry, agri-environment, seeks to develop a competitive, market and export-oriented agri-food sector that will increase farm incomes, create new jobs, enhance food security, and ensure the sustainable use of natural resources.

The Agriculture Strategy consists of nine strategic priorities which include ensuring food security, promoting private investments through a robust agri-business climate and enhanced public services, building up world class value chains and a network of agricultural knowledge and advisory services, ensuring sustainable use of natural resources. These priorities are closely aligned with the Uzbekistan Government commitment to support the achievement of the Sustainable Development Goals (SDGs), with emphasis on SDGs 2, 5, 6, 13 and 15.

Implementation of the Agriculture Strategy is designed to accelerate the adoption of modern technologies, moving the country to the forefront of agri-food industry efficiency and innovation and establishing Uzbekistan as the leading exporter of high-value agri-food products in Central Asia and beyond.

Priority 7 of the Agriculture Strategy is focused on the development of a modern, integrated, and flexible support system for the development of agriculture research, education, training, information, and advisory services. The UAKIS Strategy and Roadmap is designed to directly contribute to the fulfillment of this strategic objective and address the multiple challenges that are currently constraining progress.

The Project implements and tests European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) and Innovation Groups (IGs), as a proven concept of providing transfer of knowledge and technologies on climate resilient agriculture to the farming communities.

The overall objective of the EU-AGRIN project is to support broader transformation of Uzbekistan’s food and agriculture sector towards climate resilient and low-carbon development by accelerating innovation and scaling up climate action across agri-food value chains through the operationalization of the UAKIS.

Problems that the project sought to address, threats and barriers targeted

EU-AGRIN ensures sustainability and introduces new opportunities as it lays the ground to furtherly pursued objective of portfolio of climate-relevant investments and by creating a scale-linking, primarily through implementation of Innovation Groups, but also through other actions on the policy and field level.

The principal global social, development and environmental benefits of the project derive from its overall objective to “contribute to the broader transformation of Uzbekistan's food and agriculture sector towards climate-resilient and low-carbon development by accelerating innovation and scaling up climate action across agri-food value chains through the operationalization of the UAKIS” (ProDoc).

Out of several challenges analyzed by the government as a base for UAKIS, the Prodoc keeps “the key barriers to resilience in Uzbekistan are as follows:

(i) Centrally planned and centrally managed agriculture production systems and services are poorly equipped to meet the vastly different and constantly changing needs of a market-based, private sector driven agri-food system

(ii) Lack of integration between the producers and research communities, that leads to poor climate change and resilience agendas in the national and sectoral planning and policies: insufficient understanding and mainstreaming of climate-fragility risks, adaptation strategies and plans, and insufficient integration of human development objectives/measures in national adaptation planning;

(iii) Fragmented and uncoordinated legal framework, characterized by a significant number of decrees and resolutions, prescribing the management and resourcing of agriculture research, education, and training with no effective mechanisms for their implementation.

(iv) Extremely low level of public investment in agriculture research (currently 0.2% of the total agricultural budget), with little or no evidence of mechanisms for the practical transfer, uptake, or implementation of publicly funded agriculture research at all levels.

(v) Outdated higher and secondary educational framework (curricula, teaching material), focused predominantly on the provision of theoretical courses, teaching methods and practices, with limited provision of practical teaching and training, or linkages with farming or agri-food business skills needs.

(vi) Predominance of top down, non-diversified, fragmented agriculture vocation training system, with limited linkages to farmers day-to-days problems, real needs and/or challenges.

(vii) No current public or private system for the provision of advice, information and/or knowledge development services to support and guide farmers and agri-businesses, with attention to the specific needs of women in farming and agri-business.

(viii) Low participation of research and knowledge generating community in planning and provision of advice to assist in coordinating agricultural activities, policies, strategies and legislation.”

The evaluation clearly found that, while points (iii) and (iv) are out of direct reach of the project, all IGs visited by the consultants have not only contributed to solve these issues within the perimeter of IGs, but have also provided a framework or template for contributing to solve these issues nationally, should Innovation Partnership and IGs be generalised.

List of Innovation Groups with official names and compositions, budget

INNOVATION GROUPS UNDER EU AGRIN PROJECTS

Project Number:	Leading entity	Project title	Innovation Groups	The project leader	Cost, Mln UZS
#01/2023	Cotton breeding, seeds production and agrotechnologies research institute	New cotton varieties C-6580 and C-8296 implementation suitable for Fergana region soil and climate conditions and adoption the water and resource efficient technologies and integrated pest control measures	Cotton breeding, seeds production and agrotechnologies research institute, Branch of the Agency for Plant Quarantine and Protection in Kuva district, Fergana Polytechnic Institute, "Kosim-Karvon" Farm Enterprise, Agricultural Services Center (AKIS) of Fergana Region	Kurbonov Abrorjon Yorkinovish	450
#02/2023	Institute of Genetics and Plant Experimental Biology of the Academy of Sciences of the RUz	Seed production of new Ehtiyoj and Khotira varieties of soybeans suitable for the soil and climate conditions of Tashkent region	Institute of Genetics and Plant Experimental Biology of the Academy of Sciences of the Ruz, Yangihayat, Sharqiyabonu, Fayz farm, Amir, Vali, Fayz seed LLC, Tashkent region agroservices (AKIS) center.	Kurbanbaev Ilhom Jumanazarovich	437
#03/2023	Cotton breeding, seeds production and agrotechnologies research institute Kashkadarya Scientific Experimental Station	Organization of primary seed production of new SP-2602 medium fiber and Kashkadarya-5 fine fiber drought and heat resistant cotton varieties suitable for the soil and climatic conditions of the Kashkadarya region	Cotton breeding, seeds production and agrotechnologies research institute Kashkadarya Scientific Experimental Station, Southern farming Scientific-research institute, Saparova Tursuntos" farm, Agricultural Services Center (AKIS) of Kashkadarya Region	Jumaev Shukur Babaqulovich	450
#04/2023	Research Institute of Plant Genetic Resources	Introduction of new Barkaror variety of mungbean using innovative land and water management technologies	Research Institute of Plant Genetic Resources, Research Institute of Irrigation and Water Problems, Fergana Research Station of Research Institute of Cereals and Legumes, Mirzakamol farm	Alikulov Safar Menglikulovich	448,2
#05/2023	Southern Agricultural Scientific Research Institute	Adaptation of agricultural technology for new "Nasaf" and "Zilol" durum wheat varieties cultivation and launch of pasta production	Southern farming Scientific-research institute, Urugchilik taraqqiyoti farm, Agricultural Services Center (AKIS) of Kashkadarya Region	Amanov Oybek Anvarovich	450
#06/2023	Southern Agricultural Scientific Research Institute	Introduction and organization of seed production of new varieties of spring wheat for low-water, arid regions	Southern farming Scientific-research institute, Urugchilik taraqqiyoti farm, Agricultural Services Center (AKIS) of Kashkadarya Region	Dilmurodov Sherzod Dilmurodovich	450
#07/2023	Institute of Genetics and Plant Experimental Biology of the Academy of Sciences of the UZ	Growing of heat-resistant soft winter wheat variety Ezoz irrigated with drip irrigation	Institute of Genetics and Plant Experimental Biology of the Academy of Sciences of the UZ, Yashil Ziroat farm, Qibray Nikholi production cooperation, Agricultural Services Center (AKIS) of Tashkent Region	Meliev Sodir Karimjonovich	448,68
#08/2023	Southern Agricultural Scientific Research Institute	Introduction of high-yielding varieties of pistachios into seedling production by in vitro microclonal reproduction technology	Southern farming Scientific-research institute, Oltinboev eri farm, G'ofirjon Jumaev invest farm, Kashkadarya Region Agroservices Center (AKIS)	Begmatov Bekzod Elmurod ogli	439,9215
#09/2023	Cotton breeding, seeds production and agrotechnologies research institute	Introduction of a resource-efficient technology of summer siderate crops that increase soil fertility and cotton yield at Tashkent region conditions	Cotton breeding, seeds production and agrotechnologies research institute, "Shukurullo Yasmina Agro" Farm , Agriculture Knowledge and Innovation Systems (AKIS), Department of Agriculture of Tashkent region, Agriculture Department of Buka district	Durdiev Normat Hasanovich	450
#10/2023	Scientific-research institute of Vegetables, Melon crops and Potato	Organization of primary seeding of promising varieties of non-traditional okra and artichoke crops to climate conditions of Tashkent Region	Scientific-research institute of Vegetables, Melon crops and potato cultivation, Plant protection and quarantine Research Institute, Ghulomnazar tabarruk farm, Agroservices center of Tashkent region (AKIS)	Ibrohimov Bakhodir Akmal ogli	447
#11/2023	Scientific Research Institute of Irrigation and Water Problems	Introduction of drip irrigation at water scarcity conditions in household areas using alternative energy	Scientific Research Institute of Vegetables, Melons and Potatoes, International Strategic Center for Agri-Food Development (ISCAD), Center of Agricultural Services (AKIS) of Tashkent Region, Council of Farmers, Peasants and Household Land Owners of Okkurgon District, Kushtepa Mahalla of Okkurgon district.	Gapparov Samandar Mamatqulovich	449,902
#12/2023	Samarkand Agroinnovations and Research University	Biological control against a pest harmful to crops - Whitefly (Aleyrodidae)	Samarkand Branch of Tashkent State Agrarian University, Samarkand Regional Branch of the Research Institute of Plant Quarantine and Protection, Samarkand regional center of agricultural services (AKIS), Sayfullaeva Mashkhura farm	Pulatov Otamurod Aslamovich	411,03
#13/2023	"Agrarian women" Association of of Uzbekistan	Adaptation of livestock sector to climate change and introduction of modern technologies in dairy products production	Scientific-research institute of of Livestock and Poultry, Tashkent State Agrarian University, Zangiata Agrotechnological Vocational College, Eski Juva Biznes farm, UMID farm, Agricultural Services Center (AKIS), 5 personal subsidiary farms.	Akhmedjanova Adiba Kamiljanovna	444,9
#14/2023	Scientific Research institute of of Livestock and Poultry	Production of meat and wool by artificial insemination of merino sheep of woolly and meat breeds	Scientific-research institute of of Livestock and Poultry, Kholturaev Oybek" farm, Kizil Bobur farm, Ohangaron Abdullaev Abdurauf farm	Ruzibaev Nuraddin Rakhimovich	448
#15/2023	Scientific Research Institute of Fisheries	Intensive fish farming technology in small reservoirs (basins).	Scientific Research Institute of Fisheries, Besharik district 2nd Vocational School, Forel namuna Fishing Farm	Qurbonov Abdulla Ruxullaevich	449,4
#16/2023	Scientific-Research Institute of Horticulture, Viticulture and Winemaking named after Academician Makhmud Mirzaev	Introduction of the in vitro technology for vine grafts seedling (rootstock and scion) cultivation at the Tashkent region conditions	Scientific-research institute of horticulture, viticulture and winemaking named after Academician M. Mirzaev,Scientific Research Institute of Irrigation and Water Problems, Business Garden Park farm, Zangiota Agrotechnological College, Tashkent Agroservices Center (AKIS)	Boyjigitov Fozil Muhammadievich	450
#17/2023	Institute of Microbiology of the Academy of Sciences of the RUz	Bioremediation of saline soils using microorganisms	Institute of Microbiology of the Academy of Sciences of the Ruz, Soil Composition and Repository, Quality Analysis Center - DUK, Sardorbek Makhkamov Fayzi farm, Fergana Region, Dangara District Agro Services Center (AKIS)	Khusanov Tokhir Sunnatovich	449
#18/2023	Scientific-research institute of Vegetables, Melon crops and potato cultivation	Introduction of technology for growing and drying organic tomatoes using a solar-powered drip irrigation system	Scientific-research institute of Vegetables, Melon crops and potato cultivation, Plant protection and quarantine Research Institute, Scientific Research Institute of Irrigation and Water Problems, Far Islambek farm, Agroservices Center of Fergana region (AKIS)	Nizomov Rustam Akhrolovich	444,2

Source: Project team

Main stakeholders: summary list

The project is being implemented side by side with the relevant state institutions and stakeholders, closely cooperating with local, national, and international actors including public and private sector and research and innovation labs; the latter – innovation labs being yet to be developed at this stage. This will enable inclusion of the EU institutional experience and scientific evidence to support decision-making. In general, the project will build on existing networks and platforms to accelerate innovation and investment through the establishment of advisory services and support networks as well as facilitating a gradual digital transition.
Notably, the Project will hold cooperation with National research institutions and academia and European and international research partners listed in the Project Document (pp. 19 & 20), the "Long-term commitment" of the "non-governmental organizations and academia to facilitate and support the implementation of the UAKIS strategy and the EU Action by providing access to relevant information and contributions in the form of technical and human resources" identified as determining factor of success in the ProDoc's 'risk & assumptions' section.

Research institutions:

- ✓ Scientific-research institute of agro technologies of cotton breeding, seed-breeding and cultivation
- ✓ Kuva district branch of Scientific-research institute of agro technologies of cotton breeding, seed-breeding and cultivation
- ✓ Kasbi district branch of Scientific-research institute of agro technologies of cotton breeding, seed-breeding and cultivation
- ✓ Scientific-research institute of vegetables, pulse crops and potatoes
- ✓ Research Institute of Horticulture, Viticulture and Winemaking named after Academician Mahmud Mirzayev
- ✓ Research Institute of Plant Protection
- ✓ Research Institute of Plant Genetic Resources
- ✓ Southern agricultural scientific research institute
- ✓ Animal Husbandry and Poultry Research Institute
- ✓ Ohangaran district branch of Animal Husbandry and Poultry Research Institute
- ✓ Scientific Institute of Fisheries
- ✓ Samarkand Agroinnovations and Research Institute
- ✓ Institute of Microbiology of the Academy of sciences of the Republic of Uzbekistan
- ✓ Institute of Genetics and Plant Experimental Biology of the Academy of sciences of the Republic of Uzbekistan
- ✓ Research Institute of Irrigation and Water Problems
- ✓ Beshariq district branch of Research Institute of Cereals and Legumes
- ✓ **TVET's**
- ✓ Zangiota Agrotechnological College, Tashkent region
- ✓ Besharik district College #2

As well, IG members such as Agrarian women association, Farmers and house holders listed in Annex 4, have been interviewed.

Analysis of the coherence and difference: the ex-ante and ex-post lists are coherent in spirit: they show the project had early guarantees of involvement of key national research institutes and has been able to adjust to final IGs and integrate several stakeholders.

On the international stage, an active cooperation with CREA has developed. As CREA in fact represents 12 institutes, the objective of partnering “minimum 3” international institutes has been achieved.

Theory of Change

Theory of Change (TOC) of the project as defined by the ProDoc is “based on the understanding that the pathway to sustainability and resilience requires systemic changes that will countries transition towards: (i) reshaping long-term vision for resilient and socially inclusive development in selected regions; (ii) ability at national and local levels to establish and maintain strong and sustainable institutional and knowledge based networks for risk-informed, people-centred and long lasting development of agro-food production; (iii) scaling up data-driven and gender-responsive smart policies and solutions to address climate change impact, namely adaption and disaster resilience towards more green and effective agriculture.” Additionally, we find that the following section of the ProDoc is particularly explicit as for objectives:
The intention of the proposed project is to establish a range of Agri-food Innovation Support and Brokering Services that will play a crucial role in galvanizing local knowledge and capacities and getting many worthwhile practical projects off the ground, accelerating the process by which ideas can be turned into innovations and used by farmers and agri-businesses to respond to the growing threats caused by climate change, boost rural livelihoods and promote sustainable resource use and protection. The strong focus on inclusion will be followed in developing innovative public-private collaboration models to support small producers. The project will support a systemic change, which will facilitate larger “green” investments in the agri-food sector and which will ensure inclusive access to related support services and financing.

4. EVALUATION APPROACH AND METHODS

This section describes the procedures used to analyse the data collected to answer the evaluation questions.

Data Collection

Data Collection: The tools employed for the collection of the relevant data include:

- **Documentary review**: Includes all the documents listed in the TOR as well as any additional project documents requested to supplement the missing information in the mentioned documents, inter alia:

- Project document (contribution agreement).
- Theory of change and results framework.
- Programme and project quality assurance reports.
- Annual workplans.
- Activity designs.
- Consolidated quarterly and annual reports.
- Results-oriented monitoring report.
- Highlights of project board meetings.
- Technical/financial monitoring reports.
- One-pagers and descriptions of results for each IG

- **Interviews with stakeholders (men and women; see Annex)**:

- Key government counterparts, donor community members, representatives of key civil society organizations, United Nations country team (UNCT) members and implementing partners:
- Semi-structured interviews provide this evaluation team with the opportunity to speak frankly with key stakeholders. This method also ensures a participatory approach, giving equal voice to all stakeholders and ensuring that different perspectives are evaluated to reach conclusions about the different processes undertaken by the project. The interviews were structured according to the matrix of evaluation questions, so that the criteria was addressed in the interviews, without necessarily asking a question per criteria or mentioning these in interviews.
- Key informant and focus group discussions with men and women, beneficiaries and stakeholders. All interviews with men and women should be undertaken in full confidence and anonymity. The final evaluation report should not assign specific comments to individuals including male and female participants in development programmes,
- Other methods such as outcome mapping, observational visits, group discussions, and cross-checking with IG one-pagers declared results, PPT presented by institutes, observational visits, group discussions,

- **Field Missions and on-site validation of key tangible outputs and interventions:** The evaluation field mission was conducted to perform face-to-face consultations with the stakeholders, using semi-structured interviews based on the discussion points in a conversational form.

Data Analysis

Above data allowed for cross references from different perspectives: each issue raised was addressed from the point of view of the project/document, from the perspective of the government and stakeholders in the private sector and civil society.

As a result , this evaluation obtained information and evidence that reflect the perspectives of various stakeholders , enabling the formulation of well grounded recommendations regarding the project's management.
Detailed analysis on disaggregated data was undertaken as part of this evaluation from which findings were consolidated to make recommendations and identify lessons learned for enhanced gender-responsive and rights-based approach of the project.
Notably, Gender equality and women's empowerment as well as LNOB was paid utter attention with number of women attending/participating each meeting during the interviews (see annexure). In this context, an assessment was conducted:

- How did the project contribute to gender equality and women's empowerment:
- Level of progress of gender action plan and gender indicators in results framework
- In what ways did the project's gender results advance or contribute to the project's outcomes
- To what extent was the UNDP initiative designed to appropriately incorporate in each outcome area contributions to the attainment of gender equality
- To what extent did UNDP support positive changes in terms of gender equality and were there any unintended effects
- Level of initiative towards the attainment of gender equality in project activities

Participatory and LNOB approach at each aspect of the project design and implementation (phase); representativity, inclusiveness and balance during the evaluation mission itself.

5. FINDINGS

After a summary presentation (7.1), Findings detailed discussion is structured as per design/formulation of the project (7.2), project implementation (7.3), project results and impact (7.4).

5.1 SUMMARY OF FINDINGS

Findings – Specific Objectives are on the way to be attained or even surpassed.

While the tables above highlight a positive overall impact, the evaluation findings can be summarized based on the Specific Objectives (SO) of the project.

SO1 - To facilitate a phased and knowledge-based development and operationalization of policies and regulatory frameworks conducive to the promotion of 'green' investments across agri-food value chains.

- Finding 1.1. An Institutional success, with the project setting the stage for the adoption of the presidential decree "On Additional Measures to Improve Quality and Efficiency by Integrating Science, Education, and Production in the Agricultural Sector."
- Finding 1.2. Actual implementation of research happened through the validation of concept of IGs, opening avenues for a new research; including the potential for fruitful international cooperations,
- Finding 1.3. Activity 2.1 aims to “Establish Agri-food Innovation Operational Groups and solicit innovative proposals on climate-smart agriculture and the transition to ‘green’ agri-food value chains.” A key consideration here is the project’s ability to contribute to the creation of agri-food value chains at scale. Achieving this would require support from the AKIS system and the private sector. This challenge could be addressed through additional capacity-building efforts, such as support workshops, as the current project concludes.

SO2 - To establish a suite of 'Agri-food Innovation Support and Brokering Services' integrated into the Uzbek Agriculture Knowledge and Innovation System, playing a pivotal role in mobilizing public and private funding, galvanizing local knowledge and capacities, and scaling up climate-smart investments.

