# Terminal Evaluation Report

## UNDP-GEF Project: Conservation and Sustainable Use of Globally Important Agrobiodiversity

GEF Project ID: 6943 / UNDP Project ID: 5482

| | |
|---|---|
| **Country:** | Azerbaijan |
| **Region:** | Europe and Central Asia |
| **Focal Area:** | Multi-focal area (GEF-6): Biodiversity, Land Degradation |
| **GEF Agency:** | United Nations Development Programme (UNDP) |
| **Executing Agency:** | Ministry of Agriculture |

## Opening Page

**PROJECT DETAILS:**

| | |
|---|---|
| **Project Name:** | Conservation and Sustainable Use of Globally Important Agrobiodiversity |
| **Project ID:** | UNDP PIMS: 5482 GEF Project ID: 6943 |
| **Country:** | Azerbaijan |
| **Region:** | Europe and Central Asia |
| **Focal Area:** | Multi-focal area (GEF-6): Biodiversity, Land Degradation |
| **Focal Area Objectives:** | **LD-1**: Agriculture and Rangeland Systems: Maintain or improve flow of agroecosystem services to sustain food production and livelihoods; **Program 1**: Agroecological intensification; **Outcome 1.2**: Functionality and cover of agro- ecosystems maintained<br>**BD-3:** Sustainability use biodiversity; **Program 7**: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources; **Outcome 7.1:** Increased genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems |
| **Funding Source:** | GEF Trust Fund (GEF 6) |
| **Implementing Agency:** | United Nations Development Programme |
| **Implementation Modality:** | National Implementation |
| **Executing Agency:** | Ministry of Agriculture |

**FINANCIALS:**

| | |
|---|---|
| **Project Preparation Grant:** | US$ 150,000 |
| **GEF Project Grant:** | US$ 4,160,502 |
| **Co-financing Total:** | US$ 20,700,000 |
| **GEF Agency Fees:** | US$ 395,248 |
| **Total Cost:** | US$ 25,010,502 |

**PROJECT TIMELINE**

| | |
|---|---|
| **Received by GEF:** | 13 August 2014 |
| **Preparation Grant Approved:** | 04 September 2014 |
| **Concepted Approved:** | 01 October 2014 |
| **Project Approved for Implementation:** | 31 July 2016 |
| **Start Date:** | 13 December 2016 |
| **Closing Date (Planned):** | 31 December 2021 |
| **Closing Date (Actual):** | 31 October 2022 |

**MIDTERM REVIEW DETAILS:**

| | |
|---|---|
| **Midterm Review Timeframe:** | August-October 2020 |

**TERMINAL EVALUATION DETAILS:**

| | |
|---|---|
| **Terminal Evaluation Timeframe:** | June-August 2022 |
| **TE Consultants:** | Francis Hurst and Kamil Nazarov |
| **TE Reporting Language:** | English |

**Acknowledgements:**

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The Terminal Evaluation Final Report is the final deliverable of the Terminal Evaluation.

The Terminal Evaluation Final Report is a Contractual deliverable of the Terminal Evaluation and once accepted becomes in integral part of the project management cycle and documentation.

The Terminal Evaluation is initiated by the UNDP commissioning unit and is independent of the Implementing and Executing Agencies .

The opinions expressed in this document represent the authors' points of view, which are not necessarily shared by the Implementing and Executing Agencies or by the project partners and beneficiaries.