- Finding 2.1. The project operated independently of the current Agricultural Knowledge and Innovation System (AKIS) development, contributing to it through a bottom-up approach. This independence was a key factor in mitigating the potential risk of the project becoming overly reliant on the AKIS framework. Field visits revealed that such a dependency did not materialize, largely because the project demonstrated a comparable level of know-how and, in some cases, a more advanced level of knowledge than the local AKIS structures. This was made possible by the project’s strong foundation in the expertise and skills of research centers, which positioned it as a valuable complement to the AKIS system rather than being dependent on it.
- Finding 2.2. Local AKIS structures, in turn, gained an opportunity to enhance their capacity through the project. This opportunity was likely solidified by the Presidential decree mentioned in the report, as well as by the project’s effective management. Field observations indicate that the project successfully built trust with AKIS structures, fostering their active engagement and collaboration.

S03 - To realize innovative projects at the 'farm level,' with a primary focus on smallholder and family farmers, farmer cooperatives, and micro-agri-businesses. These projects aim to pilot

and demonstrate effective strategies for mitigation, adaptation, and, where applicable, post-COVID-19 'green' transformational recovery pathways.

- Finding 3.1. Innovativeness was demonstrated across multiple levels within the project. It spanned the transition from laboratory research to practical field applications, transforming inventions into innovations and creating opportunities for future advancements, particularly through the utilization of specialized equipment. This innovation extended to implementation processes, practical applications, and the development of networks, showcasing the comprehensive and multi-dimensional nature of the Innovation Groups
- Finding 3.2. Beyond achieving planned innovation, side innovation or sometimes additional substantial innovation emerged through suggestion sand ideas of IGs, beyond the initial integrated plans. This is noticeable within several IGs. For instance, one IG went beyond artificial insemination to include the protection and regeneration of pastureland; another extended beyond microbiology targets, to incorporate the use of siderate crops, modern irrigation techniques, and the introduction of new crop varieties. These additional innovations, based on a two-fold technical impact, lay the ground for further adaptable program, that, is, to replicability and scalability.
- Finding 3.3. The key lesson to be drawn from capacity building and learning in projects rooted in science and innovation is that the process is not one-directional. Feedback from the field to the laboratory is just as crucial as the transfer of knowledge and innovation from the laboratory to the field.

7.2 PROJECT DESIGN/FORMULATION

Analysis of Results Framework: project logic and strategy, indicators

Framework and project logic

Outputs are twofold:

- Output 1: Establish Agri-food Innovation Support and Brokerage Services: operationalization support services

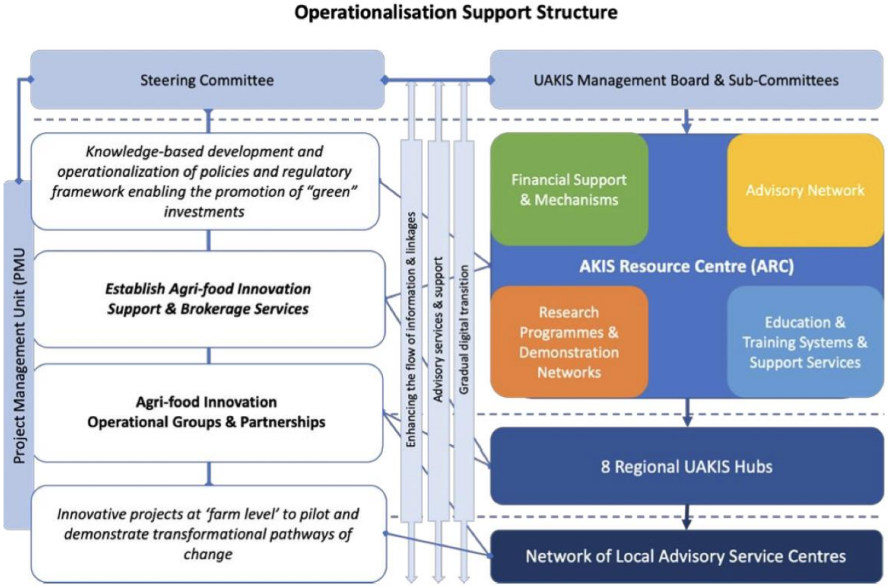
- Output 2: Agri-food Innovation Operational Groups and Partnerships.

The Specific Objectives are as follows:

- To facilitate a phased and knowledge-based development and operationalization of policies and regulatory frameworks conducive to the promotion of 'green' investments across agri-food value chains.
- To establish a suite of 'Agri-food Innovation Support and Brokering Services' integrated into the Uzbek Agriculture Knowledge and Innovation System (UAKIS), playing a pivotal role in mobilizing public and private funding, galvanizing local knowledge and capacities, and scaling up climate-smart investments.
- To realize innovative projects at the 'farm level,' with a primary focus on smallholder and family farmers, farmer cooperatives, and micro-agri-businesses. These projects aim to pilot and demonstrate effective strategies for mitigation, adaptation, and, where applicable, post-COVID-19 'green' transformational recovery pathways.

These two outputs and three objectives, according to the consultant, are well articulated as the specific objectives are understood reading them in the reverse order: IGs at farm level are

bricks to establish the agri-food innovation support and brokering services, ultimately contributing to policies, in a bottom-up approach as the figure below illustrates.



The consultants wish here to point that such a structure could have led to a dependency risk for the whole project to depend on the AKIS system (see risk analysis section). The fact that it did not arise, as comes out from field visits, is because the project, on the field, is at par level of know-how, and at more advanced level of knowledge (being based on research centres skills), with local AKIS structures.

Strategy

As per the ProDoc, the strategy is jointly inclusive and operates within the broader AKIS system:

"All Operational (Innovation) Groups supported through the project will be obliged, as a pre-condition of the support they receive, to share and report all the results they achieved to stimulate innovation within the UAKIS network (and other relevant networks both domestically and internationally). The project will develop practical communication and promotional support services, knowledge networks and other mechanisms facilitated through the UAKIS infrastructure to ensure roll out to other relevant regions/ areas"

"Priority target clients for advisory extension services (i.e. recipients of advice, training, knowledge etc.) are anticipated to include the following groups, with attention to the inclusion of women in all relevant groups:

(i) Small and medium scale farmers (Dehkan & Private Farms): This includes family farms and small-scale farms whose incomes are predominantly from farming.

(ii) Small & medium scale rural entrepreneurs: This includes individual rural entrepreneurs, family businesses and companies, primarily aimed at business with less than 200 staff.

(iii) New agriculture and rural business start-ups: This includes young farmers and young rural entrepreneurs between the ages of 18 up to 40 years of age.

(iv) Medium and large-scale farms & agri-businesses: This includes other medium and larger-scale farms and agri-businesses that will be secondary target clients of AKIS services.

(v) Vulnerable population groups (which will include remotely located communities that have challenges in accessing to water and fetial land, unskilled and underemployed youth), whose knowledge in agricultural production will enhance their income and status.

(vi) Women who are engaged in agricultural production and want to increase productivity and the competitiveness of the value chain."

Indicators

Understanding the project's organization is challenging because the ProDoc separates the activities (pages 13–18) and the logframe with indicators (pages 31–33), and there is no table to clearly match them. Additionally, Output 1 includes 4 activities and 7 indicators, while Output 2 includes 4 activities but only 2 indicators, adding to the complexity. The consultant suggests creating such a table before proceeding with further analysis, particularly to reassess and potentially refine the naming of each output.

On indicators and value chain

The consultant raises an analytical question about whether the current project indicators effectively reinforce value chain analysis and contribute to its actual development. Some concerns have been identified in this regard.

The first series of activities and indicators clearly aligns with what can be categorized as "support functions" for the establishment, operation, and continuous improvement of the IGs and their institutional ecosystems—both direct and indirect. Specifically, Activity 1.1 focuses on policy; Activities 1.2 to 1.4 focus on assets and tools, both individually and collectively (e.g., activity 1.4). This series of activities and indicators, which could also be described as part of a "science-policy" ecosystem, is particularly evident in indicators 1.1 to 1.7.

The second series of activities is less homogeneous and more complex and ambitious:

- Activities 2.1 to 2.3 focus on the IGs themselves. These activities are essential and well-executed in the field, following a "direct project support" approach aligned with project management principles.

- Activity 2.4 lies at the intersection of capitalizing on IG outcomes and preparing for project expansion. This activity is crucial and carries tremendous potential for enabling scalability, appropriability, and serving as a "seed for program" development.

However, while these activities (2.1 to 2.4) collectively contribute to the foundation of value chain development, none explicitly focus on this objective, which is linked to Indicator 2.2. There is a direct alignment with Indicator 2.1 (and potentially with activities 1.2 to 1.7), but Indicator 2.2 appears less substantiated within the logical framework.

That said, the project's strong emphasis on establishing explicit support systems and fostering a proactive institutional environment has been instrumental in ensuring the success of every

IG. This analysis should not be seen as negative or critical but rather as reflective, offering entry points for anchoring IGs as seeds of value chain development.

In this context, the saying, "Form links up to contents" (Victor Hugo), provides insight into why the link between IGs and value chains, while indirect, needs further clarification. This observation aligns with the project team's own reflections as stated in the risks section: “Direct impact on chains related to IGs, indirect to others – needs to be clarified.”

The consultant does not perceive a high risk here, as the project team has been fully aware of this challenge from the beginning. The ProDoc acknowledges this by stating:

“The central design challenge is to build the capacity of actors at all levels to mutually learn from all parts of the value chains of the agri-food system in an ongoing process of generating options for innovation and investment. The central objective is, therefore, to create an experiential learning system and enhance the flow of information and the building of linkages across the entire agri-food system value chain. This is an integrated, cross-sectoral, and trans-disciplinary approach—engaging with both local and international academic and research institutions to build scientific evidence to support decision-making.”

As a conclusion, while indicators should not be altered during the current project, they could be reconsidered in a potential second phase or follow-up project. Value chain creation workshops could be organized during this project to strengthen alignment with the value chain objectives.

Output	Activities	Indicators
Output 1: Establish Agri-food Innovation Support and Brokerage Services: operationalization support services	-Activity 1.1. Support and facilitate improvements in the policy and regulatory framework for effective implementation of the Agri-food Innovation Support and Brokerage Services and for scaled-up climate action in the agri-food sector -Activity 1.2. Building institutional capacity and partnerships among UAKIS stakeholders to effectively deliver Agri-food Innovation Support and Brokerage Services -Activity 1.3. Participatory planning and identification of project portfolios -Activity 1.4. Establishing a continuous feedback, learning and knowledge management system under UAKIS	1.1 Assessment of policy and regulatory barriers to scaled-up climate action and “green” transition. 1.2 Number of knowledge products elaborated per priority area, their status and availability (O2.1, O2.2) 1.3 Number of policy makers informed by the Action about the new knowledge products (O2.3) 1.4 Number of professional staff and researchers trained (O3.1) 1.5 Number of professional organizations strengthened with research and training interventions (O3.2) 1.6 Number of EU research organizations mobilized by the action (O4.1) 1.7 Number of subject specific, evidence-based policy briefs prepared and supported to policy address constraints to the uptake of new innovations.
Output 2: Agri-food Innovation Operational Groups and Partnerships	-Activity 2.1. Establishing the Agri-food Innovation Operational Groups and soliciting innovative proposals on climate-smart agriculture and transition to “green” agri-food value chains -Activity 2.2. Delivery of training, capacity building and technical advice to the members and partners of the Agri-food Innovation Operational Groups -Activity 2.3. Delivering targeted financial support and investments for innovative projects with climate change mitigation and adaptation benefits -Activity 2.4. Innovation networking and exchange program to promote uptake in other regions/areas	2.1 Number of new Agri-food Innovation Groups and Partnerships (operational groups) established with the project support 2.2 Number of food and agriculture value chains supported by the project on climate resilience and emission reduction

Table: Recollection of Output, Activities, Indicators, by the consultant (source: ProDoc)

While the activities and indicators provide a framework for structuring the project team's work and assessing progress, they do not necessarily align perfectly. However, there is a clear correspondence between them, as well as potential for dual use. This has implications that the project team, UNDP, and the EU may wish to consider or reject based on their priorities:

- Improving readability and usability: To enhance the readability and understanding of the project—making it easier to appropriate and disseminate—we introduce above a consolidated view of the project that explicitly matches activities with indicators. This could take the form of a derived format.
- Internal and external clarity: The team may wish to reflect on whether, despite the clear understanding of the activity-indicator linkage at the management level, this clarity is equally evident to team members, stakeholders, and potential new partners. Ensuring this alignment could be particularly important when engaging new stakeholders for project extensions, renewals, or follow-up initiatives based on current results.

Dynamic indicator tracking: Establishing such a linkage would enable the creation of a dynamic matrix of indicators. This matrix could help identify which indicators remain valid, need to be achieved, or require improvement, offering a flexible tool for tracking progress and adapting to evolving project needs.

Assumptions and Risks

Assumptions

Assumptions are reasonable, and, as observed from the field mission, realistic (clustered by the consultant for analysis below):

● Political willingness in the country to cooperate on transition to “green economy” and climate action, including timely adoption of the UAKIS regulatory framework

● Long-term commitment of the Government of Uzbekistan, non-governmental organizations and academia to facilitate and support the implementation of the UAKIS strategy and the EU Action by providing access to relevant information and contributions in the form of technical and human resources.

Analysis: the overall institutional environment was conducive and is likely to remain so, based on national interviews

● A strong and sustainable network of institutional partners is established and maintained for the project implementation led by beneficiary governments.

● Clear lines and means of communication and dissemination of information are established

Analysis: this was demonstrated and achieved by the project and should lead to limited risks, if no risks as the project is ahead of objectives

● Alignment with needs identified by the government translate into full support by the authorities, private sector and beneficiary farming communities in the implementation phase.

● Decision-making by recipient authorities is overall timely and coherent.

Analysis: This is the most critical factor to consider when evaluating value chains and, more broadly, the scaling up of training. It is not a "risk" but rather a key area requiring focused attention.

● Policy priorities do not suffer sudden and radical changes.

● Resources for implementation, including Government resources for the management and development of the UAKIS network are sufficient and available timely.

Analysis: This assumption rather pertains for the long term deployment of the results of the project; the project itself is insulated from any risk based on this assumption

Risks

No “high risk” was identified in the ProDoc. “Overall, there are two main assumptions underpinning the success of the project:

- (a) Political willingness in the country to cooperate on transition to “green economy” and climate action, including timely adoption of the UAKIS regulatory and institutional management framework, and
- (b) Long-term commitment of the Government of Uzbekistan, non-governmental organizations and academia to facilitate and support the implementation of the UAKIS strategy and the EU Action by providing access to relevant information and contributions in the form of technical and human resources. As demonstrated during the project design consultations, the national stakeholders are interested and committed to take part and contribute to the intervention.

Matched with “the project intends to support the on-going regulatory and institutional reform towards “green economy” transition in agricultural sector initiated by the Government of Uzbekistan and to accompany the project implementation with tailored capacity building and awareness activities.”

Focus on environmental risk

Annex 2 of the ProDoc emphasizes that "Environmental sustainability will be considered throughout the project. Natural resources, such as land and water, as well as ecosystems, are key assets of this project. The economic value of natural resources is increasing with agricultural production, which also brings potential risks of further depletion if not managed sustainably. Therefore, it is essential to ensure that all stakeholders understand and value the economic importance of the environment and ecosystems and that activities equally prioritize environmental sustainability and social inclusion."

It is important to note that the downstream projects (Innovation Group outputs) not only respect environmental sustainability but also enhance the value and even the physical quantity of natural capital. This is particularly evident in areas such as soil rehabilitation, whether as a direct objective or an indirect benefit (e.g., in the sheep project), as well as in water preservation efforts.

Actual Risk management

The project team produced a risk table. No 'high risk' was identified' and in the next chapter we will be focusing on the 'medium' ones, which are (re-ordered by consultant, from the risk assessment revised matrix):

- "Risk 1: Project complexity and a broad scope related to the extended network of institutional partners, the geographical, social and economic diversity, and innovative nature of the project may affect the project implementation with respect to the adequacy of allocated resources, work plans and stakeholder engagement.
- Answer: Development and implementation of the Action is based upon strong national ownership, a consensus regarding priorities, expected results and shared responsibilities, pro-active participation of all partners in the planning and implementation. The project will transfer successful innovative technologies, practices and advice, including from the EU, to facilitate transition to "green economy" in the Uzbekistan agri-food sector."

- Risk 2 is confined within the scope of the project, as its direct stakeholders are observed to be in alignment with it. The responses provided during interviews were consistent and convincing. While certain aspects of scaling up may involve simplifying or addressing this complexity, these are more relevant to the long-term impact of the post-project phase rather than the project's implementation or duration. As such, they inform the recommendations for the future. "Risk 2: Lack of experience in the system innovation and participatory whole-of-government approaches.
- Answer: The project will work closely and engage with national and local authorities as well as with local partners and stakeholders in an open dialogue that will help enhance awareness, set priorities, agree on results linked to performance, and measure progress. The project includes activities to strengthen enabling environment and capacities for system innovation and climate action across the food and agriculture sector stakeholders."

- "Risk 3: Risks related to the failure of the national beneficiaries to meet their commitments for regulatory, institutional and financial sustainability of UAKIS network.
- Answer: The project is based on the extensive consultations with the Government of Uzbekistan on their long-term development priorities and commitments towards transition to "green economy" and scaling up innovation. Positive changes in the legal, regulatory and institutional framework conductive for the promotion of

> innovation and “green economy” strategy in agri-food sector have been demonstrated.”

The latter two risks relate to the institutional environment of the project at both national and local levels and ultimately to the extent of "buy-in" from these stakeholders. The measures adopted to address these risks have proven effective and efficient, ensuring they do not hinder the outcomes of either the IGs or the overall project. Thus, these risks have been well managed.

The focus now shifts to the project's long-term scaling: achieving national extension and local appropriation. While not so much a risk, this challenge, identified as a risk, can be transformed into an analytical opportunity. This involves further engaging with authorities, showcasing the results achieved by IGs, and addressing the critical need to build agri-business value chains.

The consultant observes that the project management team recognizes this potential, particularly regarding the KPI “Number of food and agriculture value chains supported by the project on climate resilience and emission reduction.” With a target of 20 chains, only 6 are likely to be achieved by the end of 2023 (as per the Logframe). The M&E documents note, “Direct impact on chains related to IGs, indirect to others – needs to be clarified.”

Overall, the shift from well-planned generic risks (ex-ante) to real-world adjustments based on IG implementation (ex-post) reflects a well-managed risk framework.

Lessons from other relevant projects incorporated into project design

Neither the reviewed documents nor the interviews explicitly addressed this issue in relation to a specific project (see below on EU programs). However, discussions at the national level confirmed the existence of an exchange ecosystem around the AKIS strategy, which has both benefited from and contributed to the project. Additionally, major institutes involved in the project are engaged in other thematically related initiatives, offering valuable lessons in design and management.

The originality of most IGs is evident, and the opportunity was effectively seized to finance projects with specific and additional contributions. These include initiatives with significant impact that required time for developing ground protocols or establishing control fields.

In generic terms, the ProDoc states:

“The project will build on existing networks and platforms to share learnings, insights, and emerging practices to accelerate innovation and investment through the establishment of advisory services and support networks and facilitating the gradual digital transition.”

Planned stakeholder participation

List of national institutional stakeholders and their planned participation has been analysed as positive, *supra* in report.

The ProDoc states that “the project will pursue an inclusive, participatory and gender-transformative approach to stakeholder engagement at the local and national levels”, and more precisely that

“The following institutional stakeholders will be involved in all programme activities and become the main partners in implementation of the programme:

• National research institutions to ensuring close integration of science and production in the field of agriculture;

• Competent authorities within national governments responsible for development and implementing national policies related to the close integration of education and science on a systematic basis and agricultural production, training, advanced training and professional development of personnel, taking into account the current and future needs of agricultural industries in highly qualified relevant specialists;

• Technical departments of other relevant ministries (i.e. environment, energy, natural resources, economy, industry, agriculture, finance) and other government agencies (i.e. water management agencies, toxic and radioactive waste management agencies);

• National agencies and institutions responsible for generation and delivery of climate risk information, analysis and early warning, such as national hydro-meteorological services and research entities.