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# Executive Summary

## Project Information Table

| Project Details | | Project Milestones | |
|---|---|---|---|
| Project Title | Conservation and Sustainable Use of Globally Important Agro-biodiversity | PIF Approval Date: | 01/10/2014 |
| UNDP Project ID (PIMS #): | 5332 | CEO Endorsement Date (FSP) / Approval date (MSP): | 18/06/2017 |
| GEF Project ID: | 6973 | ProDoc Signature: Date: | 13/12/2016 |
| UNDP Atlas Business Unit, Award ID, Project ID: | 85294 | Date Project Manager hired: | 03/2018 |
| Country/Countries: | Azerbaijan | Inception Workshop: | 29/06/2018 |
| Region: | Europe and Central Asia | Mid-Term Review Completion Date: | 08-09/2020 |
| Focal Area: | Multi-focal areas | Terminal Evaluation Completion date: | 30/08/2022 |
| GEF Operational Programme or Strategic Priorities/Objectives: | LD-1, Prog. 1<br>BD-3, Prog. 7 | Planned Operational Closure Date: | 31/11/2021. Revised 31/10/2022 |
| Trust Fund: | GEF Trust fund | | |
| Implementing Partner (GEF Executing Entity): | Ministry of Agriculture | | |
| NGOs/CBOs involvement: | | | |
| Private sector involvement: | | | |
| Geospatial coordinates of project sites: | Hot spot No. 1 | 048.41161 E 40.58568 N at an altitude of 350 meters above sea level | |
| | Hot spot No. 2 | 49° 6' 24, 7 "E 40 ° 28'26.7" N at an altitude of 640.0 meters above sea level<br>48 ° 32'18.1 "E 40 ° 19'9.4" N, 812.6 at an altitude of 812.6 meters above sea level | |
| | Hot spot No. 3 | 48 ° ′ 30.72″ E 39 ° 39′ 19.44″ N at an altitude of 10.0 meters above sea level | |
| | Hot spot No. 4 | 47° 2 '21.7 "E 41 ° 7'51.82" N at an altitude of 270.0 meters above sea | |
| | Hot spot No. 5 | 46 ° 57'9.31 "E 41 ° 11'27.08" N at an altitude of 280.0 meters above sea level | |
| | Hot spot No. 6 | 045 ° 28'20 "E 39 ° 22'12" N), at an altitude of 1137.0 meters above sea level<br>045 ° 32'39.23 "E 39 ° 11'38.68" N at an altitude of 1000.0 m above sea level | |

## Project Finance

| PDF/PPG | at approval (US$M) | at PDF/PPG completion (US$M) |
|---|---|---|
| GEF PDF/PPG grants for project preparation | 4.160502 | 4.310502 |
| Co-financing for project preparation | | |
| **Project** | **at CEO Endorsement (US$M)** | **at TE (US$M)** |
| [1] UNDP contribution: | 0.2 | 0.145363 |
| [2] Government: | 20.5 | 22.141805 |
| [3] Other multi-/bi-laterals: | 0 | 0 |
| [4] Private Sector: | 0 | 0 |
| [5] NGOs: | 0 | 0 |
| [6] Total co-financing [1 + 2 + 3 + 4 + 5]: | 20.7 | 22.287168 |
| [7] Total GEF funding: | 4.160502 | 3.969940 |
| [8] Total Project Funding [6 + 7] | 24.860502 | 26.257108 |

## Project description

1. Azerbaijan is considered to be part of Vavilov's Asia Minor centre of origin of cultivated plants. In general, the wild relatives of cultivated crops in Azerbaijan are genetically diverse, locally adapted and represent a potential source of genes and alleles for adapting crops to the ever-changing environmental conditions and human needs of the country.
2. The project sought to: (i) improve the protection of viable populations of indigenous wild relatives of crops and local landraces in their natural habitats; (ii) augment the conservation of indigenous wild relatives of crops and local landraces in plant gene banks to ensure an adequate source of genetic resources for plant

breeding; and (iii) increase the production, and extent of use, of local landraces in agricultural smallholdings and commercial farms.

3. The project was to be implemented in three rayons - Sheki, Goranboy and Goychay. With the ending of the territorial dispute with Armenia in 2020, the project also extended some activities into the reopened Tartar rayon. The project was structured into three complementary components:
4. Component 1: expand the state of knowledge of agro-biodiversity, enhance the conservation of this agro-biodiversity and increase the intensity and extent of use native crops in the agricultural sector in the three project rayons. Work under this component focused around four key areas of project support, as follows: (i) Improving the knowledge base of crop wild relatives (CWRs) and local crop landraces (Output 1.1); (ii) Establishing and managing a network of conserved areas for CWRs (Output 1.2); (iii) Establishing and maintaining field gene banks for crop landraces (Output 1.3); and (iv) Increasing the production, storage and distribution of native crop seeds (Output 1.4).
5. Component 2: build the capacities of, and improve the collaboration and cooperation between, agricultural institutions and small farmers in order to improve agricultural productivity and reduce land degradation using native crops (i.e. the targeted crop species) in the three project rayons. Work under this component focused around three key areas of project support: (i) Building the capacity of agricultural institutions (Output 2.1); (ii) Supporting the development of local farmer organisations (Output 2.2); and (iii) Improving the knowledge and skills of local farmers (Output 2.3).
6. Component 3: strengthen incentives that encourage the planting of, and improve access to commercial markets for agricultural products derived from, the targeted native crop species across the three rayons. Work under this component focused around two key areas of project support: (i) Strengthening the agricultural incentives toolbox for farmers (Output 3.1); and (ii) Improving access to markets for local farmers (Output 3.2).
7. The total cost of investment in the project was estimated at US$ 24,860,502, of which US$ 4,160,502 was grant funding from GEF and US$ 20,700,000 co-financing from national government and UNDP.