• Other stakeholders such as regional and local governments, civil society organisations (i.e. NGOs, academia) and the private sector will be involved in and benefit from certain specific activities."

Linkages between project and other interventions within the sector

"The Action builds upon the past and ongoing work of the EU Programme on agro-food sector with focus on climate-related risks in Uzbekistan and will benefit from the existing platforms and mechanisms established in the region of CA" as per the ProDoc.

7.3 PROJECT IMPLEMENTATION

Adaptive management (project design & project outputs changes during implementation)

Appropriation and engagement, through formal involvement of AKIS system, could be observed in several IGs, the project team has thereby extended some sort of open "ground co-management". Beyond observations during the visits, this is well documented through numerous workshop and field visits reporting documents. This offers ground for the Local AKIS structures to embark into opportunities for capacitation.

The complexity of the project (in turn serving its richness) called for hiring an M&E expert in the second phase of the project. Neither the generic design not the project outputs changed during implementation which, ex-post, shows the good reparation and design, having had to integrate largely unforeseeable IGs after a call for projects.

These ought not to be changed, but linkages between activities and output may be look at in order to achieve activity 2.2 on value chains.

Actual stakeholder participation

The participation of national institutional stakeholders has been analyzed positively and detailed earlier in the report.

Local stakeholder involvement has been documented through the M&E process, including the frequency and documentation of meetings, as recorded in the Logframe. This documentation effort was one of the factors leading to the recruitment of an M&E expert, and the process can be assessed positively based on this foundation.

Field observations revealed active participation by local stakeholders. In most meetings at the institute level, farmer members of the IGs were present. Questions directed to them by the consultants were met with responses that demonstrated their awareness of the overall process, the functioning of their IGs, and the achievements made.

Monitoring & Evaluation: design at entry

M&E at design was left to the Inception Workshop : “Provide a detailed overview of reporting, M&E requirements. The M&E work plan and budget should be agreed and scheduled” (ProDoc). Implementation has then consistently followed the below tables of activities and targets; and reported into the Logframe just after.

Intended Outcome as stated in the UNDAF/Country [or Global/Regional] Programme Results and Resource Framework:											
Outcome indicators as stated in the Country Programme [or Global/Regional] Results and Resources Framework, including baseline and targets:											
Applicable Output(s) from the UNDP Strategic Plan:											
Project title and Atlas Project Number:											
EXPECTED OUTPUTS	**OUTPUT INDICATORS[1]**	**DATA SOURCE**	**BASELINE**		**TARGETS (by frequency of data collection)**						**DATA COLLECTION METHODS & RISKS**
			Value	**Year**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year …**	**FINAL**	
Output 1 *Establish Agri-food Innovation Support and Brokerage Services*	***1.1** Assessment of policy and regulatory barriers to scaled-up climate action and “green” transition.*	*Monitoring data and progress reports on the implementation of the Agri-food Strategy of the Ministry of Agriculture*	UAKIS Strategy is adopted (Concept); Operationalization plan for CC mitigation and adaptation in the Agri-food sector not available for CC mitigation and adaptation in the Agri-food sector not available	2021	*1*	TBD	TBD	TBD		*Supported policy dialogues and development of plans and regulatory framework at national and regional level for the alignment of agricultural policies and programmes to respond to climate change.*	*Document review*

On this indicator 1.1, a positive dramatic shift has occurred as the Presidential decree “On Additional Measures to Improve Quality and Efficiency by Integrating Science, Education, and Production in the Agricultural Sector." Has been taken. While it is to be credited to the Presidency of the Republic, interviews converge in presenting this decree as reinforcing the project, but also as having been taken in full cognizance of the existence and early successes of the project.

	1.2 Number of knowledge products elaborated per priority area, their status and availability (O2.1, O2.2)	*Action/Project reports, government reports*	*0*			*5*	*14*	*4*		*At least 20*	*Document review*
	1.3 Number of policy makers informed by the Action about the new knowledge products (O2.3)	*Action/Project reports*	*0*			*31*	*61*	*64*		*At least 120*	*Document review, local surveys*
	1.4 Number of professional staff and researchers trained (O3.1)	*Action/Project reports*	0			*44*	*87*	*98*		*At least 100*	*Project report*
	1.5 Number of professional organizations strengthened with research and training interventions (O3.2)	*Results of the trainings*	0			*5*	*13*	*0*		*At least 10*	*Project report*
	1.6 *Number of EU research organizations mobilized by the action (O4.1)*	*Cooperation agreement, project/Action reports*	0			*1*	*12*	*0*		*At least 3*	*Project report*
	1.7 Number of subject specific, evidence-based policy briefs prepared and supported to policy address constraints to the uptake of new innovations.	*Action/Project reports*	0			*1*	*1*	*0*		*At least 5*	*Document review*

NB: these sub-objectives have been integrated into the logframe

Output 2 Agri-food Innovation Operational Groups and Partnerships	***2.1*** Number of new Agri-food Innovation Groups and Partnerships (operational groups) established with the project support	*Government reports/report from partners/national registration data/mass media*	0			0	18	0		*At least 12*	*Project report* *Risk: The failure of the national beneficiaries to meet their commitments for regulatory, institutional and financial sustainability of UAKIS network.*
	2.2 Number of food and agriculture value chains supported by the project on climate resilience and emission reduction	*Information from CCI and khokimiyats./ Action/project reports*	*0*			*0*	*6*	*11*		*At least 20*	
	2.3 Agricultural and pastoral ecosystems where climate relevant management practices have been introduced with EU support, ha (SO1.3, EU RF 2.04)	*Local khokimiyat/* *Action/project reports*	*0*			*0*	*92*	*101*		*At least 200*	
	2.4. Number of small-scale farmers adopting sustainable and resilient agriculture practices thanks to this action, disaggregated by sex (SO1.1, EU RF 2.03)	*Council of Farmers reports/ Action/project reports*	*0*			*0*	*38*	*0*		*At least 40*	*Project report*
	2.5 Number of smallholder farmers reached by the R&D initiatives, disaggregated by sex and country (O1.1)	*National reports/Council of Farmers Reports/ Action/project reports*	*0*			*0*	*315*	*301*		*At least 400*	*Project report*

NB: these sub-objectives have been integrated into the logframe

Monitoring & Evaluation: implementation and overall assessment of M&E – achieved results

EU-AGRIN LOGFRAME INDICATORS (NB: Detailed Logframe can be found in Annex)

LEVEL	2022	2023	2024	2025	Target
IMPACT					
1. Decrease of specific emissions of greenhouse gases per unit of GDP by 10% by 2030 from level of 2010. (UZ INDC, SDG 13) **2. Average income of small-scale food producers by sex and indigenous status (SDG 2, 2.3.2)** **3. - Productivity of main crops by category of farms/small scale food producers (SDG2, 2.3.1)**					
OUTCOME					
Development of subject specific, evidence-based policy briefs to address policy constraints related to new innovative practices supported by the project **Agricultural and pastoral ecosystems where sustainable management practices have been introduced, attributable to EU support (ha) (SDG 2, EURF 2.4)**					
OUTPUT 1					
1. Number of knowledge products elaborated per priority area, their status and availability (O2.1, O2.2)	5	14	4		20
2. Number of policy makers informed by the Action about the new knowledge products (O2.3)	31	61	64		120
3. Number of professional staff and researchers trained (O3.1)	44	87	98		100
Number of professional organizations strengthened with research and training interventions (O3.2)	5	13	0		10
Number of EU research organizations mobilized by the action (O4.1)	1	12	0		3

Number of subject specific, evidence-based policy briefs prepared and supported to policy address constraints to the uptake of new innovations	1	1	-	-	5
OUTPUT 2	2022	2023	2024	2025	**Target**
1. Number of new Agri-food Innovation Groups and Partnerships (operational groups) established with the project support	0	18	-	-	12
2. Number of food and agriculture value chains supported by the project on climate resilience and emission reduction	-	6	11		20
3. Agricultural and pastoral ecosystems where climate relevant management practices have been introduced with EU support, ha (SO1.3, EU RF 2.04)		92	101	-	200
4. Number of small-scale farmers adopting sustainable and resilient agriculture practices thanks to this action, disaggregated by sex (SO1.1, EU RF 2.03)		38	-	-	40
5. Number of smallholder farmers reached by the R&D initiatives, disaggregated by sex and country (O1.1)		315	301	-	400

One can clearly see that indicators are all being met and some have been met already, excepting the point of attention of 2.2 Number of food and agriculture value chains supported by the project on climate resilience and emission reduction, the subject of a larger discussion in this report.

7.4 PROJECT RESULTS AND IMPACTS

An evaluation matrix (see below) was constructed based on the evaluation scope presented in the TOR. The matrix includes principal evaluation questions. The matrix provided overall direction for the evaluation and was used as a basis for interviewing stakeholders and reviewing the project implementation reports; all sections below directly answer to the matrix.

The evaluation field mission was conducted to perform face-to-face consultations with the stakeholders, using semi-structured interviews based on the discussion points in a conversational form. The preparation of the evaluation field mission was done in close coordination with the Project Manager and the UNDP Country Office. To the extent possible, visits to relevant project sites to make direct observations of selected project outputs was also conducted during the evaluation mission.

7.4.1 Introductory note: On project Innovativeness and sustainability evaluation

This project is not merely a portfolio of 18 Innovation Group (IG) projects but also a demonstration of the Innovation Partnership concept and its mechanisms, which are essential to evaluate. Whether the project should be continued raises questions about its scope and terms, as highlighted during interviews and this evaluation process (see audit trail). Beyond the need for methodological clarity, the key lesson from this evaluation is the potential for replicability—referred to in the ProDoc as “scale-out innovation,” though not fully defined.

This section examines innovation, sustainability, and replicability/scale-out innovation in that order.

While evaluation tables are largely positive, this assessment seeks to characterize the project’s innovation more comprehensively. Based on field interviews and the diverse nature of the 18 IGs, it became clear that the ProDoc’s definition of innovation could be expanded to include an evaluation of the following:

- The nature, degree, and processes of innovativeness,
- The assets leveraged and developed,
- The sustainability of IG outputs,
- The IGs’ capacity to promote further innovations at both the individual and project levels.

The detailed discussion in this report regarding the innovative, sustainable, and scalable elements of the IGs highlights the project management team’s significant efforts to create an explicit support system and a proactive institutional environment, which have been critical to the success of all IGs.

The ProDoc conceptualizes innovation in three main ways:

Institutional Innovation: This involves activating UAKIS mechanisms to engage key partners and stakeholders in operationalizing transformational change. Practical impacts at regional and farm levels are achieved through interagency coordination, climate risk management, and innovative public-private models to support small producers. The IGs serve as demonstrators of public policy feasibility, with field observations confirming the successful capacitation of local AKIS structures and consistent engagement with local authorities.

Economic and Financial Innovations: These focus on creating market mechanisms (e.g., water and carbon pricing) to address systemic mitigation and adaptation challenges. All evaluated IGs were relevantly selected, contributing to knowledge creation and national policy improvement. Most IGs are either impactful, sustainable, or scalable, with many meeting at least two of these criteria. Sustainability here refers to farmers' ability to continue activities with the initial capital equipment and training provided.

Scale-Out Innovation: This involves two dimensions:

- Scalability: Expanding tested IG models into existing contexts.
- Replicability: Reproducing the IG concept with new research, equipment, and training.

While scalability depends on deeper economic sustainability and reduced dependence on research institutes, replicability requires increased seed funding for new initiatives.

Sustainability

The project’s richness and complexity suggest three complementary dimensions of sustainability:

Sustainability of Existing IGs: This depends on farmers’ interest, as well as the capital and training support provided. Over time, research institutes’ involvement in established IGs will likely decrease as scientific protocols are completed and results achieved. Feedback from this process will inform the next level of sustainability.

Sustainability of the Innovation Partnership Concept: IGs could evolve in several ways, such as:

- Replicating similar IGs with new farmer groups,
- Deepening scientific research with existing stakeholders,
- Designing new IGs based on lessons learned.

Given the reliance on training, it would be beneficial to streamline and scale training efforts to reduce demands on researchers, who represent a scarce resource.

Scaling Sustainability: Achieving regional and national scale requires translating research results into broader geographic applications. This involves generalizing and routinizing training, support mechanisms, and budget allocation while strengthening the national AKIS system.

Interviews suggest that while the project has tremendous potential across these dimensions, no structured actions for scaling up pilot initiatives have yet been taken. The government and donors have shown interest but have not committed to scaling efforts, focusing instead on potentially repeating similar projects.

This evaluation recommends adopting a more ambitious learning and scaling horizon.

Replicability and scaling out innovation through value chains

This analysis introduces another layer of consideration: identifying the key entry points for anchoring IGs into agri-food value chains, particularly concerning the complex notion of sustainability. The goal, as acknowledged by the project team, remains to be fully achieved: “Direct impact on chains related to IGs, indirect to others – needs to be clarified” (see section on risks). The team has been aware of this challenge since the project’s inception, as reflected in the ProDoc, which states:

“The central design challenge is to build the capacity of actors at all levels to mutually learn from all parts of the value chains of the agri-food system in an ongoing process of generating options for innovation and investment. The central objective is, therefore, to create an experiential learning system and enhance the flow of information and the building of linkages across the entire agri-food system value chain.”

While financing strategy considerations fall outside the scope of the TORs, the consultant suggests that economic assessments and modeling would provide valuable insights. A dedicated study could serve as a solid foundation for ensuring institutional sustainability and scaling up post-project.

Key approaches for progress forward include:

Distinguishing costs for scaling up: Identify which upstream or incremental research investments and one-time equipment costs have already been made and do not need to be repeated when scaling up existing IG models. Separate these from operational, service, and support costs to calculate a “short-run marginal cost” of expansion and the “short-run marginal need for public funding.”

Evaluating institutional capacity for training and support: Assess the maximum capacity of research institutes to provide training and services for future projects without compromising their core research responsibilities. Beyond this capacity, determine which additional support should come from AKIS or public funding to establish the “long-run development cost” of scaling up.

Phased marketability assessments: Conduct phased evaluations of the marketability of IG products. These assessments would limit public funding requirements per IG while accounting for phased support to de-risk projects and/or introduce concessional loans. This approach could involve national funds blended with commercial bank financing.

This structured approach could provide a viable exit strategy, ensuring the scalability and sustainability of the IG concept. Uzbekistan benefits from a strong foundation of

science, technology, and skills—critical resources for the success of such projects, which are often scarce and highly sought after in development contexts.

Based on the evaluation findings, the report supports the continuation of the Innovation Partnership concept through:

- Launching new IG calls,
- Capitalizing on scientific results,
- Replicating and scaling current IG models with AKIS support to reduce reliance on institutes,
- Providing dedicated support for integrating IGs into agri-food value chains.

This strategic continuation would leverage the project's achievements and lessons learned to foster long-term sustainability and impact at national and regional levels.

7.4.2 Project Results

The UNDP guidelines specify five evaluative criteria and an LNOB (cross-cutting) synthesis. While these are described in detail in the methodology and matrix in the Annex, this section recalls the fundamentals and **synthesizes the project achievements against them.**

Relevance

Were the project's outcomes consistent with the focal areas/operational program strategies and country priorities? This criterion assesses the extent to which the activity is aligned with local and national development priorities and organizational policies, including changes over time.

The project aligns with key national documents. Cumulatively, many IGs contribute to a very innovative and holistic approach, for example to land regeneration, serving the NAP, as well as local governments and communities.

Cross-cutting - LNOB Synthesis, including focus on gender

This evaluates the extent to which the intervention objectives address the distinct problems and needs of women and men. The project implementation has also impacted other partners, influencing their policies, programs, and services to advance gender equality and women's empowerment.

By design, the variety of selected IGs covered several regions, with the capacity to replicate across other regions and natural ecosystems. At the same time, the project targeted social communities with both social backlog and entrepreneurial skills. Gender considerations have been integrated throughout the design and M&E, although the project operates at the intersection of two sectors—science and agro-industry—where gender inequality is typically prevalent. A minority of IGs have shown a more balanced approach in addressing these issues.

Effectiveness

Are the actual project outcomes commensurate with the original or modified project objectives? If the original or modified expected results were merely outputs/inputs, the evaluation assesses whether there were real outcomes and if these were commensurate with realistic expectations. This criterion examines the extent to which the expected outcomes and objectives were achieved or are likely to be achieved.

Most activity KPIs have been met, and the objectives are within reach, enabling a special focus on:

(i) Strengthening the creation of value chains,

(ii) Approaching different degrees of scaling the project or making it pre-scalable to contribute to national policy developments.

Scalability, in this innovation-driven project, is inherently part of its design, as the project cannot be limited to pilot initiatives. Achieved efficiency has directly supported the project's progress.

Efficiency

Was the project cost-effective? Was it implemented with the least cost possible? Were there delays, and if so, did they affect cost-effectiveness? This criterion compares the costs incurred and the time taken to achieve outcomes with similar projects. It assesses whether results have been delivered with minimal resources, also referred to as cost-effectiveness or efficacy.

While many IGs were based on earlier research, field implementation required new or mobilized equipment. It is commendable that IGs operated within a budget of less than 40,000 USD, even considering the indirect financial and time support provided by research institutes. A detailed IG-by-IG audit might reveal variations in efficiency, but such an analysis was beyond the scope of this evaluation. Nevertheless, it is understandable that a priori budgeting was allocated equally across IGs as part of a rational process.

Sustainability

Can the project’s beneficial results be sustained? Sustainability refers to the likelihood of an intervention continuing to deliver benefits over an extended period after completion. This includes environmental, financial, and social sustainability.

Impact

What are the positive and negative, foreseen and unforeseen changes and effects produced by a development intervention? Impact results include direct and indirect effects, longer-term changes, and evidence of replication or scaling up.

Impact and Sustainability are the most variable factors among IGs. They must be evaluated alongside the form and degree of innovativeness of each project, the scientific protocol, and the length of field experiment requirements. It is clear that innovative projects cannot be expected to deliver both direct impact and sustainability

in the initial years, especially when the degree of innovation involves policy changes, radical innovation, or programmatic innovation.

Viewed through this lens, most IGs exhibit one of the following combinations:

- Sustainable and impactful,
- Significantly innovative and impactful,
- Significantly innovative and sustainable.

A few IGs even combine all three qualities. Collectively, the project can be considered radically innovative, sustainable under specific support conditions, already impactful, and with the potential for large-scale, deep, and inclusive impact.

Progress towards objective and expected outcomes (*)

The Specific Objectives presented previously may be recalled here in an abridged format:

- To facilitate a phased and knowledge-based development and operationalization of policies and regulatory frameworks conducive to the promotion of 'green' investments across agri-food value chains.
- To establish a suite of 'Agri-food Innovation Support and Brokering Services'.
- To realize innovative projects at the 'farm level,' with a primary focus on smallholder and family farmers, farmer cooperatives, and micro-agri-businesses.

Reviewing the project's Logframe, the three objectives are well-articulated, particularly when interpreted in reverse order: IGs at the farm level serve as foundational elements ("bricks") for establishing agri-food innovation support and brokering services, which, in turn, ultimately contribute to policy development.

In summary, the consultant's assessment is that farm-level innovation has been broadly successful, often exceeding the conservative expectations outlined in the ProDoc. The variety and diversity of IGs have enriched the "project-as-a-portfolio" approach, creating numerous opportunities for consolidation—whether within individual IGs, between IGs, regionally, nationally, or even across emerging themes such as resource efficiency and land regeneration.

Regarding the agri-food innovation support and brokering services, interviews consistently focused on assessing the sustainability and scalability of IG findings. Key aspects explored include:

- Origination of new stakeholders: Identifying and engaging willing farmers and other stakeholders.
- Capacity of research institutes: Assessing their ability to scale up their support while balancing their primary mission of research.

- Alternative training systems: Considering options beyond research institutes, such as private training organizations or leveraging the state AKIS system.

The level of awareness and scalability options varies across IGs, often influenced by their specific nature:

- In the dairy IG, some households have taken the initiative to integrate and sustain the equipment with minimal support.