### Evaluation ratings table

| 1. Monitoring & Evaluation (M&E) | Rating |
|---|---|
| M&E design at entry | MS |
| M&E Plan Implementation | MS |
| Overall Quality of M&E | MS |
| **2. Implementing Agency (IA) Implementation & Executing Agency (EA) Execution** | **Rating** |
| Quality of UNDP Implementation/Oversight | S |
| Quality of Implementing Partner Execution | S |
| Overall quality of Implementation/Execution | S |
| **3. Assessment of Outcomes** | **Rating** |
| Relevance | HS |
| Effectiveness | S |
| Efficiency | S |
| Overall Project Outcome Rating | S |
| **4. Sustainability** | **Rating** |
| Financial sustainability | L |
| Socio-political sustainability | ML |
| Institutional framework and governance sustainability | L |
| Environmental sustainability | L |
| Overall Likelihood of Sustainability | L |

### Summary of findings, conclusions and lessons learned

8. The conceptualisation and rationale behind the project development were highly relevant to the situation in Azerbaijan and the Project Document presented a well-thought through and intelligent strategy implemented through three components: knowledge and *in situ* and *ex situ conservation* of crop wild relatives (CWR), strengthening capacities and collaboration between state and non-state stakeholders, and creating incentives, including market-led approaches for the wise use of agrobiodiversity.

9. Furthermore, the project's objective was well-aligned with national policy objectives, UNDP Country Programme Outcomes and the GEF Land Degradation and Biodiversity programme objectives.
10. Implementation has been both effective and efficient, although there was an approximately eighteen-month delay in putting in place a Project Management Unit (PMU). Management has been very effective and adaptive with good financial controls. Project monitoring has had some weaknesses, some of which related to the SRF and some were due to reporting; however, these appear to have been largely addressed following the MTR. The Implementing Partner and UNDP CO have provided sufficient oversight during the project's implementation.
11. The project has faced some disruptive challenges, mostly during 2020 with the Covid-19 pandemic and the international territorial dispute. The PMU and partners have responsibly quickly and sensibly to these, for instance switching to on-line capacity building, etc.
12. Project partnerships have been very effective and there are good relationships and trust within the project stakeholders and this had created a considerable institutional and intellectual capital that is not reflected in the SRF.
13. Outcome 1 was intended to address the barrier of *sub-optimal conservation, production, distribution and agricultural use of crop wild relatives and landraces* through *in situ* and *ex situ* conservation of agro-biodiversity and creating a substantive knowledge base. This has been achieved to a satisfactory level with the identification and protection of six CWR hotspots, the reinvigoration of land races and locally developed varieties within the farming system, gene banks and field gene banks/ living collections and a enthusiastic scientific community interest in the conservation and use of agrobiodiversity.
14. Outcome 2 was intended to address the barrier of *weak institutional capacities to support the adoption of, and limited farmer skills and knowledge to grow, native crops* through building the capacity to improve agricultural productivity and reduce land degradation using native crops. This has been achieved to a satisfactory level largely through the training of training of agricultural personnel at all levels, training of farmers, the creation of farmer to farmer networks, capacities of field stations as extension centres, multiplications and distribution of seed material and the introduction of sustainable farming practices and material support for farmers.
15. Outcome 3 was intended to address the barrier created by a *lack of incentives and mechanisms to grow native crops, and market the products derived from these native crops*. This was to be achieved through creating incentives and markets to improve the uptake and commercial viability of native crops. This has been achieved to a satisfactory level by only providing economic incentives such as government subsidies for local variety and land races crops, awareness raising regarding the risk reduction and higher performance of local varieties under environmental and biological stresses, investigating and value chains and other market mechanisms as well as beginning to address the gender inequalities within the sector.
16. The project contributes to five Sustainable Development Goals (SDG): Gender (SDG 5: Gender Equality) as well as 4 other SDGs (2 Zero Hunger, 12 Responsible Consumption and Production, 13 Climate Action, and 15 Life on Land) with relevance to eleven SDG indicators.
17. The project outcomes are evaluated to be sustainable. There are a range of complex issues effecting the socio-ecosystem and agricultural biodiversity. However, the outputs produced during the project are sufficiently robust and designed in a way that will make up-scaling possible.