- For wheat or cotton varieties, once experimental results and sowing conditions are well-established, traditional agrarian organizations can disseminate the findings effectively.

In contrast, areas like bioremediation or biological pest control involve higher levels of technical expertise. These may require ongoing, but ultimately profitable, support from state organizations.

The consultant notes that this is a shared concern within the project team, as reflected in M&E documents stating: “Direct impact on chains related to IGs, indirect to others – needs to be clarified.”

Table 3: Evaluation Rating Table : Progress towards specific objectives

Progress towards objectives – by Specific objectives	Rating
SO1 - To facilitate a phased and knowledge-based development and operationalization of policies and regulatory frameworks conducive to the promotion of 'green' investments across agri-food value chains	HS
SO2 - To establish a suite of 'Agri-food Innovation Support and Brokering Services' integrated into the Uzbek Agriculture Knowledge and Innovation System, playing a pivotal role in mobilizing public and private funding, galvanizing local knowledge and capacities, and scaling up climate-smart investments	S
S03 - To realize innovative projects at the 'farm level,' with a primary focus on smallholder and family farmers, farmer cooperatives, and micro-agri-businesses. These projects aim to pilot and demonstrate effective strategies for mitigation, adaptation, and, where applicable, post-COVID-19 'green' transformational recovery pathways	HS
Overall Progress towards specific objectives	HS

Relevance (*)

The project’s objective aligns well with national environmental and development priorities. All IGs aim to contribute to the “Decrease of specific emissions of greenhouse gases per unit of GDP by 10% by 2030 from the 2010 level”, a goal outlined in Uzbekistan’s INDC and linked to SDG 13.

Local beneficiaries are directly involved, with the primary beneficiaries being local farmers. While budgets are transmitted through institutions, it should not overshadow the significant contributions of these institutions in terms of staff, facilities, and additional budgetary inputs. In the short term, farmers are the end beneficiaries, and their development needs are addressed through the IG concept and its objectives, including:

Average income of small-scale food producers by sex and indigenous status (SDG 2, 2.3.2),

Productivity of main crops by category of farms/small-scale food producers (SDG 2, 2.3.1),

Agricultural and pastoral ecosystems where sustainable management practices have been introduced, attributable to EU support (ha) (SDG 2, EURF 2.4).

Across IGs, several other SDGs are served. For instance, SDGs 2, 5, 6, 12, and 13 are highlighted in the one-pager documents of IGs 5, 7, and 8, all of which involve the Southern Agricultural Scientific-Research Institute. While some IG one-pagers do not explicitly mention SDGs, other project documents do—for example, IG 1 includes SDGs 5, 6, 7, 13, 15, and 17 in its comprehensive iconography, although it omits SDG 2. Contributions to these SDGs are quantified in terms of reductions in energy, water, fertilizer use, and soil loss.

To scale up funding through the INFS (Integrated National Framework Strategy) approach, it is recommended that all one-pagers and related documents clearly reference all SDGs covered by each IG. While this omission does not indicate a gap—since the ProDoc does not mandate it—it is a useful initiative that should be generalized across all IGs. Furthermore, it reflects positively on the project that the selection process expanded the SDG coverage during implementation, consolidating its alignment with global development goals.

The project demonstrates a strong level of coherence between its objectives and national policy priorities, as exemplified by the presidential decree “On Additional Measures to Improve Quality and Efficiency by Integrating Science, Education, and Production in the Agricultural Sector.” This decree builds on earlier policies, highlighting the bottom-up approach of the project. This coherence was confirmed during national-level discussions with the Ministry and the FAO national office.

Additionally, IGs serve as practical tools for implementing and supporting the AKIS system, particularly in newly established local branches. For instance, IGs in the Fergana region provide a platform for capacitating AKIS agents, strengthening their roles in agricultural innovation.

The project’s alignment with local government and community priorities is evident. While the global IG concept did not originate from local stakeholders, the implementation details were partly shaped by local input. Across all IGs visited, relevant local stakeholders were sufficiently involved in project development. The real implementation of scientific advancements would have been impossible without their contributions. This is evident in two main ways:

Direct implementation of technologies and techniques: Although these are not purely direct applications, discussions with local stakeholders consistently highlighted their feedback to institutes. In IGs targeting multiple beneficiaries, such as households, differences in responses and application strategies (e.g., dairy or household crops) provide valuable insights for IG design.

Scientific and experimental protocols: IGs such as cotton/wheat seed trials, drip irrigation, merino insemination, and soil bioremediation involved control lands that required careful handling, cooperation, and suggestions from local farmers. Interviews consistently confirmed the alignment between stakeholders and projects, with farmers expressing confidence and a sense of support.

The project's objectives not only align with local community priorities but also have the potential to influence local government priorities, driven by national government policies.

In conclusion, while it was not always straightforward to determine the project's origination, this can be credited to the project itself, which mitigated risks through a robust process. The number of meetings held, stakeholder inputs during project development, and regular contacts with both the OG and project management team are well-documented. Interviews consistently noted recurring and constructive engagements with stakeholders.

The consultant also observes that the development of subject-specific, evidence-based policy briefs addressing policy constraints related to innovative practices ensures the project's implementation aligns with UNDP priorities and strategies for Uzbekistan. This alignment was further corroborated in UNDP/UNCO meetings.

For the evaluation rating, please refer to the table below.

Table 4: Evaluation Rating Table: Relevance

Assessment of Outcomes	Rating
Relevance	HS

Effectiveness (*)

Level of Progress:
All selected and contracted Innovation Groups (IGs) are actively finalizing their activities or implementing actions in line with their approved work plans. Numerous public events have been organized to share the achievements of the IGs with the broader public. The Logframe indicators, updated through 2023, reveal early completion of a majority of KPIs, with some minimum targets being significantly overachieved. Moreover, there is clear attention to gender issues in execution and M&E. The key factor for success appears to be the strong preparation by scientific institutes, combined with the careful management of the IGs.

The importance of the project should not be underestimated simply because some scientific developments predated the project. Without this initiative, many of these innovations might have remained confined to the laboratory. The project has contributed significantly to generating knowledge on implementation and scientific verification, enabling practical application of these developments.

Outputs and Sub-Outputs:
Outputs and sub-outputs are being delivered as planned, with a particular focus on value chains:

In the current situation, several IGs are achieving value chain objectives based on a standard commercial definition: from upstream science to local commercialization.

This includes IGs focused on biological pest control, seed and hybrid development, species breeding (fish and animal), pasta, meat, and dairy products. These IGs are "virtually" commercial, as with additional efforts in skill appropriation, support mechanisms, and transformation of institute activities to income-generating models, they could become viable at their current scale.
Additional value chains may be attainable for transformative IGs if they receive further support through larger programs that could make them profitable within a few years. Examples include bioremediation, new cotton breeds linked to water control, and household cropping systems integrated with water management.
If viability is approached with the understanding that a public-private distribution, training, and support system could be developed (as either a public good or private service depending on the IG), nearly the entire portfolio of IGs has the potential to become sustainable.
NB: The consultant resisted making definitive conclusions about matching each IG to these categories, as this was not within the scope of the TORs. Such an assessment would require further examination. Instead, the recommendation is to organize a national workshop where IGs themselves can identify their barriers in collaboration with the project management team and exchange insights with one another.

Support Functions:
The lack of adequate support functions could act as barriers to IGs achieving full integration into value chains. Addressing these barriers is critical to ensuring their success.

Logical Linkages:
The selected projects varied across pilot regions, highlighting their context-specific focus:

Tashkent prioritized seed production and modern irrigation methods.
Fergana emphasized new cotton varieties and organic tomato cultivation.
Kashkadarya focused on new wheat varieties and biological pest control.
No unintended results were identified during the document review or interviews.

LNOB Approach:

The Leave No One Behind (LNOB) approach is reflected in the project design and the selection of diverse IGs. However, its integration is less explicitly documented in the Logframe and more evident in the qualitative aspects of the IGs' implementation.

Table 5: Evaluation Rating Table: Effectiveness

Assessment of Outcomes	Rating
Effectiveness	HS

Efficiency (*)

The project has been implemented within the original timeframe and budget, demonstrating cost-effectiveness.

The selection process is a crucial aspect of the project's effectiveness and should not be overlooked. In December 2022, the EU-AGRIN team, in collaboration with Uzbekistan's Ministry of Agriculture, issued a public call for the establishment of Innovation Groups (IGs). The goal was to solicit innovative proposals focusing on sustainable agriculture, with an emphasis on water conservation, soil management, and climate change adaptation. By January 2023, this call had attracted more than 200

submissions. The selection process, managed by a Technical Evaluation Committee, resulted in 18 IGs being chosen for their strong alignment with sustainable agriculture themes.

While many IGs built on earlier research, their implementation in the field required additional equipment (either new or mobilized). It is commendable that all IGs operated within a budget of less than 40,000 USD, even considering the time commitment and indirect financial contributions of research institutes. Although a detailed IG-by-IG audit might reveal varying degrees of efficiency—an aspect outside the scope of this evaluation—the equal distribution of budgets across IGs reflects a logical and fair approach in the context of the selection process.

At this budget level, the project is expected to have a long-lasting effect. The technical and human resource capacities of 12 research institutes were enhanced through equipment procurement and training. Furthermore, the project leveraged additional resources, including time and financial contributions from participating institutes. However, the exact amount of leveraged resources remains unknown due to the administrative accounting practices of these institutes, which rely on expense-based rather than project-specific analytical accounting.

Note: Within the innovation paradigm of “demonstrators first – then early adopters – then massification (scaling up),” conducting economic modeling would be highly beneficial for future planning. While part of the EU-UNDP budget involves non-repeating investments, certain components of the 'shadow' budget from institutes may need repetition. However, with improved efficiency and increasing returns, this repetition can be minimized and optimized. This observation qualifies but does not contradict the assessment of the project’s overall efficiency.

Table 6: Evaluation Rating Table: Efficiency

Assessment of Outcomes	Rating
Efficiency	HS

Overall Outcome (*)

The overall objective of this initiative is to contribute to the transformation of Uzbekistan's food and agriculture sector toward climate-resilient and low-carbon development. This is achieved by accelerating innovation and scaling up climate action across agri-food value chains through the operationalization of the UAKIS. The project focuses on policy support, demonstrative field activities, and active communication throughout its implementation.

In 2023 alone, 47 technical training sessions were conducted for Innovation Group (IG) partners and farmers, including women’s groups, with a total of 1,118 participants.

In 2024, all IGs successfully conducted (and in some cases, repeated) production campaigns. Many of these campaigns were supported by scientific advancements, paving the way for accelerated replication without the need for first-year "control" fields.

Looking ahead to 2024-2025, Terms of Reference (ToRs) have been prepared for two critical initiatives:

- "Dialogue Workshops and a Policy Brief on Barriers for Agri-Innovation": Aimed at identifying and addressing policy and operational challenges.
- "Empowering Service Providers to Support Producers and SME Processors across Agri-Food Value Chains": Focused on strengthening the capacities of stakeholders to effectively assist producers and SME processors within agri-food supply chains.

As a focal area of the project, knowledge products, while being just one of the outcomes, represent the most structurally significant contribution for future advancements. These knowledge products, aligned with objectives O2.1 and O2.2, were developed in priority areas and continue to grow in their potential impact. By mid-term, a number of these products were already completed, including:

- Manual on the agrotechnics of placement and cultivation of bamia and artichoke
- Manual on cultivation agro-technologies and primary seed quality of Kashkadarya-5 cotton with fine fiber
- Manual on the development of pastoral ecosystems in the Tashkent region
- Knowledge product by the IG on new wheat in the Tashkent region
- Knowledge product by the IG on siderate crops
- Knowledge products by the IG on cotton in the Fergana region
- Knowledge products by the IG on cotton production
- Knowledge products by the IG on fishing
- Knowledge products by the IG on milk production
- Knowledge products by the IG on mugbean
- Knowledge products by the IG on soil bioremediation
- Knowledge products by the IG on soybean
- Knowledge products by the IG on horticulture
- Water-Saving Forum held on 25.11.2022

In addition, during preparation of this document a series of technical videos and one-pager publications was in development by the project team. These knowledge products have established a solid foundation for future replication and scaling of project activities, ensuring long-term impact and sustainability.

Table 7: Evaluation Rating: Overall outcomes

Assessment of Outcomes	Rating
Overall Project Outcome Rating	HS

Impact

The evaluation faces a definitional dilemma regarding impact. On one hand, the ProDoc defines impact through the concept of scaling across three levels:

Scale Up	Impact the enabling environment with the operationalization of the UAKIS legal framework
Scale Out	Impact greater numbers of beneficiaries with Government and international co- financing
Scale Deep	Impact cultural needs with regional hubs and supportive local ecosystems for scaling

These levels clearly represent meta- or macro-impact. Achieving these within the scope of this project is unlikely.

On the other hand, the ProDoc also provides a micro-level definition of positive impact in two instances:

- "Towards equity and inclusiveness by directly tackling environmental sustainability and climate resilience, which has a greater impact on poorer segments of society."

- "The project will also confer positive impacts on human development through reduced risks of conflicts over natural resources such as land and water, particularly in high-density regions like the Fergana Valley and Kashkadarya, through better service provision under AKIS development."

By design, most IGs align with this micro-level definition of impact.

In summary, as per the evaluation matrix (see Annex), the key assumptions and impact drivers relevant to achieving global environmental benefits are likely to be met at the micro level but unlikely at the macro or meta-project level.

Recommendation:

The concept of impact as applied to this project would benefit from further discussion in a dedicated workshop, which is a key recommendation. This workshop should explore the question posed in the evaluation matrix: "To what extent is it likely to achieve a scale sufficient to be considered global environmental benefits?"

At the same time, given the diversity and richness of IG cases, the consultant proposes a working hypothesis centered on the notion of "Impacting cultural needs with regional hubs and supportive local ecosystems for scaling." While no IG currently fulfills this specific concept, certain IGs exhibit the potential to achieve such an outcome. This potential should be noted and earmarked for further consideration.

The following table (see Annex) provides a conditional assessment derived from field observations:

This assessment reflects a snapshot ("photographic" conditions) rather than longitudinal analysis.

It acknowledges the positionality of the consultant, as pure objectivity is difficult to achieve.

Institutional, scientific, and land access support, alongside financial considerations, are critical conditions for these assessments.

Table 8: Evaluation Rating Table: Impact

Impact	Rating
Socio-political/economic	S
Environmental	S
Potential for scalability	S
Potential for upbringing/aggregating additional / further innovation	S
Overall Impact	S

Sustainability: financial (*), socio-economic (*), institutional framework and governance (*), environmental (*), and overall likelihood (*)

All IGs, without exception, have been well-designed to ensure environmental sustainability. Some IGs even exhibit unexpected positive environmental effects, such as land regeneration in the case of the Merinos artificial insemination project, which were not initially emphasized. None of the IGs pose particular environmental risks; in fact, many operate in degraded environments, further enhancing their environmental sustainability. As such, the entire project can be deemed environmentally sustainable.

When considering socio-economic sustainability, defined separately from financial sustainability and focusing on non-financial socio-economic aspects (e.g., livelihoods, social structures, LNOB, human resources), every IG has been designed with great care. This ensures that the project as a whole is socio-economically sustainable.

Institutional and governance sustainability can be evaluated primarily in terms of risk. Given recent policy developments, such as the new UAKIS decree, the associated risks are minimal. Socio-political factors, institutional frameworks, and governance structures are unlikely to negatively impact sustainability on their own. On the contrary, institutional support through the AKIS system has the potential to enhance both financial and overall sustainability.

These conclusions are based on thorough investigations conducted during interviews and can be summarized effectively as follows:

- Environmental sustainability: Strong and inherent in all IGs.
- Socio-economic sustainability: Carefully embedded in each IG design.
- Institutional and governance sustainability: Supported by recent policy developments with minimal risks.

Financial and Overall Sustainability

Financial sustainability, while related to efficiency, involves distinct considerations. Efficiency measures the economy of means in achieving demonstrators, whereas sustainability refers to the ability to maintain project benefits over time. Financial sustainability can be examined at multiple levels:

Micro-economic financial sustainability for direct beneficiaries: This includes non-institute members of IGs, where maintenance of project benefits requires financial resources. Key factors to assess include:

- Financial requirements for maintaining project benefits,
- Expected financial resources available to support these benefits,
- Potential for securing additional resources.

In many cases, equipment requiring maintenance is owned and maintained by the institute. To ensure sustainability, a cost or cess price for the products, usage, or services provided by the institute should be calculated, even if nominally.

While these aspects go far beyond the scope of the TORs and this evaluation, the following qualitative insights can be provided:

The financial complexity of sustaining IGs requires tailored economic tools and mechanisms.

The introduction of nominal service fees, cess pricing, or other mechanisms could support long-term sustainability.

This deeper consideration of financial and overall sustainability highlights the need for continued institutional support, innovative financial mechanisms, and careful planning to maximize the long-term benefits of the project.

Table 9: Evaluation Rating: Sustainability; micro-economic

Sustainability	Rating
Financial resources	ML
Socio-political/economic	L
Environmental	L

Meso economic sustainability: this form of economic sustainability refers to the unit / marginal cost of expanding projects; some other difficulties occur: for some IGs the unit may be the reproduction of the outcomes and outputs of on IG at farm level, given that early innovation is made; equipment/investment must be taken at maintenance / long term renewal cost; for others the unit may have to be redefined as there is considerable learning, but not necessarily implying an automatic decrease of cost, but on the contrary requiring a commercialization of the technical support once the intellectual skills and research implication of institutes is better utilize don new fronts from a society point of view. In short, this requires modelling and, if IGs may be clustered and 18 models are not required, numerous models are still needed.

Table 10: Evaluation Rating Table: Sustainability; meso-economic (project scalability)

Sustainability	Rating
Overall Likelihood of Sustainability	L

One recommendation directly derived from this would be to adapt activity 2.3:

Activity 2.3 “Delivering targeted financial support and investments for innovative projects with climate change mitigation and adaptation benefits;

“Namely, the purpose of this activity is to establish a dialogue with the Ministry of Agriculture and financial entities. The objective is to formulate and develop mechanisms for distributing innovation grants, especially those targeting climate change adaptation and mitigation and sustainable agricultural practices. The plan included dedicating funds for a comprehensive grant portfolio and preparing customized regulations, guidelines, and templates for implementation.” (ProDoc)

The Presidential Decree, mentioned before, which endorsed the Innovation Partnership concept and envisaged formation of a dedicated fund (5 mil USD) to support further calls and support of the IG mechanism, had actually covered the requirements of Act 2.3. The problem in conducting this activity on a sound ground is that, besides the issues just underlined above, there are additional operational context issue underlined by the progress report:

“besides all the efforts invested in dissemination of the knowledge, findings and new practices obtained by Innovation Groups, there is still possibility of the suboptimal impact of the results of some of them, due to a variety of factors such as market volatility, fluctuating prices of agricultural inputs, and regulatory changes impacting

land usage and farmers planning. To mitigate these risks, the project will continue to advocate for a stable and supportive policy framework, that will enable farmers, advisors, researchers and business sector to work together and achieve results that are beneficial for the whole community."

The recommendation is to conduct a sustainability workshop based on self-assessment and scenarios proposals by IGs, and to discuss within these scenarios the following three points:

- Do relevant stakeholders have or are likely to achieve an adequate level of "ownership" of results, to have the interest in ensuring that project benefits are maintained? Level of initiative and engagement of relevant stakeholders in project activities and results.

- Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained? Level of technical capacity of relevant stakeholders relative to level required to sustain project benefits.

- To what extent are project results likely to be dependent on continued financial support? What is the likelihood that any required financial resources will be available to sustain the project results once the current assistance ends?

7.4.3 Capitalization and Impacts

Using interviews with Innovation Groups (IGs) as a key source of evaluation material, the final assessment of the observed de facto impact can be qualitatively enriched.

All indicators, along with scientific and communication outputs, demonstrate that science-to-project and laboratory-to-field conversions are not only possible but effective. These conversions have been successfully implemented outside the experimental fields within research institutes, in real-world conditions, and at full field scale. As noted earlier, this success is attributed to the combination of mature research, precise protocols, and the dedication of the management team in engaging farmers and local beneficiaries.