### Lessons learned

18. This evaluation draws three lessons from the project's implementation:
19. Communication and effective relations are important for success: a defining character of this project has been the ability of the PMU to communicate across a range of different stakeholders maintaining the "bigger picture" while speaking to the key interest of a specific stakeholder or stakeholder group.
20. More thought should be given to issues of gender when examining any socio-ecosystem: gender issues should not be minimised because they appear beyond the control or remit of the project. If there are gender inequalities due to existing social norms, gender stereotypes or historical causes; then they should not be seen in isolation from what the project is trying to do. Gender inequalities in the workforce and unequal involvement in the value chain should be identified early on, it is part of the system that is not working efficiently.
21. A project cannot ignore the larger processes shaping the socio-ecosystem and, because of time scale differences, the real benefit of the project may not be evident until after it is completed: one of the challenges of evaluating a project like the Agrobiodiversity project is understanding the system dynamics

that are shaping not only agrobiodiversity, but also the processes that drive the agencies and communities whose decisions and activities agrobiodiversity is interacting with.

### Recommendations summary table

| Rec # | TE Recommendation | Entity Responsible | Time frame |
|---|---|---|---|
| A | Category 1: Project closure | | |
| A.1 | Develop the lessons from the value chain and gender study and present them with strategic recommendations to the Ministry of Agriculture through a workshop. | PMU | 10-2022 |
| A.2 | Organise a workshop with the Ministry of Tourism on agro-ecotourism with a focus on rural development, landscape conservation, traditional crops and foods. Use the workshop to explore opportunities to add value through branding and marketing. | PMU | 10-2022 |
| A.3 | Biodiversity Focal Area – BD Tracking Tool for Programs 3,4,5,6,7,8,9 and 10 should be completed before project close and uploaded with the TE report | PMU | 10-2022 |
| B | Category 2: Follow-up | | |
| B.1 | Organise a workshop to develop a legacy plan. The project has generated considerable lessons, institutional and social capital. Developing a legacy plan before the end of the project will ensure that the project benefits continue in an orderly manner after the closure of the GEF-funded project | PMU | 09-2022 |
| B.2 | The project should prepare a policy briefing note on changes in land tenure and the likely positive and negative impacts on agrobiodiversity and ecosystem resilience. This can be communicated at a high level to decision-makers to inform sector policy decisions in the near future. The briefing note should take at least four perspectives (be developed by four technical experts): agronomy, socio-economic and gender, economic and ecological. The briefing note should include the plausible impacts of emerging issues such as food safety standards, water quality and ground water recharge, the importance of soil carbon in reducing emissions, etc. | PMU | 10-2022 |
| B.3 | Explore the synergies between protected areas/ genetic reserves and on-farm conservation of biodiversity with a view to managing a greater range of ecosystem goods and services to shape the utilisation of the annual spending on preventing land degradation. The concept of Other Effective Areas-based Conservation Measures (OECM[1]) is increasingly being used as an approach to managing biodiversity outside of national protected areas systems. However, despite the focus of OECMs being outside the reserved areas they are mutually supporting. The approach lends itself to production landscapes and reduces contradictions between local development needs and wider ecosystem resilience. | MA & MENR | 12-2022 |
| B.4 | Develop the Genetic Resources Institute fund-raising capacity to develop partnerships, submit grant proposals and manage grants and partner relations. Grant management and maintaining partnerships can benefit from specialist training and effective grant management can significantly increase the institute's income. | Azerbaijan National Academy of Sciences. | 2022 - 2023 |