While the project has provided direct benefits to some beneficiaries, for the majority, it has offered a sustainable perspective on improved production practices. Once new agricultural techniques, calendars, and inputs are fully mastered, these beneficiaries will need continued support to realize the long-term benefits. This is particularly relevant for typically vulnerable groups, including those in remote areas, individuals with limited formal education, rural women, and youth with restricted access to land (though this group is less represented among the current beneficiaries). Nonetheless, the project has systematically promoted gender equality and the empowerment of women, leading to meaningful positive changes.

One notable impact is the shift in the perception and behavior of communities who derive income from biodiversity resources. These communities have moved from viewing natural resources as inherently depletable to recognizing their potential for replenishment. This shift is evident in areas such as fisheries and land management, where improvements in soil salinity, hygrometry, and moisture have been observed.

A critical lesson learned is the bidirectional importance of feedback in science-to-field projects. While laboratory-to-field conversions are essential, field-to-laboratory feedback is equally critical for refining scientific approaches and protocols.

The direct consequence of this bottom-up approach is the emphasis on time. Achieving lasting national impact potential requires long-term field sustainability combined with continuous scientific innovation. As stated in the project's ProDoc, "scale-out innovation" cannot be expected to occur annually or even biannually. This is inherently a patient innovation project.

At present, nearly every IG exhibits at least two out of three characteristics of sustainability, innovation, and scalability. The primary outstanding question remains the extent and continuity of institutional support. This is perhaps the most important lesson for UNDP, donors, partners, implementers, and the Government of Uzbekistan (GoU) to consider as they evaluate and plan for the future of this initiative.

Capitalization: Country ownership

Country ownership is ensured as innovativeness in results areas is embraced by research institutes. This ownership applies to both:

Currently demonstrated innovations, and

The extent to which interventions can lead to a paradigm shift toward low-emission and climate-resilient development pathways.

Operational results and practices are also firmly owned by IG members at the farm level.

Moving forward, it is now the role of the AKIS system to integrate these innovations. Encouragingly, no significant barriers have been identified that would prevent this integration.

Another pathway for strengthening country ownership is through replication and scalability. Replication within other locations in Uzbekistan is directly linked to sustainability scenarios and the potential for additional funding. Similarly, the scalability of the approach presents opportunities for replication in other countries.

An interesting indicator relevant to this is Number of EU research organizations mobilized by the action (O4.1). The target was three organizations, with two achieved:

- Swedish University of Agricultural Science (SLU)
- CREA of Italy

These collaborations have enabled national centers to capitalize on and develop key international relationships, strengthening their role within global research networks and further advancing the project's objectives.

Capitalization: Gender equality and women's empowerment, LNOB

The Logframe highlights the following gender-dedicated events and actions:

- Blog: "International best practices in integrating gender equality and women's empowerment in climate-smart agriculture programs" (by Gender Consultant).
- International Forum: Dedicated to Rural Women's Day, held on 11 October 2023 (Participation: 39 women and 53 men).

- Trainings on Gender Issues: Conducted on 14 October, 27 October, and 10 November 2023, with 33 women and 98 men participating.

- Gender Policy Brief: Developed as a key output.

Leave No One Behind (LNOB)

The project's LNOB approach was integrated during the stakeholder engagement process, with a focus on avoiding risks or negative impacts. These included:

- Ensuring there were no adverse impacts on human rights (civil, political, economic, social, or cultural) by affected populations, particularly marginalized groups.

- Preventing inequitable or discriminatory outcomes for people living in poverty, marginalized individuals, or excluded groups (e.g., persons with disabilities).

- Avoiding restrictions in the availability, quality, or access to basic resources or services.

- Mitigating potential conflicts or exacerbation of existing tensions.

The Logframe (see Annex) reflects the project's attention to gender issues. The LNOB approach was addressed through the project's design and the selection of diverse IGs. However, such details are less apparent in the Logframe, which focuses on broader reporting.

Alignment with UNDP Priorities

The project objectives align with the priorities outlined in the UNDP Country Programme Document (CPD) and other country program documents. This alignment is substantiated by several actions, including:

International Forums:

Two forums were held, one specifically focused on strengthening the role of women in the innovative development of agriculture.

Gender Analysis and Training:

A gender analysis was conducted, followed by a series of training sessions targeting women. Two gender-focused training modules were developed and delivered in pilot regions. A policy brief addressing gender-sensitive climate change risks in agriculture, with a case study on rural women in Kashkadarya, was also prepared.

Support for Young Women:

A contest was conducted among 2,703 women students of Tashkent State Agrarian University. Seven finalists were selected for their outstanding project ideas related to climate change adaptation, the green transition, and innovative agricultural approaches.

Gender-Specific Knowledge Products:

Two knowledge products were developed, published online, and distributed among beneficiaries:

Barriers and opportunities for gender-responsive climate-smart agriculture adoption in Uzbekistan.

International best practices in integrating gender equality and women's empowerment in climate-smart agriculture programs.

Capitalization: Catalytic/Replication Effect Institutes

On the indicator Number of professional organizations strengthened with research and training interventions (O3.2), the project significantly exceeded its target of 10, reaching 18 organizations over 2022–2023 alone:

- Research Institute of Vegetables, Melon Crops, and Potato Cultivation
- Scientific Research Institute of Fisheries
- Institute of Genetics and Plant Experimental Biology of the Academy of Sciences of Uzbekistan
- Scientific Research Institute of Livestock and Poultry
- Tashkent State Agrarian University
- Southern Agriculture Scientific Research Institute
- Institute of Microbiology of the Academy of Sciences of Uzbekistan
- Scientific Research Institute of Irrigation and Water Problems
- Scientific Research Institute of Horticulture, Viticulture, and Winemaking M. Mirzaev
- Plant Genetic Resources Research Institute
- Plant Protection and Quarantine Research Institute
- Cotton Breeding, Seeds Production, and Agrotechnologies Research Institute
- Kashkadarya Experimental Station of the Cotton Breeding, Seeds Production, and Agrotechnologies Research Institute
- Fergana Research Station of the Research Institute of Cereals and Legumes
- Samarkand Agro-Innovation and Research Institute
- Agrarian Women Association of Uzbekistan
- Besharik District 2nd Vocational School
- Zangiata Agrotechnological Vocational College
- Farmers

The primary objective of establishing Innovation Labs is to provide farmers, researchers, and agricultural professionals with hands-on experience in innovative agricultural methods.

Key Objectives:

- Demonstrating sustainable practices: Showcasing how sustainable farming techniques can enhance productivity while preserving environmental integrity.
- Encouraging adoption of new technologies: Introducing farmers to the latest agricultural technologies and illustrating their practical benefits.

- Promoting knowledge exchange: Creating a collaborative environment where farmers can learn from experts and peers, fostering shared learning and mutual experience.
- Empowering women in agriculture: Ensuring the labs are inclusive and address the unique needs and potential of women in agriculture.

To maximize their impact, these Innovation Labs should evolve into a permanent, organized demonstration network established in cooperation with local agricultural institutions, research bodies, and government agencies, functioning as AKIS centers.

Policymakers

The catalytic impact of the project on policymakers can be measured through specific targets:

	Target	2022	2023
Number of policy makers informed by the Action about the new knowledge products (O2.3)	120	31	91
Number of professional staff and researchers trained (O3.1)	100	44	87
Number of professional organizations strengthened with research and training interventions (O3.2)	10	5	14

Opportunities for International Collaboration

The ProDoc highlights the potential for engaging with international partners, such as WB, ADB, USAID, CAREC, IWMI, ICARDA, UNECE, UN Environment, FAO, UNESCO, and others, to leverage expertise and maximize regional benefits. However, many opportunities in this area remain untapped, signaling a need for future strategic engagement.

The ProDoc states that “The Action will explore opportunities to engage with other international partners (WB, ABR, USAID, CAREC, IWMI, ICARDA, UNECE, UN Environment, FAO, UNESCO, etc.) in the region to match the expertise and maximize the expected benefits for the region.” Many opportunities in this remain untapped.

Capitalization: Progress to Impact

Beyond the issues already discussed—such as impact measurement, the definition of innovation, and scaling-up challenges—lies the interrelated question of how government agencies can be encouraged and enabled to facilitate the wider adoption of project results, particularly in connection with value chain creation.

While senior and influential government officials at the Ministry of Agriculture have endorsed the project’s innovative approaches and advocated for more enabling policies, mechanisms, and strategies, addressing the above-mentioned issues in a clear and structured manner may be a necessary prerequisite before engaging other ministries.

8 CONCLUSIONS

This section brings the Conclusions of this MTE in terms of outcomes of the intervention and insights for decision-making and users.

Generic conclusion

A broad evaluation of the project's strengths and weaknesses indicates that the project team has demonstrated awareness of the challenges and made significant efforts in delivering core outputs while also prioritizing M&E, gender, and LNOB approaches, despite contextual challenges for the latter.

The project has successfully transitioned “From innovation (in institutes) and ideas (on farms) to applied innovation.” The potential next phase will test its scalability and its capacity to evolve “From project to program,” focusing not only on “technology for change” but on the integrated approach of “innovation + technology + nature” to achieve impact and sustainability.

On innovation and science-to-field connection: Based on field interviews and the project's composition of 18 Innovation Groups (IGs), it became evident that this report should include an evaluation of “innovativeness”—its nature, degree, processes, and the assets leveraged and developed. This evaluation also considers the sustainability and impact of each IG's outputs. Additionally, an unexpected but significant outcome emerged: the project's overall capacity to promote further innovations, both at the individual IG level and at the project-wide scale.

This project serves as an excellent example of how science can learn from the field, demonstrated by:

- Ex-ante: The ability to generate a significant number of high-quality projects.
- Ex-post: Concrete examples and insights derived from the Innovation Groups (IGs).

On outcomes and evaluation of singular IGs: While individual Innovation Groups (IGs) require detailed analysis to inform the overall project evaluation, the project itself stands out for its intrinsic value—not merely as a project management unit or a platform, but as a demonstrator. It showcases how science-to-field projects can drive systemic change through the integration of technology and nature in the agri-food sector, making a notable contribution to the UAKIS reform.

The evaluation must avoid a myopic, project-by-project perspective that focuses solely on a limited list of beneficiaries, farms, or research institutes. Instead, it should recognize that today’s beneficiaries are the experimenters shaping the future of the country, laying the groundwork for assessing conditions related to maintenance, sustainability, impact scalability, co-management, co-learning, and further innovation.

On gender: Gender considerations have been effectively addressed, especially in a context where progress was lagging. However, continued efforts are needed to ensure sustained improvements.

LNOB (Leave No One Behind): Many IGs inherently focus on areas, geographies, sectors, and activities that are typically overlooked by policies, programs, and the ministry. In addressing these gaps, the project has successfully engaged the ministry and policies, positioning them as active drivers of change. This achievement is a credit to the project and its management team.

Gender Representation in IGs: Despite progress, most IGs still involve a higher proportion of men compared to women. Furthermore, women are often concentrated in laboratory positions rather than in research roles or direct farming activities with interactive roles in decision-making or innovation implementation. Continued efforts are recommended to enhance gender equality across all levels of project activities and stakeholder engagement.

A point of attention on value chains has been noted: The M&E report by the project team notes that “Direct impact on value chains related to IGs, indirect to other value chains” – needs to be clarified. This point is addressed in the recommendations section.

Specific Conclusions

Conclusion 1 – While the project has achieved significant and rewarding successes, it holds even greater potential with continued support. As a "patient innovation" initiative, the key lesson for UNDP, donors, partners, implementers, and the Government of Uzbekistan is to focus on analyzing its impact and replicability. This analysis will be essential in deciding whether to continue the project, extend it, or develop a scalable and replicable version.

To begin, it is important to analyze the replicability of the IGs approach. Specifically, replicating the entire mechanism of Innovation Partnerships as a strategic framework across the country requires careful consideration.

The evaluator offers the following observations and lessons to guide this process: Impact and replicability should be evaluated within a specific timeframe, as every IG operates on two levels: implementing laboratory results and, through this process, feeding back new results, processes, or products into the lab. These contributions have the potential to achieve broader national outreach. As a "patient innovation" project, this requires a broader perspective than the scale of individual IGs for a comprehensive evaluation.

Beyond the achievements and forward-looking outcomes, nearly every IG could be debated in terms of its ex-post efficiency regarding net project funding. This does not account for the de facto budgets of research institutes, which contribute earlier research efforts and researcher time. Similarly, questions arise about the ex-ante financial sustainability and replicability of these IGs when considering the total costs, including past research investments and current budgets. While this analysis may hold value in the context of shifting donor budget priorities, it risks overlooking the originality and learning potential inherent in each IG, the IG concept as a whole, and the broader project framework.

In sum, micro-analysis of each actual IG inputs and results, as well as long run marginal returns of IG concept must be considered simultaneously. For this, a balanced and objective perspective highlights three key points:

- (i) A mutual exchange of learning has occurred, with the field benefiting from institutes and vice versa. Field projects have actualized scientific potential, just as scientific advancements have enriched fieldwork, leading to significant value creation, to be captured beyond financial accounting.

- (ii) Over time, as replication occurs, the speed of scaling will be crucial in a large country like Uzbekistan. Achieving this will require cumulative learning, economies of scale, and some level of standardization or routinization of training—possibly through collectives but certainly as part of the national AKIS development.

- (iii) Given the diversity of agricultural fields and challenges, the scarcest resource will not be financial but the limited availability of researchers to address these demands effectively. While the project has achieved significant and rewarding successes, it holds even greater potential with the right support. As a "patient innovation" initiative, this is a key takeaway for UNDP, donors, partners, implementers, and the Government of Uzbekistan. Careful consideration should be given to continuing the project, extending it, or developing a replicable and scalable version.

Conclusion 2 – In assessment of IGs and of the project, Sustainability -as well as impact- is to be envisaged at several levels: IG levels, project level, and national scalability levels.

In this context, 'sustainability,' as traditionally addressed in evaluations, requires a broader interpretation, and in fact different layers. In this report, 'sustainability' refers not only to the long-term viability of individual IGs but also to the Innovation Partnership as a concept - durability of feedback and follow-up systems. It emphasizes the scalability of various resources, their optimization, and rationalization within the evolving AKIS framework, considering their differing levels of scarcity and how they will integrate into future IGs. The foundation for this lies in the current IGs, which serve as the key aspect of this assessment. It is essential to distinguish between the sustainability of individual IGs, the overarching Innovation Partnership framework, and the full-scale replicability of the system. Recognizing this distinction allows for a focus on the localized sustainability of current IGs and the development of training frameworks that could enable nationwide replication. Financial considerations during the establishment phase should not overshadow the tangible results achieved, nor should the performance of specific IGs overshadow the broader potential for system-wide replication. These IGs provide valuable, bottom-up insights into replicability, scalability, and strategic ambitions, offering critical input for decisions on the continuation and expansion of the project.

Conclusion 3 – Several IGs have produced scientific and field results that could be effectively combined, warranting further scientific analysis and capitalization.

At a later stage, there is potential for broader integration through cross-IG initiatives in the field. Future options include:

- Developing a comprehensive land restoration package by combining relevant IG results.
- Coordinating scalability strategies under the UAKIS framework to optimize impact.
- Facilitating the exchange of lessons learned to enhance the overall effectiveness and impact of IGs.

- Designing larger programs that leverage diverse financial instruments to support further innovation and sustainability.

9 RECOMMENDATIONS

The following recommendations are based on the above Findings and Conclusions.

The project currently stands at a critical juncture where its tremendous potential is evident to any close observer. From interviews with the Ministry of Agriculture, there is a clearly expressed desire to continue the project, particularly to stabilize the concept of Innovation Groups (IGs) and ensure their functional and institutional sustainability.

However, no financial actions have yet been taken to scale up the pilot initiatives—neither by the government nor donors. To address this, the consultant suggests pursuing economic modeling based on current results, as detailed earlier.

Specifically:

- Clarify the distinction between incremental research/once-for-all equipment investments and the operational, service, and support costs for IGs that could have broader appeal to the farming community.

- Assess the economic framework of a regional and national support strategy for IGs, both within and beyond the AKIS system.

- Evaluate the marketability of IG products, which could provide a strong foundation for post-project institutional sustainability and scaling up while also serving as a potential exit strategy with economic benefits.

Crucially, Uzbekistan possesses the scarce yet critical elements—science, technology, and skills—that are often highly sought after in development economics. These combined resources should be strategically capitalized to maximize the project's long-term impact.

The key recommendations are organized into the following titles.

Recommendations summary

Uzbekistan possesses the key elements required for success in complex projects: science, technology, and skills. These elements, often scarce in similar contexts, are well-established in Uzbekistan.

The project stands out as a critical initiative because it operates within a unique environment where:

- Science support systems exists
- Technological knowledge is widely available through variety of publications.
- Existing national innovation system (NIS) provides a strong foundation for innovation and implementation.

The project effectively integrated these three areas, demonstrating a well-articulated approach that maximized the potential of Uzbekistan's National Innovation System (NIS).

The IGs' demonstrated success and scalability potential highlight the need for national extension. Key priorities include local appropriation, continued engagement with AKIS offices, and integration into agri-business chains.

The following recommendations are based on the findings, conclusions, and lessons learned outlined above.

Smooth transition to 2nd part of the project

R1. As smooth transition to 2nd part of the project, it is recommended to conduct a sustainability feedbacks workshop. This workshop should include self-assessments and scenario planning by IGs, focusing on the level of ownership of results, technical capacity to sustain project benefits, and dependence on continued financial support.

Rationale: While IG establishment is fully achieved, stronger linking IGs to value chains and attracting investments remains ambitious. Clarifying the impact on value chains—notably where targets are only partially met—requires additional analysis. A workshop would enable IGs to identify barriers, assess sustainability, and explore replication potential.

Capitalization on Lesson Learnt

R2. To capitalize on lesson learnt, the project should organize a joint national seminar on "The Potential of Impacting Agricultural Needs Through Regional Innovation Hubs and Supportive Local Ecosystems for Scaling." The seminar should focus on capitalizing on cross-IG learning in the following areas:

- **Land regeneration (science and field practices),**
- **Training of trainers (management and skills development),**
- **Scaling up (financial strategies),**
- **Database development, data exchange, and forecasting tools.**

Rationale: A national seminar would strengthen sustainability, serve as a platform for knowledge exchange, and feed into a cohesive exit strategy. It would engage stakeholders and reinforce institutional buy-in at national and local levels.

Additionally, the seminar should collectively assess the training and support required to achieve strong and sustainable long-term outcomes. (Target audience: Project Team, consultants, AKIS stakeholders).

Exit Strategy (Replicability, Scalability)

R3. To capitalize on lesson learnt, conduct research to develop financial models (combining quantitative and qualitative approaches) at the level of targeted IGs, to evaluate their potential for strong and long-term sustainability.

Rationale: Sustainability depends on clearly understanding operational costs, innovation scalability, and public-private funding mechanisms. Financial modeling would guide integration into value chains and continued public investment.

On updating the Theory of Change according to achieved results

R4. Consider updating the theory of change of the project, by adding a few sentences to clearly reflect its achievements in concretely defining the "scale out innovation" attempted by the project (as an outcome of above workshops).

Rationale: UNDP's review guidelines emphasize linking evaluations to explicit results frameworks and theories of change. Revisiting the ToC would incorporate learnings on LNOB, gender, innovation, and value chain development while reinforcing pathways to sustainability and resilience.

Overall Recommendation

R5. Recommendation to capacitate the ministry of agriculture and the AKIS system into implementation towards replication of the concept of IGs (Innovation Partnership).

10 LESSON LEARNED

Let us now reflect on the lessons learned from this evaluation—insights and knowledge gained from the project's unique circumstances, including its interventions, context, outcomes, and evaluation methods, that can be applied in similar settings.

As discussed earlier, a key consequence of the project's bottom-up approach is the importance of time. Achieving a lasting national impact requires a combination of long-term field sustainability and scientific innovation, which influences both sustainability reinforcement and capitalization potential.

Lasting national impact can be defined as the convergence of sustainability and laboratory-to-field innovation. However, as the ProDoc acknowledges, achieving "scale out innovation" may require more than one or even two years. This reinforces the understanding that the project must be seen as a "patient innovation project," where progress unfolds over time.