[1] https://biodiversity.europa.eu/protected-areas/other-effective-area-based-conservation-measures ; https://www.cbd.int/protected/partnership/vilm/presentations/15_oecm_mackinnon.pdf

## List of acronyms and abbreviations

| Abbreviation/ Acronym | Full Name |
|---|---|
| ANAS | Azerbaijan National Academy of Sciences |
| CO | Country Office (UNDP) |
| CWR | Crop Wild Relatives |
| EOP | End of Project |
| GEF | Global Environmental Facility |
| GMO | Genetically Modified Organism |
| Ha | Hectare |
| IA | Implementing Agency |
| IP | Implementing Partner |
| LOA | Letter of Agreement |
| MEI | Ministry of Economy and Industry |
| M&E | Monitoring & Evaluation |
| MoA | Ministry of Agriculture |
| MTR | Mid-term Review |
| NC | National Coordinator |
| NIM | National Implementation Modality |
| PD | Project Director |
| PIF | Project Identification Form |
| PMU | Project Management Unit |
| RTA | Regional Technical Adviser |
| SAAC | State Agency for Agricultural Credits |
| SC | Steering Committee |
| SDG | Sustainable Development Goals |
| SMART | Specific, Measurable, Achievable, Relevant, Time-Bound |
| SRF | Strategic Result Framework |
| TE | Terminal Evaluation |
| TOC | Theory of Change |
| TOR | Terms of Reference |
| UNDP | United Nations Development Programme |

# 1.0 Introduction

## 1.1 Purpose and objective of the Terminal Evaluation

22. The UNDP and GEF monitoring and evaluation (M&E) policies and procedures require all UNDP-implemented and GEF-funded projects to undergo a terminal evaluation (TE) upon completion of implementation. Therefore, UNDP has commissioned the terminal evaluation by contracting an independent evaluation team consisting of a National Consultant (NC) and an International Consultant (IC). The TE was conducted following the UNDP-GEF Monitoring and Evaluation Policy and facilitated by the UNDP Country Office, Azerbaijan.
23. The purpose of the "Conservation and sustainable use of globally important agro-biodiversity[2]" Project terminal evaluation as per TORs (Annex 1), is to assess the achievement of project results and to draw lessons that can both improve the sustainability of the benefits from this project, and aid in the overall enhancement of UNDP and Government programming.

## 1.2 Scope

24. The evaluation focuses primarily on assessing the performance of the project in light of the accomplished outcomes, objectives and effects using the evaluation criteria of relevance, effectiveness, efficiency, sustainability, and impact, as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported and GEF-financed Projects[3]. These are:

    *Relevance:* assesses how the project relates to the development priorities at the local, regional and national levels for climate change and is coherent with the main objectives of GEF focal areas. It also assesses whether the project addressed the needs of targeted beneficiaries at the local, regional and national levels.
    *Effectiveness:* measures the extent to which the project achieved the expected outcomes and objectives, how risks and risk mitigation were being managed, and what lessons can be drawn for other similar projects in the future.
    *Efficiency:* the measure of how economically resources (funds, expertise, time, etc.) are converted to results. It also examines how efficient were partnership arrangements (linkages between institutions / organizations) for the project.
    *Impact:* examines the positive and negative, primary and secondary long-term effects produced by the development intervention, directly or indirectly, intended or unintended. It looks at whether the project has achieved the intended changes or improvements (technical, economic, social, cultural, political, and ecological). In GEF terms, impact / results include direct project outputs, short to medium-term outcomes, and longer-term impact including global environmental benefits, replication effects and other local effects including on communities.
    *Sustainability:* is the ability of the project interventions to continue delivering benefits for an extended time after completion; it examines the project's sustainability in financial, socio-political, institutional framework and governance, environmental terms.
25. Using these evaluation criteria, the terminal evaluation covers all activities supported by UNDP-GEF and completed by the project management unit (PMU) and Government agencies as well as activities that other collaborating partners including beneficiaries participated in.
26. The temporal scope of the TE covers all activities of the project beginning with the Project Identification Form (PIF) dated August 2014 through to the current final period of implementation evaluation in mid 2022 (approximately four months before project closure).
27. The evaluation has been conducted in an ethical and participatory manner and in order to provide evidence-based information that is credible, reliable and useful.

## 1.3 Methodology

28. As stated above, the Evaluation adopted a participatory and consultative approach ensuring close engagement with government counterparts, UNDP Office, the PMU, and key stakeholders based at the local level (state, local communities, NGOs, private sector).
29. Key aspects of the evaluation approach included:

[2] Henceforth referred to as the "agrobiodiversity project" or "the project".

[3] http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf

*Defining the scope of the Evaluation's focus:* through discussions with the PMU and UNDP and partner agencies, the areas and extent of inquiry to be defined.

*Emphasis on constructive analytical dialogue:* with the project partners; providing the project participants with an opportunity to explain the strategies applied to date, the challenges that have been faced and the inevitable nuances that affect a project. In this way the Evaluation is able to deepen the partner's conceptual understanding of the key issues underlying the project and the driving forces that have shaped, and continue, shaping events.

*Critical analysis of the project design:* the original design and strategic approach was challenged against best practices and in light of the project's experience to consider whether there were flaws in its logic and approach or whether there were assumptions, known or unknown, that have not proven correct.

*Critical reflection on the measures of project success:* measuring progress and performance against the indicators provided in the project's SRF with the participation of the project partners and reflecting on their relevance and adequacy.

*Assessment of the project's performance and impact to date:* analysing the performance and progress against the indicators and reasonably expected impacts of the project's implementation.

*An examination of process:* critically examining the project's actions and activities to ensure that there was sufficient effort in ensuring that elements of capacity building and participation, establishing processes and mechanisms, that would enable the targets to be achieved in the longer term rather than being *expedient*.

*Synthesizing plausible future impacts:* using analytical methods to identify plausible future outcomes resulting from the impact of the project in the future and how these might affect the project's Theory of Change[4] (ToC)[5].

*Jointly defining the conclusions and recommendations with the PMU and UNDP:* ensuring that there is a common understanding of any weaknesses or shortcomings in the project's implementation and an understanding of the reasons for, and the appropriate detail of, any recommended actions that might be necessary.

30. The methodology used is detailed in Annex 8.
31. Gender was considered through participation and inclusion by incorporating gender and women's rights dimensions into the evaluation approach, method and analysis to determine how the project affected men and women differently.
32. As directed in the 2020 GEF Terminal Evaluation guidelines, specific Evaluation Rating Criteria were used for the following aspects of the project's implementation and results:

    Project Implementation:

    Monitoring and Evaluation: design at entry, implementation, and overall assessment of M&E.

    Implementing Agency (UNDP) and Executing Agency, overall project oversight / implementation and execution.

    Project Results (outcomes):

    Relevance, Effectiveness, Efficiency and overall project outcome.

    Sustainability: financial, socio-political, institutional framework and governance, environmental, overall likelihood of sustainability.

33. Project performance was evaluated and rated using the criteria of relevance, effectiveness, efficiency and impact using the standard rating scales (Table 1). The primary reference points for assessing the performance were the indicators and targets set out in the Strategic Results Framework (SRF), with consideration given to contextual factors.
34. The MTR (2020) provided eleven key findings and made twelve recommendations to address weaknesses in the project identified during the MTR. The TE will examine the management response to these recommendations and assess any changes made and their overall effect on the project's performance, impact and achievements.

[4] Theory of Change Primer A STAP document, December 2019

[5] At the time of the project's formulation it was not a requirement to include a ToC in the Project Document. However, a ToC was developed during the Midterm Review (MTR).

### 1.4 Data collection and analysis

35. An initial document review was carried out to define the scope and focus of the TE[6]. This was followed by a country mission with visits to field sites and interviews with the PMU, UNDP, key stakeholders and beneficiaries.
36. The data collection tools included a structured questionnaire for key farmers and interview guides for discussions with beneficiaries based on the evaluation questions matrix (Annex 8). These were structured according to different stakeholder groups. The tools were developed by the evaluators focusing on the evaluation criteria and major outcomes planned and adjusted after a scoping exercise carried out during the inception phase.
37. Generally, information obtained from interviews was cross-checked against more than one source and field observations[7] and project documents where possible[8]. A detailed account of the data collection and analysis if provided in Annex 7.