One of the most important lessons from this project is that field-to-laboratory feedback is equally as important as laboratory-to-field processes. Scientific protocols rely on the field to deliver tested and validated results, underscoring the mutual dependency between the two.

In practical terms, the ambitious goal of "scale out innovation" requires donors to view the project as a long-term investment, with continuous support to sustain momentum. Similarly, government backing is essential to integrate IG outcomes into the AKIS system, ensuring that constant innovation dissemination becomes a central pillar for success.

These insights collectively form a vital takeaway for UNDP, donors, partners, implementers, and the Government of Uzbekistan (GoU) as they consider the project's future trajectory, potential extension, or scaling-up strategies.

Lesson Learnt – By integrating all findings and aligning them with a multi-level sustainability analysis, the project's achievements provide valuable insights and a solid

foundation for feeding into and moving toward what the ProDoc refers to as “scale-out innovation.” These outcomes serve as capitalization material and offer lessons applicable to similar initiatives, both within and beyond Uzbekistan.

The potential for lasting national impact lies in the convergence of sustainability and radical innovation. However, achieving “scale-out innovation,” as outlined in the project ProDoc, may take more than one or even two years. This process requires extensive analytical development, which is detailed in section 4.3.1 and beyond the scope of this executive summary.

In conclusion, the ambitious goal of “scale-out innovation,” as defined in the project ProDoc, is a fruitful, actionable, and desirable horizon, the current project being a successful foundational step to it. The Innovation Group approach should be viewed by donors as a “patient innovation project” requiring sustained effort on the push side, with current progress justifying these are well deserved. On the pull side, continuous government support is essential to integrate IG results into the AKIS system, into which capitalization is to be appropriated, consolidated, and ultimately scaled. The linked condition for success is ensuring “constant innovation dissemination.” This is perhaps the key lesson for UNDP, donors, partners, implementers, and the Government of Uzbekistan.

11 REPORT ANNEXES

• Annex 1 - MTE ToR (excluding ToR annexes)

I. Background and context

The Government of Uzbekistan is currently implementing Uzbek Agricultural Knowledge and Innovation System Strategy, which aims to provide effective solutions to overcome challenges faced by farmers and agri-food businesses.

While there is an extensive financial and technical assistance support provided by various actors to the Government, an EU-funded UNDP intervention (EU-AGRIN) was launched with a specific focus on promoting knowledge and innovation. The project will implement and test European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) and Innovation Groups (IGs), as a proven concept of providing transfer of knowledge and technologies on climate resilient agriculture to the farming communities. The overall objective of the EU-AGRIN project is to support broader transformation of Uzbekistan's food and agriculture sector towards climate resilient and low-carbon development by accelerating innovation and scaling up climate action across agri-food value chains through the operationalization of the UAKIS. This objective will be pursued by portfolio of climate-relevant investments and by creating a scale-linking, primarily through implementation of Innovation Groups, but also through other actions on the policy and field level.

In doing so, the project has been closely cooperating with local, national, and international actors including public and private sector and research and innovation labs. This will enable inclusion of the EU institutional experience and scientific evidence to support decision-making. In general, the project will build on existing networks and platforms to accelerate innovation and investment through the establishment of advisory services and support networks as well as facilitating a gradual digital transition.

As the project progresses to its second phase, the UNDP Uzbekistan is in the process of engaging a National Consultant who will closely collaborate with the International Consultant - Evaluation Team Leader during the MTE of the UNDP "Supporting an inclusive transition to a "green" economy in the Agri-food sector and development of a "climate-smart" Uzbek Agriculture Knowledge and Innovation System" project.

II. MTE Evaluation purpose, scope and objectives

This MTE is initiated by the UNDP Uzbekistan CO. The objective of the evaluation is to review and assess the project results, its efficiency, stakeholder involvement, sustainability and provide recommendations on the smooth transition to the 2nd Phase of the Project.

Based on internal assessment and continuous positive feedback of the stakeholders and project beneficiaries, it is envisaged that UNDP Uzbekistan remains committed in continuing its efforts in this field. Therefore, it is anticipated that the outcomes of the evaluation will be a clear source for future planning and prioritization of UNDP Uzbekistan activities in the field of agriculture. It should provide the basis for learning and accountability for managers and stakeholders. The evaluation will have to provide to UNDP complete and convincing evidence to support its findings/ratings. Emphasis should be put on the project results, the lessons learned from the project and recommendations for the follow-up activities.

This evaluation is to be undertaken in line with the evaluation policy of UNDP (http://www.undp.org/content/undp/en/home/operations/accountability/evaluation/evaluation_policyofund) and the Evaluating Handbook Results Monitoring for UNDP

on (http://web.undp.org/evaluation/handbook/index.html).

The assignment will take place between July - October 2024. It will involve deskwork and meetings with national partners and stakeholders, including project beneficiaries. The national consultant will work in close collaboration with UNDP Uzbekistan CO and relevant stakeholders.

EVALUATION OBJECTIVES:

The evaluation is intended to provide a comprehensive overall assessment of the project and to provide recommendations for exit strategy and/or follow-up activities.

The purpose of the evaluation is:

- To assess overall performance against the Project objective and outcomes as set out in Project Document.
- To assess the effectiveness and efficiency of the Project.
- To analyze critically the implementation and management arrangements of the Project.
- To assess the sustainability of the project's interventions.
- To list and document lessons concerning Project design, implementation and management.
- To assess Project relevance to national priorities.
- To assess changes in the baseline situation and provide guidance for the future activities in the area of promoting improved water management.

Project performance will be measured based on Project's Results and Resources Framework, which provides clear indicators for project implementation. The Report of the Evaluation will be stand-alone document that substantiates its recommendations and conclusions.

• Annex 2 - Innovation Groups, names of projects, and IGs visited across pilot regions

In **Bold** we show the IGs the consultants have visited; in *italics*, IGs not visited

Tashkent Region:

In agricultural production, the region's crop production share is 49.4%, and livestock products contribute 50.6%.

Selected Innovation Groups:

- **IG#2. Seed production of new Ehtiyoj and Khotira varieties of soybeans suitable for the soil and climate conditions of Tashkent region.**
- **IG#7. Growing of heat-resistant soft winter wheat variety Ezoz irrigated with drip irrigation.**
- **IG#9. Introduction of a resource-efficient technology of summer siderate crops that increase soil fertility and cotton yield at Tashkent region conditions.**
- **IG#10. Organization of primary seeding of promising varieties of non-traditional okra and artichoke crops to climate conditions of Tashkent Region.**
- **IG#11. Introduction of drip irrigation at water scarcity conditions in household areas using alternative energy.**
- **IG#13. Adaptation of livestock sector to climate change and introduction of modern technologies in dairy products production.**
- **IG#14. Production of meat and wool by artificial insemination of merino sheep of woolly and meat breeds.**
- **IG#16. Introduction of the in vitro technology for vine grafts seedling (rootstock and scion) cultivation at the Tashkent region conditions.**

Fergana Region:

The region's agriculture predominantly comprises meat (22.7%), vegetables (16.4%), milk (13.2%), and grain (12.8%).

Innovation Groups:

- **IG#1. New cotton varieties C-6580 and C-8296 implementation suitable for Fergana region soil and climate conditions and adoption the water and resource efficient technologies and integrated pest control measures.**
- **IG#4. Introduction of new Barkaror variety of mungbean using innovative land and water management technologies.**
- **IG#15. Intensive fish farming technology in small reservoirs (basins).**
- **IG#17. Bioremediation of saline lands using microorganisms.**
- *IG#18. Introduction of technology for growing and drying organic tomatoes using a solar-powered drip irrigation system.*

Kashkadrya Region:

The region contributes 9.5% to the republic's total agricultural, forestry, and fisheries products and services.

In agricultural production, crop production accounts for 31.1% and livestock products for 68.9%.

Innovation Groups:

- *IG#3. Organization of primary seed production of new SP-2602 medium fiber and Kashkadarya-5 fine fiber drought and heat resistant cotton varieties suitable for the soil and climatic conditions of the Kashkadarya region.*
- **IG#5. Adaptation of agricultural technology for new "Nasaf" and "Zilol" durum wheat varieties cultivation and launch of pasta production.**
- **IG#6. Introduction and organization of seed production of new varieties of spring wheat for low-water, arid regions.**
- **IG#8. Introduction of high-yielding varieties of pistachios into seedling production**

Samarkand:

Innovation Group:

- **IG#12. Biological control against a pest harmful to crops - Whitefly (Aleyrodidae)**

• Annex 3 - List of persons interviewed

See mission itinerary in Annex 4

• Annex 4 - MTE Mission itinerary, including summary of field visits

AGENDA and MAIN FINDINGS
within framework of the final evaluation of Supporting an inclusive transition to a "green" economy in the Agri-food sector and development of a "climate-smart" Uzbek Agriculture Knowledge and Innovation System (EU-AGRIN) Project
August 19 – 30, 2024

Mission Objectives of the mission: The international Consultant visited Uzbekistan to evaluate several aspects of the project, including relevance of the project, quality of project design, efficiency of implementation, effectiveness to date, partnership strategy, and potential sustainability of project interventions. He looked at the achievements of the project with respect to the relevance of its objectives and the attainability of its outputs. The evaluation considered the project design, including whether the assumptions and risks remain valid, noting external factors beyond the control of the project that have affected it negatively or positively to date.

Time	Agency	Location	Participants	IG n°
DAY 1: Monday, August 19, TASHKENT				
10:00 – 10:30	UNDP CO	Tashkent	DRR, ECA lead, National Project Coordinator (PM), International Consultant, National consultant	NA
Discussion: Workplan for activities defined in the ToR for International Consultant. Discussion mission objectives and future inputs of the consultant				
11:00 - 11:30	EUD	Tashkent	Jana Kurpisa, Program Manager International Consultant, National consultant	NA
Discussion of expectations from the evaluation Agriculture has been only sector of intervention allowed until 2016; now the Eu has an opportunity to refocus beyond this sector. The EU has the largest portfolio of Agrarian cooperation with Uzbekistan in a context of agriculture reforms; the EU has partnerships on project funding with the World Bank, AFD. The EU's specific interest in this project evaluation is to understand the project's specific contribution into the UAKIS. The discussion revolved around Project by project evaluation vs overall project evaluation, delving into the characteristics of 'real' innovation, ultimately leading the report to discuss various innovations approaches as it should neither be mistaken for invention, nor should existing invention underplay the fact that innovation may happen through the project. Refinement (or not) of IGs were discussed; typology of beneficiaries beyond research institutes, capacity for maintenance and sustainability were pointed as markers for evaluation, as well as capacity f scientists and farmers to interact. Ownership, decision power, public funding, and the role of the Agriculture ministry were discussed, as well as Tenure on land and organization of farmers in Fergana and Kashkadarya comparatively to Tashkent region. UAKIS emphasis on large agri-business groups vs. ; 5 M small farmers out of 37 M inhabitants and employment scenarios were laid.				
14:00-15:00	Ministry of Agriculture	Tashkent	Alisher Shukurov, Deputy Minister, Chairperson of the project board International Consultant	NA
Discussion of joint project implementation and future opportunities The deputy minister stated the support and priority given to this project in the view of the government, and all its satisfaction on it.				
16:00 – 17:00	FAO in Uzbekistan	Tashkent	Sherzod Umarov, Assistant Representative International Consultant	NA
Cooperation with FAO in promoting green transition in agri-food sector FAO's mission to accelerate agri-food systems transformation while covering ecology, climate change, was recalled. Inter-ministerial coordination, role of presidential administration, international agencies coordination was explained. FAO specific projects include a platform to gather people from sciences, production, government, etc., to discuss real agri-production challenges. Since 2016 , 50+ presidential decrees on agriculture in a context of a first move for sub-leasing land. The need of the hour is to exit the traditional + post-soviet specialization: Fergana cropping / other regions cattling ; with soviet period cotton everywhere: encouragement to cross cultures but limited by water scarcity. Challenge of salinity, agriculture with an innovation angle as Minister of agriculture was 5 years minister of innovation (and had created this ministry). FAO in Uzbekistan is active on digitalization and Data base / data exchange / forecasting material ; and should be public.				

even more				
DAY 2: Tuesday, August 20, TASHKENT REGION				
9:30-10:30	Scientific-research institute of agro technologies of cotton breeding, seed-breeding and cultivation	Tashkent region, Kibray distict	Shadman Namazov, Director Normat Durdiev, Siderate IG leader, Project Coordinator (PM), International Consultant, Interpreter	IG#9 DAY12 IG#1 DAY9

Cooperation with researchers in the implementation of the innovation project: achievements, and opportunities.

Visit to the Institute - Scientific-research institute of agro technologies of cotton breeding, seed-breeding and cultivation

- Discussion of IG#9. Introduction of a resource-efficient technology of summer siderate crops that increase soil fertility and cotton yield at Tashkent region conditions
- (details presented DAY 12)

Effect of cover crop on cotton yield – keeping soil moisture longer reduce irrigation
Farrow irrigation
Innovation (disking instead of farrow) in plowing and irrigation (sprinkle)
Save water through cover crop plus sprinkle
Possible to reduce 20% energy consumption in plowing

- Discussion of IG#1. New cotton varieties C-6580 and C-8296 implementation suitable for Fergana region soil and climate conditions and adoption the water and resource efficient technologies and integrated pest control measures
- (field visit in Fergana DAY 9)

In charge of biotechnology laboratory in the institute ; project head for Fergana cotton project
Background research was in Fergana valley
Type of cotton adapted to climate change ; abnormal heat waves hit 30% productivity
Water scarcity : dripping systems but low knowledge on using this system: demand goes down among farmers ; horticulture farming systems are sold by foreign companies instead of cotton dripping systems ; the institute developed two varieties of resistant cotton 5.4 t/ha vs 3.2 t/ha; and easier to harvest more compact ; early mature before the rains come that would reduce the fiber; quality ; productivity +30-40%
Drip irrigation ; installation; automation for distant / smart phone using
Adapt nano fertilizers / liquid fertilizers ; using different fertilizers at different stages
Save water 30-35%; Fertilizers 40%
Next stages will be on pest fighting / control ; biological methods pest against pest ; biological pests against hazardous pests; not against useful pests
Moved from 10 ha march 2023 to 130 ha now on farmers' land not on institute land ; peer-to-peer farmers to farmers
So far IG specialized by region as TAS and FER have different issues degraded land for FER; humidity then pests for FER
CREA Italy consultants commissioned UNDP suggested link various innovation groups

In cover crop IG: 6 members from institute ; 2 m (one phd student) ; 4 w; data control and soil composition and temp and humidity and conditions ; women measure leaves and stem development ; need more women staff for phenological research ; some are institute members some students from agri university ; farmers to pass the information farmers to farmers training

Soil fertility is very subtle hence focus on this; recent PR decree on soil fertility ; government subsidies have been announced 1 million per ha ; good opportunity from now on replicate at larger scale the dissemination of the institute know how ; 100km away from TAS pilot land where a private farmer is

<table>
<tr><td colspan="5">interested to apply the institute knowledge; they have a pool of farmers with regular communication ; many farmers come with their problems and this is the way to identify voluntaries for pilots
There should be more calls by UNDP and donors to give the opportunity to demonstrate skills of science and real actors working together ; possibility to systemize : CREA for instance has an algorithm to match IG solutions / specific issues of a given territory</td></tr>
<tr><td>11:00 – 12:00</td><td>Institute of Genetics and Plant Experimental Biology of the Academy of sciences</td><td>Tashkent, Kibray</td><td>Abdujalil Narimanov, Director
Sodir Meliev, Innovation Group Leader,
Ilkhom Kurbanbaev

Project Coordinator (PM), International Consultant</td><td>IG#2

IG#7</td></tr>
<tr><td colspan="5">Cooperation with researchers in the implementation of the innovation project: achievements, and opportunities.
<u>Visit to the Institute - Institute of Genetics and Plant Experimental Biology of the Academy of sciences</u>
1 DG
4 cadres including 2 IG leaders; all men
6 staffs including 1 woman

DG: contributions to the institute now well equipped ; and helps to integrate knowledge into applied ; knowledge specialists have shared their knowledge into workshops seminars etc ; approach towards creating a systematic seeding system
Helps creating a new variety / new patents ; and also new generation is gaining from old generation

• <u>Discussion of IG#2 - soya Seed production of new Ehtiyoj and Khotira varieties of soybeans suitable for the soil and climate conditions of Tashkent region</u>

Before the project : Long standing experience in oil seed; soy beans wheat seeds etc ; high end yield, early species and protein rich
Previously poor integration into real farming meant challenges
Specific contribution : show the farmers how a new market / transformed soya seeds is profitable and not just soya for feeding the cattling / capacity building from seeding to irrigation to harvesting ; now expanding the territory from 2 + 2 ha; +8 ha in jizzack region; 10 in total
Helped farmers get more than 4t/ha of soya beans while most of these into this activity were losing money before
Gender: more women getting engaged on the farmer side / in capacity building trainings

• <u>Discussion of IG#7 - Growing of heat-resistant soft winter wheat variety Ezoz irrigated with drip irrigation</u>

System 3 in one (invented by the Chinese in Xinjiang; 84% of Chinese cotton production; 12 t/ha of wheat production) dripping irrigation: thinking on agricultural systems to enable the advantage of resistant variety to be implemented / integrated
From 5 to 7.5 t/ha; now farmers express willingness to try new seeds variety
Rotation of cultures: Irrigation Gap between cotton and wheat ; farmers used to have farrow irrigation and drip irrigation for cotton; with the new system same system for both</td></tr>
<tr><td>14:00 – 15:00</td><td>Research Institute of Irrigation and Water Problems</td><td>Tashkent</td><td>Abduvokhid Urazkeldiev,
Director
Samandar Gapparov, Drip irrigation IG leader,

Project Coordinator (PM), International Consultant, Interpreter</td><td>IG#11 (Day 4)</td></tr>
</table>

Cooperation with researchers in the implementation of the innovation project: achievements, and opportunities.

Visit to the Institute - Scientific Research Institute of Irrigation and Water Problems

- Discussion of IG#11 - Introduction of drip irrigation at water scarcity conditions in household areas using alternative energy
- Field Visit DAY 4

DG + team leader
15 labs and 6 regional centres; next year 100 years
Water using alternative energy / solar panels resources in 10 households
Major task is to upscale from village to district level ; a direct requirement from the PR himself
When call, 2 ideas to submit:

- Rational use of water in crops
- Experts mentioned priority to: Idea to improve the productivity of small farming (62% of farmers in UZB) also a higher level government strategy; recently 10 PR regulations focusing on water saving ; just back from 2 weeks / 5 workshops of training local population for efficient use of water; -23% water resources over 30 years; population from 20mn to 37mn: further importance for water efficiency
  ISMITI, ISCAT, AKIS – 1 borewell 120m, 17kW solar panels dripping irrigation in 10 households
  Second project focus based on genderness, inclusiveness
  So main innovation is to deliver to the undelivered as they don't have any ither means in an adaptation context ; target population would have had to migrate otherwise

Innovative? :
1st solar based vertical irrigation in UZB; done in water scarcity regions (in these regions many were depending on rains plus government water supply / 2 hours of drinking water per day)
Farmers submit their water demands to the govt ; in draught context this has changed in these regions (and also the government is giving limits now and distributing equally) / water conflicts among farmers ; also upstream people better served)
Preparing a document to explain the feedbacks/ experience return for donors
Economic aspect: excess energy sold to the government and money can be used for maintenance or others
So socio-economic innovativeness first

Scaling-up?:
Question:

1. To all unserved first ?
2. Then To other types of households?

Designed the pilot / demonstrator product: will present it to the govt and government will decide where t and how to apply it / decide allocation of funding

3. To all unserved
4. To other types of households

Great alignment with govt on policy levels ; will also debrief the govt on the pool of experts that was created through this project ; great asset for future

16:00 – 17:00	Research Institute of Horticulture, Viticulture and Winemaking named after Academician Mahmud Mirzayev	Tashkent region, Tashkent district	Alijon Esonqulov, Director Fozil Boyjigitov, Grape IG leader, Project Coordinator (PM), International Consultant, Interpreter	IG#16

Cooperation with researchers in the implementation of the innovation project: achievements, and opportunities.

Visit to Institute - Research Institute of Horticulture, Viticulture and Winemaking Mahmud Mirzayev

- Discussion IG#16 - Introduction of the in vitro technology for vine grafts seedling (rootstock and scion) cultivation at the Tashkent region conditions

Created 1898
Visit cloning laboratory; 4 m, 3 w
Breed local varieties with international varieties to make more resistant species especially to salinity.
Winery & horticulture
2ha of land plots, 5 varieties of grape and 2 root stocks, grafting
End stage : use in agriculture: 4 farmers approached to them to integrate these products

Selection of farmers: They found the institute ; for instance one of them has gone to 18 countries ; learn about the institute through media internet TV etc; one farmer for instance wants to turn 90 ha into a grape crop / wineyard end target ; so far 2 ha allocated ; IG = 1 farmer to several institute members
So far on the 2 ha, mother plants then later grafting: Many people apply to the institute on a contract basis

Their direct beneficiary is the nursery ; government institute but allowed to generate commercial revenues

One innovation is they had never been doing rootstock innovation
Within the projects started “branding” local varieties into ‘mother’ varieties (nursery context/ source to multiply)

Also conducting scientific work for Woodstock preservation
In UZB 130,000 ha done by cutting / not grafting for wineyards
They will continue after the project’s

DAY 3: Wednesday, August 21, TASHKENT REGION				
9:00 - 12:00	Scientific Research Institute of Fisheries	Tashkent region, Yangiyul district	Abdulla Qurbonov, Director, IG Leader, Members Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#15 Day10

Introduction of intensive fish farming technology in small artificial reservoirs (basins).

Visit to Institute - Fisheries scientific research Institute

- Discussion of IG#15 - Intensive fish farming technology in small reservoirs (basins).
- (Visit of regional institute and field visit on Day 10)

Recently created, under Ministry of agriculture
11 scie staff (incl 3 phd) ; 18 technical

Including fishery from natural lakes & dams
200,000 tons 60/40 aquaculture / natural ; 300 ha Publ/private projects

Focus on fish disease : collaboration with Belarus / FAO / GIZ / USAID / UNDP (equipment) grants ; through grants able to increase services to the farmers

Projects on technology on Intensive culture in reservoirs while water quality decreases in the country and population increases ; led to IG

Aim is mostly to teach what is intensive agriculture and points of attention to be successful with limited land and water resources: extra-oxygenation; winter strategies incl. 10,000 African catfish indoor including market-placing at optimum time in the year - recycle close circuit water
UNDP : solar panels solar heating water for winter ; move from 48 kW to 30 solar / 18 grid ; and also increase temperature to advance breeding period by a few months
Started also with Tilapia 2-3 years ago
Partnerships with Belarus, Russia, Egypt, ; South Korea in progress

UNDP project: in Fergana chose a technical school ; stock / Mother brood stocks / larvae centralized and then distributed to the farmers ; Fergana is the model of "training the trainers" ; through UNDP equipment (and training) for FER and TAS regions : controlling the water equipment
1.5-2 t/ha to 5-7 now
National target 600,000 t/ha
Now households are also interested (flow through systems in mountainous areas: UNDP helps continue an annual training on this ; was there before);
Exact numbers will be provided through the school director; from last 5 years nationally special grants for women to enter into a business; in aquaculture included so for large was mostly men but women are entering: households: mostly women

Visit of breeding lab: where breeding Belarus carp and local carp

14:00 - 16:00	Institute of Microbiology of the Academy of sciences of the Republic of Uzbekistan	Tashkent	Qahramon Davranov, Director Tokhir Husanov, Innovation Group Leader Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#17 Day 10

Cooperation with researchers in the implementation of the innovation project: achievements, and opportunities.

Visit to Institute - Institute of Microbiology of the Academy of sciences of the Republic of Uzbekistan

- Discussion of IG#17 - Bioremediation of saline soils using microorganisms
- (Field visit on Day 10)

100% gender parity in the scientists team.

Bio-remediation of saline land 5ha now target 96ha
Cotton 2.0
Micro organisms to remediate soils ; rehabilitate the soil productivity

2 objectives
- Remediation of fertility of soils
- Resistance of plants

Scaling up: will draft a blueprint to submit to the govt
But issue of convincing against the old school: innovative as it is breaching usual concepts of salinity; have checked scientific literature it's quite original

Claim and call for UNDP to feedback the govt

Links up to mineral fertilizers' use : enable to reduce the costs

Relevance : more than 50% agri land of UZB is high salinity : expand geographically also no to lose know-how e.g. compare moderate / high salinity etc
5 functional (type of) micro organisms

Also 5 ha is nothing: need to show a larger scale				
16:00-18:00	IG Project: Organization of primary seeding of promising varieties of non-traditional okra and artichoke crops to climate conditions of Tashkent Region	Tashkent region, Tashkent district	Rustam Nizomov, Director Bahodir Ibrohimov, Innovation Group Leader, Nurbek Khushvaqtov, researcher, Rustam Turamatov, researcher, Sardor Hamidov, farmer Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#10
Comprehensive evaluation of varieties of okra and artichoke based on resource-saving innovative technologies, establishment and popularization of primary seed production of promising non-traditional varieties of okra such as Tashkent tuhfasi, Shafaq, Zamin and artichoke variety Sharq go'zali				
DAY 4: Thursday, August 22, TASHKENT REGION				
09:00 – 16:00	IG Project: Introduction of drip irrigation at water scarcity conditions in household areas using alternative energy	Tashkent region, Akkurgan district	Samandar Gapparov, Innovation Group Leader, Abduholiq Utaev, Senior Researcher, Ziyodulla Jumaev, Senior Researcher, Anvar Rahmatov, Senior Researcher, Shuhrat Togaev, PhD student Project Coordinator (PM), International Consultant	IG#11
Implementation of water-saving irrigation technologies using alternative energy in the agricultural crops cultivation at residential areas of Tashkent Region				
	DAY 5: Friday, August 23, SAMARKAND			
10:15 – 15:00	Samarkand Agroinnovations and Research University	Samarkand	Otamurod Pulatov, Innovation Group Leader, members of the group Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#12
Cooperation with researchers in the implementation of the innovation project towards introducing application of Encarsia Formosa UZX1, biological control method against Whitefly (Aleyrodidae), a pest harmful to vegetables, rice and other crops: achievements, and opportunities. **Visit to Institute - The Educational and Scientific Production Biolaboratory affiliated with the Department of Agrochemistry, Soil Science, and Plant Protection at the Samarkand Branch of Tashkent State Agrarian University Samarkand -** • Discussion of IG#12 - Biological control against a pest harmful to crops - Whitefly (Aleyrodidae) (before 3 other insects) Long discussion on scaling up: capacity to train trainers is large, and an economic model is possible. Sustainability : farmers willing to pay ; less expensive than chemicals and in chemicals further applications are difficult once crop has started growing Planning a brochure / training towards the 900 centres in the country.				
DAY 6: Saturday, August 24				
DAY 7: Sunday, August 25				
DAY 8: Monday, August 26, KASHKADARYA REGION				
09:00 – 11:00 11:00 – 16:00	Southern farming Scientific-research institute Cotton demonstration farm	Karshi town	Oybek Amanov, director, Leader of IG on durum wheat; Sherzod Dilmurodov, Leader of IG on spring wheat; Bekzot Begmatov, leader of IG on pistachio	IG#8 IG#5 IG#6

	and pasta production mini factory	Karshi and Kasbi districts	Project Coordinator (PM), International Consultant, National consultant, Interpreter	

Presentation of Innovation Groups that are being implemented in Kashkadarya region:
1) Establishment of pistachio seedlings "in vitro" conditions based on micro clonal propagation of local and introduced pistachio varieties and the creation of pistachio plantations in farms;
2) Adaptation of agricultural technology for the cultivation of durum wheat “Nasaf” and “Zilol” varieties, suitable for the climatic conditions of the southern regions, to establish the production of high-quality pasta from the cultivated crop;
3) Development and innovative introduction of resource-efficient agrotechnologies of new Janub Gavhari, Navroz and Parvoz varieties of spring wheat and preparation of high-quality seeds and application to farms and agroclusters suitable for the soil and climatic conditions of Uzbekistan;

12-15 people; incl. 2 women - IGs: huge majority of institute members; few women
Institute has a partnership with CIMYT since inception

- <u>Discussion of IG#6 - Introduction and organization of seed production of new varieties of spring wheat for low-water, arid regions</u>

Spring variety initially not adapted to southern, regions; multiplied seeds; later on can be implemented to other dry regions
Out of 1,000 varieties, 3 types of varieties targeted for water scarce regions; objective to test and develop recommendations for the farmers and to support agro-clusters for adopting these varieties
One has a patent registered in 2019; plus two that are results of the breeding work, registered in 2024
Breeding period 8-10 years; testing for last Two varieties started in 2021
Goal of the project was not to develop the new varieties but to develop the seeding for the farmers

First, organized the system of seeding; planted for two consecutive years; 3 fields; planted on three different dates; also applied different fertilizers; and identified the highest productivity combination ; developed the recommendations/guidelines and transmission to farmers; so far with the one partner farmer in the IG /planning to work with others as there is a demand

Q&A
- Irrigation scheme: no field experience so far; maintain 70% soil humidity but no experimentation protocol; during vegetation period irrigated two times: est 800 cubic meter/ha (fall variety one more time or even more when no much precipitations during winter time)
- Developing seeds for other regions: before Russians, UZB tradition was spring variety, not winter variety; in north winter comes early so no time for winter variety: in south possibility to optimize the land and have different crops: so advantage to one with shorter time
- IG: was good feedback from direct communication institute-farmer-akis akis staff supported a lot
- emphasize the water contents as in Kashkadarya comes from pumping; high energy intensive; high cost.

- <u>Discussion of IG#5 - Adaptation of agricultural technology for new “Nasaf” and “Zilol” durum wheat varieties cultivation and launch of pasta production</u>

Wheat disadvantages : requires good temperature; new varieties should meet requirement for pasta production (so far pasta mostly imported): introduce those varieties
Manufacturing unit of bread and pasta; sold to local consumers
Developed rain irrigation ; research on agri-technology schemes
Focus on in-house training

Sustainability: Equipment for pasta-bread can be used by institute for other experiments : other cereals into bread or pasta for instance ;
Scaling up: also produced enough seeds to scale up to 250 hectares

- Discussion of IG#8 - Introduction of high-yielding varieties of pistachios into seedling production by in vitro microclonal reproduction technology

People : in degraded land that no longer worth for agriculture but just sheep greezing, possibility to reintegrate agri through pistachio and it can regenerate the land;
Including research o medium optimization of developing the rooting; rain irrigation ; Iranian varieties better than local; introducing them
Comparative Question on sustainability / scalability as pistachio for instance more complex and risky even if requires no irrigation: why would go in pistachio vs spring wheat? Simple: slope: pistachio / flat land : wheat; can also combine pistachio with other plantations : roots go deep for pistachio (15 cm roots for 10 cm plants)
Farmers: on what do they still need institute: irrigation; pest methods for some more time / 2-3 years or 5-6 years as some years precipitations are lower / maybe need some other recommendations these years; pistachio complex so need help
if they want to train other : would recommend the institute still : for seeding, institute should support
Director ox Axis Kashkadarya: good cooperation with institute and IG
As irrigation very costly here, needs heat-resistant plants
Spring wheat was historically popular; 2004 wheat independence achieved quantitatively; then qualitative experiments ; as cotton harvested until December need of spring wheat; alternating not just year to year but within the year
Research goes on but without the support cannot be applied
Question on generalization of IG method to less depend on external support in the future to implement research results

DAY 9: Tuesday, August 27, FERGANA				
14:30 – 16:00	Demo field of IG on new cotton varieties	Fergana region, Kuva district	Abrorjon Kurbonov, IG Leader, pilot farmer, members Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#1

Introduction of new innovative water and resource-efficient technologies and integrated pest control measures for new cotton varieties suitable for the soil climatic conditions of the Fergana region of the central region of Uzbekistan

- Field Visit of IG#1. New cotton varieties C-6580 and C-8296 implementation suitable for Fergana region soil and climate conditions and adoption the water and resource efficient technologies and integrated pest control measures

Coton plus précoce plus résistant au chaud; drip irrigation plus adapted fertilizers ; higher yield
Last year compared species with normal irrigation
This year introduced drip irrigation
Initial goal increase 1t/ha ; And reduce 25%
Different fertilizer composition at different stages : worked with national producers to produce the bags of fertilizers; combination is the result of a phd research in their institute ; the producer now sells nationally

DAY 10: Wednesday, August 28, FERGANA				
08:00 – 11:00	Demo field of IG on bioremediation of soil	Fergana region, Dangara district	Tokhir Khusanov, IG Leader, members Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#17

Determination of types of soil salinity using modern technologies, reduction of osmotic stress and plasmolysis processes caused by soil salinity with the help of microorganisms, increase and restoration of soil fertility for the soil and climatic conditions of Fergana Region, Uzbekistan. • Field Visit of IG#17 - Bioremediation of saline soils using microorganisms Coton salinity In the control field: less saline than the demo land initially; double water; double fertilizers; same seeds; still, no effective growth salinity very harmful				
11:30 – 13:00	Demo field of IG on mungbean	Fergana region, Dangara district	Safar Alikulov IG Leader, Members Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#4
Introduction of new innovative water and resource-efficient technologies for melioration and plant protection (biochemicals that increase soil and plant immunity) for new mungbean variety Barqaror suitable for the soil-climatic conditions of the Fergana region of Uzbekistan • Field Visit of IG#4 - Introduction of new Barkaror variety of mungbean using innovative land and water management technologies Bean improved plant that grows vertical and holds peas together easier for harvesting				
14:30 – 16:30	IG group project site on fish farming	Fergana region Besharik district	Abdulla Qurbonov, IG Leader, members, pilot households Project Coordinator (PM), International Consultant, National consultant, Interpreter	IG#15
Introduction of intensive fish farming technology in small artificial reservoirs (basins). • Field Visit of IG#15 - Intensive fish farming technology in small reservoirs (basins). Field enactment of techniques developed at the institute Teaching				
DAY 11: Thursday, August 29, TASHKENT REGION				
09:00 – 12:00	IG Project: Production of meat and wool by artificial insemination of merino sheep of woolly and meat breeds	Tashkent region, Akhangaran district	Nuraddin Ruziboev, Innovation Group Leader, International Consultant, Interpreter	IG#14
Introducing of artificial insemination of merino sheep with frozen semen of imported stud rams and efficient use of pastures, improving of the elasticity and fineness of the wool • Visit to institute - Scientific Research Institute of Livestock and Poultry • Field visit to IG#14 - Production of meat and wool by artificial insemination of merino sheep of woolly and meat breeds 1 male can inseminate 3 females and useless out of reproduction period With artificial insemination:; sperm form Dagestan, Russia - 30% higher sheep per female - Dispensing with the males saves impact on land Plants varieties of seeds / fencing for grass preparation / hope of land restoration over years ; changing greasing patterns to also protect roots 130-150 lambs from 100 sheep every year almost the same on each farms Work with three farms				

Scaling up: 60 sheep a day possible; if we delay september-october can handle 10 farms ; more than 1,000 sheep and of course equipment durable ; costs are nothing to benefits : by normal insemination needs 80 ramps to inseminate 500 sheep and keep them till the next year Activity has attracted interest from other farmers ; in workshops number of people grows ; will extend to other farmers Farm is the former soviet collective farm - Fencing was common but then abandoned and seeds lost; reintroduced to match the sheep improved production and adapt to CC				
14:00 – 17:00	Rural families in Tashkent region	Tashkent region, Akhangaran district	Adiba Akhmedjanova, Chairperson, Innovation Group Leader Kholida Abdurakhimova, Owner of the household, Sadokat Ashuralieva, Owner of the household International Consultant, Interpreter	IG#13
Integrated approach to the organization of modern and innovative dairy farming at farms and households in mitigation of the climate change negative impact in the livestock sector and increasing efficiency and well-being of rural people Mostly a revenue generation project. Sustainability depends on indiginisation of equipment and entrepreneurial skills (contrasted visits)				
DAY 12: Friday, August 20, TASHKENT & TASHKENT REGION				
09:00 – 10:00	Introduction of a resource-efficient technology of summer siderate crops that increase soil fertility and cotton yield at Tashkent region conditions	Tashkent Project office	Normat Durdiev, Innovation Group Leader Project Coordinator (PM), International Consultant,	IG#9
Presentation of IG on introduction of resource-saving agricultural technologies for green manure crops growing by sprinkler irrigation and no tillage to increase soil fertility and cotton yield • Office presentation of IG#9 Combining siderate crops and non traditional irrigation - Siderate crops: enrich the soil (lat. Siderius: conversion of sunlight energy into green plant mass) - On slopes, traditional irrigation leads to 130t/ha soil loss annually incl 1t of humus: nature takes 100 years to reconstitute it: sprinkling irrigation Farmers training then peer to peer spread After wheat harvest, siderate crops planted; next year cotton / alternate ; addresses mitigation + adaptation Siderate vs leguminous plants (pulses) vs none Rien: pertes par evaporation endommage le sol Pulses vs siderate : beans capture nitrogen from air ; if top 40% siderate harvested for animals feed this is an income Min fertilizers expected 25% saved ; in fact saved 70% Cotton yield from 4.5 to 5 t/ha Microflora/fauna +50% after one year ; will grow in increments				
11:30-12:00	UNDP	UN CO	DRR, ECA Lead International Consultant	NA
Briefing with senior management on the mission Presentation of main conclusions and lessons in this report.				

• Annex 5 - List of documents reviewed

Project structuration
Signed Project Document, 2021 (ProDoc)
Projects submitted and signed for each IG (18 documents)
List of IGs EU-AGRIN
The List of Stakeholders EU-AGRIN
Social and Environmental Screening

Progress reports and presentations
Progress Report, November 2022-December 2023
Annual Reports of IGs 2023 (18 documents)
One pager presentations on IGs (18 documents)
PPT Project presentations by IG (18 documents)
Project Logframe and KPis as transmitted September 2024

Finance documents
Budget Expenses 2023-2024, Excel file

• Annex 6 - Evaluation Question Matrix

The Matrix includes the (evaluation criteria with key questions, indicators, sources of data, and methodology)
Evaluation Criteria Matrix is presented as follows[3].

Evaluation Questions	Indicators	Sources	Data; Sources
Evaluation Criteria: Relevance ***How does the project relate to the main objectives of the EU, UN CO, and the environment and development priorities at the local, regional, and national levels including LNOB?***			
Does the project's objective align with the priorities of the local government and local communities?	Level of coherence between project objectives and stated priorities of local stakeholders	Local stakeholders Document review of development strategies, policies	Local-level field visit interviews Desk review
Does the project's objective fit within the national environment and development priorities? Who are the main beneficiaries of the project and how does the project address their development needs?	Level of coherence between project objectives and national policy priorities and strategies, as stated in official documents	National policy documents.	Desk review National level interviews
Did the project concept originate from local or national stakeholders, and/or were relevant stakeholders sufficiently involved in project development?	Level of involvement of local and national stakeholders in project origination and development (number of meetings held, project development incorporating stakeholder input, etc.)	Project staff Local and national stakeholders Project documents	Field visit interviews Desk review
Was the project linked with and in line with UNDP priorities and strategies for the country?	Level of coherence between project objective and design with UNDAF, UNDP	UNDP strategic priority documents	Desk review
Evaluation Criteria: Efficiency ***Was the project implemented efficiently, in line with international and national norms and standards?***			
Has the project or programme been implemented within the original timeframe and budget? Is the project cost-effective? Have there been any outside factors (e.g. political instability) affecting implementation effectiveness?	Quality and adequacy of financial management procedures (in line with UNDP, UNOPS, and national policies, legislation, and procedures) Financial delivery rate vs. expected rate; Management costs as a %age of total costs	Project documents Project staff	Desk review Interviews with project staff
Are expenditures in line with international standards and norms? Has there been over-expenditure or under-expenditure on the project?	Cost of project inputs and outputs relative to norms and standards for donor projects in the country or region	Project documents Project staff	Desk review Interviews with project staff
Is the project implementation approach efficient for delivering the planned project results? Extent and quality of engagement with relevant partners/partnerships? Adequacy of implementation structure and mechanisms for coordination and communication?	Planned and actual level of human resources available Quality and adequacy of project monitoring mechanisms (oversight bodies' input, quality and timeliness of reporting, etc.)	Project documents National and local stakeholders Project staff	Desk review Interviews with project staff Interviews with national and local stakeholders
Is the project implementation delayed? If so, has that affected cost-effectiveness?	Project milestones in time Planned results affected	Project documents	Desk review

[3] NB : As the projects suffered no delay due to covid, this issue was not addressed.

Evaluation Questions	Indicators	Sources	Data; Sources
Did UNDP and partners take prompt actions to solve implementation issues, if any?	by delays; Required project adaptive management measures related to delays	Project staff	Interviews with project staff
To what extent is the project leveraging additional resources?	Amount of resources leveraged relative to project budget	Project documents Project staff	Desk review Interviews with project staff
Cross-cutting Issues - LNOB, Gender equality and women's empowerment ***How did the project contribute to gender equality and women's empowerment and more generally LNOB?***			
How did the project contribute to gender equality, women's empowerment and LNOB?	Level of progress of gender action plan and gender indicators in results framework	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
In what ways did the project's gender results advance or contribute to the project's outcomes?	Existence of logical linkages between gender results and project outcomes and impacts	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
To what extent was the UNDP initiative designed to appropriately incorporate in each outcome area contributions to the attainment of gender equality and LNOB? To what extent did UNDP support positive changes in terms of gender equality and were there any unintended effects?	Level of initiative towards the attainment of gender equality in project activities	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
How were effects on local populations considered in project design and implementation in an LNOB framework?	Positive or negative effects of the project on local populations.	Project document, progress reports, monitoring reports	Desk review, interviews, field visits
Evaluation Criteria: Effectiveness - To what extent have the expected outcomes and objectives of the project been achieved?			
Are the project objectives likely to be met? To what extent are they likely to be met?	Level of progress toward project indicator targets relative to the expected level at the current point of implementation	Project documents Project staff Project stakeholders	Field visit interviews Desk review
What are the key factors contributing to project success or underachievement?	Level of documentation of and preparation for project risks, assumptions, and impact drivers	Project documents Project staff Project stakeholders	Field visit interviews Desk review
What are the key risks and barriers that remain to achieve the project objective?	Presence, assessment of, and preparation for expected risks, assumptions, and impact drivers	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are the key assumptions and impact drivers relevant to the achievement of global environmental benefits likely to be met?	Actions undertaken to address key assumptions and target impact drivers	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Have the planned outputs been produced? Have they contributed to the project outcomes and objectives? What were the unintended results (+ or -) of the project?	Level of project implementation progress relative to the expected level at the current stage of implementation	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are the anticipated outcomes likely to be achieved? Are the outcomes likely to contribute to the achievement of the project objective?	The existence of logical linkages between project outcomes and impacts	Project documents Project staff Project stakeholders	Field visit interviews Desk review

Evaluation Questions	Indicators	Sources	Data; Sources
Are impact-level results likely to be achieved? Are they likely to be at the scale sufficient to be considered global environmental benefits?	Environmental indicators Level of progress through the project's Theory of Change	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Evaluation Criteria: Sustainability ***To what extent are there financial, institutional, socio-political, and/or environmental risks to sustaining long-term project results?***			
To what extent are project results likely to be dependent on continued financial support? What is the likelihood that any required financial resources will be available to sustain the project results once the current assistance ends?	Financial requirements for maintenance of project benefits vs. Level of expected financial resources to support maintenance / project benefits; Potential for additional resources	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Do relevant stakeholders have or are likely to achieve an adequate level of "ownership" of results, to have the interest in ensuring that project benefits are maintained?	Level of initiative and engagement of relevant stakeholders in project activities and results	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?	Level of technical capacity of relevant stakeholders relative to level required to sustain project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
To what extent are the project results dependent on socio- political factors?	Existence of socio- political risks to project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
To what extent are the project results dependent on issues relating to institutional frameworks and governance?	Existence of institutional and governance risks to project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Are there any environmental risks that can undermine the future flow of project impacts and global environmental benefits?	Existence of environmental risks to project benefits	Project documents Project staff Project stakeholders	Field visit interviews Desk review
Does/did the project have an exit strategy? How does UNDP propose to exit from projects that have run for several years? Does any exit strategy take into account: support from national authorities, available budgets, skills and expertise needed, environmental sustainability	Level of progress toward establishing the project exit strategy Results of various factors consideration	Project documents Project staff Project stakeholders	Desk review Interviews with project staff and stakeholders
What actions have been taken to scale up the project pilot initiatives? Has the government taken on these initiatives? Have donors stepped in to scale up initiatives?	Level of progress toward establishing the project pilot initiatives	Project documents Project staff Project stakeholders	Desk review Interviews with project staff and stakeholders
Impact: Are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status?			
How were the effects on project implementation considered?	Positive or negative effects of the project outcomes on the environment Existence of logical linkages between project	Project documents, progress reports, monitoring reports	Desk review, interviews, field visits

Evaluation Questions	Indicators	Sources	Data; Sources
	outputs and outcomes/impacts		
Which (if any) are still missing gaps between the project outcomes and realization of the expected impacts? Are the necessary conditions in place for enabling scaling up of outcomes into impacts?	Level of initiative and engagement of relevant stakeholders in project activities and results Documented commitments to scale up the project's outcomes	Project documents Project staff Project stakeholders	Desk review, interviews, field visits
Are government agencies encouraged/ enabled to facilitate wider adoption of the project results? Have senior and influential government officials endorsed the project's innovative approaches and champion the development of a more enabling policies, mechanisms and strategies for wider adoption?	Level of initiative and engagement of relevant stakeholders in project activities and results Documented commitments to support adoption of the project's results	Project documents Project staff Project stakeholders	Desk review, interviews, field visits

• Annex 7 - MTE Rating scales

As per UNDP, Guidance for Conducting Mid Term Evaluation Rating follows this scale in Terms of Project Design/Fomulation & Implementation:

- 6 = Highly satisfactory (HS); 5 = Satisfactory (S); 4 = Moderately satisfactory (MS); 3 = Moderately unsatisfactory (MU); 2 = Unsatisfactory (U); 1 = Highly unsatisfactory (HU); Unable to Assess (UA).

The project Effectiveness, and Efficiency was rated for each component (outcome) as follows:

- 6 = Highly satisfactory (HS). The level of outcomes achieved exceeds expectations and/or there were no shortcomings.
- 5 = Satisfactory (S). The level of outcomes achieved was as expected and/or there were no or minor shortcomings.
- 4 = Moderately satisfactory (MS). The level of outcomes achieved more or less as expected and/or there were moderate shortcomings
- 3 = Moderately unsatisfactory (MU). Outcomes achieved somewhat lower than expected and/or with significant shortcomings
- 2 = Unsatisfactory (U). The level of outcomes achieved was substantially lower than expected and/or there were major shortcomings.
- 1 = Highly unsatisfactory (HU). Only a negligible level of outcomes was achieved and/or there were severe shortcomings
- Unable to Assess (UA). The available information does not allow an assessment of the level of outcome achievements

Sustainability is rated according to the following scale: • Likely (L) negligible risks to sustainability, with key outcomes expected to continue into the foreseeable future. There are little or no risks to sustainability. • Moderately Likely (ML) moderate risks, but expectations that at least some outcomes was sustained. There are moderate risks to sustainability. • Moderately Unlikely (MU) substantial risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on. There are significant sustainability risks. • Unlikely (UL) severe risk that project outcomes as well as key outputs will not be sustained. There are severe risks to sustainability. • Unable to Assess (UA): Unable to assess the expected incidence and magnitude of risks to sustainability.

Impact is rated according to the following scale:

- Significant (S), Minimal (M), or Negligible (N)

• Annex 8 - Signed UNEG Code of Conduct form for MTE Evaluators/Consultants

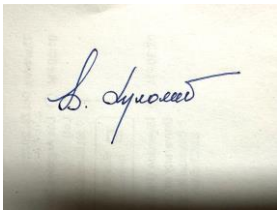
1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of Consultant: Joël RUET
I confirm that I have received and understood and will abide by the United Nations
Code of Conduct for Evaluation.

Signed at Paris 19 August 2024 Signature: 

Name of Consultant: Gulom Bekmirzaev
I confirm that I have received and understood and will abide by the United Nations
Code of Conduct for Evaluation.

Signed at Tashkent 19 August 2024 Signature: 

• Annex 9 - Draft Interview Guide

This is a reference guide only, intended to assist interviews as needed and in conjunction with the evaluation criteria/matrix. It is not a questionnaire. It serves as an informal aid in prompting discussion during the interviews and was supplemented with additional questions.

Project Formulation

1. Did you observe any problems or gaps in the project design or approach that affected project implementation?
2. Was there adequate participation of stakeholders and beneficiaries in the project formulation? (How were you involved?)
3. Has the project strategy – technical support/training, development, and piloting, been effective? How could it have been improved?
4. Does the project's objective align with the priorities of the local government and local communities?
5. Does the project's objective fit within the national environment and development priorities? Who are the main beneficiaries of the project and how does the project address their development needs?

Project Implementation

6. How effective and efficient was the Project Structure in facilitating project coordination, communications, and implementation at national, regional, and local levels? Would you have changed anything in hindsight?
7. Has annual work planning and budgeting been effective? Have actual disbursements been in line with annual budgets, work plans, and schedules? Were there any delays in administrative processes?
8. Have the project management bodies and partners been sufficiently active in guiding and responding to issues? (examples?)
9. Have the project monitoring Indicators been effective and feasible for reporting on progress? Have they provided reliable measures of change?
10. What have been the major challenges or issues in implementing the project? Are there lessons for the design of future projects?
11. What are the characteristics of development in the project pilot sites? What features have affected agreement or non-agreement?

Project Results

12. What aspects of the project have been most successful, and which are least successful? Are there specific measures that have affected the potential for replication?
13. Can you identify the Key Factors that have affected the project results – either positive or negative?
14. What has been the most apparent change in ODS management that you have seen from the project? What gaps remain in capacity development?
15. What is the most important learning or skill, if any, that you have acquired from the project training or demonstrations? Any post-training data?
16. Are there any expected results that have not been completely achieved or are not fully satisfactory?

Sustainability

17. Do you think that the use of project results was continued after the project closes? Why? Why not?
18. Are there any exit strategies for the project? What actions could be considered to enhance sustainability? How will lessons be shared within Uzbekistan and with other countries?
19. Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?
20. To what extent are the project results dependent on socio-political factors, issues relating to institutional frameworks and governance, and environmental issues?

Impact

21. Should any further changes in government policy or regulations be considered to assist in mainstreaming incentives into the ODS management strategy?
22. Are there any specific examples of alternatives that could provide models for replication?
23. Is there any empirical evidence of project impact on government ODS management budget allocations?
24. Are government agencies encouraged/enabled to facilitate wider adoption of the project results?
25. Have senior and influential government officials endorsed the project's innovative approaches and championed the development of more enabling policies, mechanisms, and strategies for wider adoption?

Gender equality and women's empowerment

26. How did the project contribute to gender equality and women's empowerment?
27. To what extent was the UNDP initiative designed to appropriately incorporate in each outcome area contributions to the attainment of gender equality? To what extent did UNDP support positive changes in terms of gender equality and were there any unintended effects?
28. Did the project implementation have an impact on other partners to transform their policies, programs, and services to advance gender equality and women's empowerment?
29. In what ways has UNDP supported other partners to transform their policies, programs, and services to advance gender equality and women's empowerment?
30. What was the extent to which the intervention objectives were adjusted to attend to the different problems and needs of women and men?

Cross-cutting and UNDP Mainstreaming Issues

31. How were effects on local populations considered in project design and implementation?
32. How were COVID 19 effects on project implementation considered?

Annex 10 - EU-AGRIN LOGFRAME INDICATORS

Source: project team; 13th September 2024 (reformatted on Impact / outcome lines / contents unaltered)

The logframe indicators, filled until 2023 included, shows an early completion of a majority of KPIs; some minimum targets being on top over-achieved; and generally a care in execution and M&E about gender issues. The LNOB approach is taken care of through the design of the project and selection of variegated IGs, and is less prone to generic reporting though the Logframe.

LEVEL	Target	2022	2023	2024	2025	Total	DATA source/note	ACTIVITY
IMPACT								
1. Decrease of specific emissions of greenhouse gases per unit of GDP by 10% by 2030 from level of 2010. (UZ INDC, SDG 13) **2. Average income of small-scale food producers by sex and indigenous status (SDG 2, 2.3.2)** **3. - Productivity of main crops by category of farms/small scale food producers (SDG2, 2.3.1)**								
OUTCOME								
Development of subject specific, evidence-based policy briefs to address policy constraints related to new innovative practices supported by the project **Agricultural and pastoral ecosystems where sustainable management practices have been introduced, attributable to EU support (ha) (SDG 2, EURF 2.4)**								
OUTPUT 1								
Number of knowledge products elaborated per priority area, their status and availability (O2.1, O2.2)	20	5	14	4			**2022:** 1. Concept of IGs 2. Guideline of IGs establishment 3. Textbook on climate and water resources 4. Report of barriers 5. Capacity needs assessment **2023:** 1. Manual on the agrotechnics of placement and cultivation of bamia and artichoke 2. Manual on cultivation agro-technologies and primary seed quality of Kashkadarya-5 cotton with fine fiber 3. Manual on development of pastoral ecosystems in Tashkent region 4. Knowledge product by IG on new wheat in Tashkent region 5. Knowledge product by IG on siderate crops 6. Knowledge products by IG Cotton in Fergana region 7. Knowledge products by IG on cotton production	1.1.1 1.1.2 1.1.3 1.1.7 2.1.1 2.2.2 2.2.4 2.3.1 2.3.2 2.4.2

							8. Knowledge products by IG on fishing 9. Knowledge products by IG on milk production 10. Knowledge products by IG on mugbean 11. Knowledge products by IG on soil bioremediation 12. Knowledge products by IG on soybean 13. Knowledge products by IG on horticulture 14. Blog “International best practices in integrating gender equality and women’s empowerment in climate-smart agriculture programs” (by Gender consultant) **2024:**	
Number of policy makers informed by the Action about the new knowledge products (O2.3)	120	31	61	64			Signature lists Annual report Short report Senate - 1 Cabinet Ministry – 2 Women Committee -4 MOA - 6 Regional khokimyats – 13 AKIS – 7 Farmers Council – 1 SRI - 58 **EVENTS AND DATES** • Technical trainings for project stakeholders by David Kahan, 13.07.2022 • Inceptional workshop by David Kahan,14.07.2022 • Training for IG, 19-20.08.2022 • Water saving, 25.11.2022 • Workshop with CREA, 31.01.2023 • Training on M&E, 12.07.2023 • International Forum dedicated to Rural women day, 11.10.2023 FEMALE/MALE 39 female / 53 male	1.1.4 1.1.5 1.1.6 1.2.1
Number of professional staff and researchers trained (O3.1)	100	44	87	98			Signature lists Annual report Short report **EVENTS AND DATES** • Technical trainings for project stakeholders by David Kahan, 13.07.2022 • Inceptional workshop by David Kahan,14.07.2022	1.2.4 1.2.5 1.2.7 1.2.9 1.2.10 1.2.11 1.2.12

							• Training for IG, 19-20.08.2022 • Water saving, 25.11.2022 • Workshop with CREA, 31.01.2023 • Training on M&E, 12.07.2023 • International Forum dedicated to Rural women day, 11.10.2023 • Training on PR, 25.08.2023, 15.09.2023, 22.09.2023 • Training on Gender issues, 14.10.2023, 27.10.2023, 10.11.2023 33 female / 98 male	2.2.2 2.2.4
Number of professional organizations strengthened with research and training interventions (O3.2)	10	5	13	0			Signature lists Annual report Short report 1. Scientific research institute of Vegetables, Melon crops and potato cultivation 2. Scientific research institute of Fisheries 3. Institute of Genetics and Plant Experimental Biology of the Academy of Sciences of the Ruz 4. Scientific research institute of Livestock and Poultry 5. Tashkent State Agrarian University 6. Southern agriculture scientific research institute 7. Institute of Microbiology of the Academy of Sciences of the Ruz 8. Scientific research institute of Irrigation and Water Problems 9. Scientific-research institute of horticulture, viticulture and winemaking named after Academician M. Mirzaev 10. Plant Genetic Resources research institute 11. Plant protection and quarantine Research Institute 12. Cotton breeding, seeds production and agrotechnologies research institute 13. Cotton breeding, seeds production and agrotechnologies research institute Kashkadarya experimental station 14. Fergana Research Station of Research Institute of Cereals and Legumes 15. Samarkand agro-innovation and research institute 16. Agrarian women association of Uzbekistan 17. Besharik district 2nd Vocational School	1.2.3 1.2.4 1.2.5 1.2.7 1.2.8 1.2.9 1.2.10 1.2.11 1.2.12 2.2.2 2.2.4

							18. Zangiata Agrotechnological Vocational College **EVENTS AND DATES** • Technical trainings for project stakeholders by David Kahan, 13.07.2022 • Inceptional workshop by David Kahan,14.07.2022 • Training for IG, 19-20.08.2022 • Water saving, 25.11.2022 • Workshop with CREA, 31.01.2023 • Training on M&E, 12.07.2023 • International Forum dedicated to Rural women day, 11.10.2023	
Number of EU research organizations mobilized by the action (O4.1)	3	1	12	0			1. Swedish University of Agricultural Science 2. CREA	1.2.13 2.1.6 2.1.7
Number of subject specific, evidence-based policy briefs prepared and supported to policy address constraints to the uptake of new innovations	5	1	1	0	-	-	- Gender Policy brief by Gulnoza Akhmedova - Policy brief on Curriculla by Flavio Forabosco	2.4.2

OUTPUT 2	**Target**	2022	2023	2024	2025	**Total**	**Plan**	
1. Number of new Agri-food Innovation Groups and Partnerships (operational groups) established with the project support	12	0	18	-	-		18 Innovation Groups in Tashkent, Ferghana and Kashkadarya region	1.3.1 2.1.2 2.1.3 2.1.4
2. Number of food and agriculture value chains supported by the project on climate resilience and emission reduction	20	-	6	11			Direct impact on chains related to IGs, indirect to other – needs to be clarified Milk production – 5 (Tashkent region) Pasta – 1 (Qashkadarya) Bread production -1 (Qashkadarya)	1.3.2 1.3.3 1.4.2 2.1.5 2.1.8 2.2.1 2.2.5 2.4.3
3. Agricultural and pastoral ecosystems where climate relevant management practices have been introduced with EU support, ha (SO1.3, EU RF 2.04)	200		92	101	-	-	- Gaps related to implementation integrated pasture management – needs to be checked - Cover crops in Tashkent region, Ohangaron district - 2 ha - drought resistant seeds - 15 ha - sprinkler irrigation - 20 ha - mountain areas - 55 ha - foothill areas	1.3.3 1.4.2 2.1.5 2.1.8 2.2.1 2.2.5 2.4.3
4. Number of small-scale farmers adopting sustainable and resilient agriculture practices thanks to this action, disaggregated by sex (SO1.1, EU RF 2.03)	40		38	0	-	-	Propose parallel/additional activity related to cover crops (up to 7 tons of clover and other in mixture) 5 – Ahangaron district (Milk) 10-Akkurgan district (drip irrigation for rural) 3-Besharik district (Fish) 19 – IG 20 female / 17 male	1.3.3 1.4.2 2.1.5 2.1.8 2.2.1 2.2.5 2.4.3
5. Number of smallholder farmers reached by the R&D initiatives, disaggregated by sex and country (O1.1)	400		315	301	-	-	Field days/presentations 47 female / 144 male	1.3.3 1.4.2 2.1.5 2.1.8 2.2.1 2.2.5

Mid-term Evaluation Report for
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SECTOR AND DEVELOPMENT OF A "CLIMATE-SMART" UZBEK AGRICULTURE
KNOWLEDGE AND INNOVATION SYSTEM (UAKIS)
FUNDING: EU-AGRIN

Evaluation Report for UAKIS Project (Quantum ID 00129151)

Reviewed and Cleared By:

Commissioning Unit (UNDP DRR)

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