### 1.5 Ethics

38. The evaluation was conducted following the UNEG Ethical Guidelines for Evaluators (Evaluation Consultant Code of Conduct Agreement - attached Annex 9 and 18).
39. The rights and dignity of all stakeholders were respected, including interviewees, project participants (project, UNDP, Government staff), beneficiaries (beneficiary institutions and communities) and other evaluation stakeholders including co-financing partners. The evaluators explained and preserved the confidentiality and anonymity of the participants so that those who participate in the evaluation are free from external pressure and that their involvement in no way disadvantages them.
40. The final report of the evaluation does not indicate a specific source of citations or qualitative data to preserve this confidentiality. The confidentiality of stakeholders was ensured throughout and consultation processes were appropriately contextualised and culturally sensitive, with attention given to issues such as gender empowerment and fair representation for vulnerable groups, wherever possible.
41. Whilst every effort was made to reflect the inputs of stakeholders fairly and accurately in the report, the evaluation ratings, conclusions and key recommendations are those of the evaluators, they do not necessarily reflect the opinions and views of the Implementing and Executing Agencies or other project partners. As such they are not binding on any individual or institutional stakeholder.

### 1.6 Audit trail

42. The final draft of the TE report is accompanied by an "audit trail" of the evaluation process, the review comments to the draft report compiled along with responses from the TE team and documented in an annex separate from the main report.

### 1.7 Limitations to the evaluation

43. The reported active cases of Covid-19 were very low during the evaluation mission and interviews with stakeholders were possible with minimal restrictions (e.g. social distancing, etc.) therefore, there were no specific limitations to the evaluation. An independent interpreter accompanied the International Consultant during the country mission and field visits and the majority of the project's documentation is written in English. As such there were no significant limitations to the evaluation process.

### 1.8 Structure of the Terminal Evaluation report

44. This report is structured in line with the guidance given on conducting TEs of UNDP-GEF projects and in accordance with the TE Terms of Reference (ToR) provided in Annex 1:

    **Section 1** provides an executive summary which gives basic information on the project, a brief description of the project and its progress to date, the TE ratings and achievement table, summary of conclusions and recommendations.

    **Section 2** provides a description of the review process and methodology.

    **Section 3** describes the background and context of the Conservation and Sustainable Use of Globally Important Agrobiodiversity project including the problems that the project sought to address, the

[6] 45 project related documents and reports as well as Excel tables, minutes, peripheral documents, etc.

[7] 64 stakeholders were interviewed and 5 site visits.

[8] Additional documents were provided by some stakeholder after the first draft was reviewed and were subsequently included in the final draft.

objectives, outcomes and means of monitoring and evaluation, the implementation arrangements, a timeline and key milestones as well as a summary of project stakeholders.

**Section 4** presents the main findings of the TE on all aspects including the project's strategy, its progress towards results, the performance of its implementation and efficiency of adaptive management as well as assessing the sustainability of the project outcomes and the TE conclusions, recommendations and main lessons.

## Table 1 Terminal Evaluation Ratings Scales

| Ratings for Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight, Execution, Relevance | Sustainability ratings: |
|---|---|
| 6 = Highly Satisfactory (HS): exceeds expectations and/or no shortcomings<br>5 = Satisfactory (S): meets expectations and/or no or minor shortcomings<br>4 = Moderately Satisfactory (MS): more or less meets expectations and/or some shortcomings<br>3 = Moderately Unsatisfactory (MU): somewhat below expectations and/or significant shortcomings<br>2 = Unsatisfactory (U): substantially below expectations and/or major shortcomings<br>1 = Highly Unsatisfactory (HU): severe shortcomings<br>Unable to Assess (U/A): available information does not allow an assessment | 4 = Likely (L): negligible risks to sustainability<br>3 = Moderately Likely (ML): moderate risks to sustainability<br>2 = Moderately Unlikely (MU): significant risks to sustainability<br>1 = Unlikely (U): severe risks to sustainability<br>Unable to Assess (U/A): Unable to assess the expected incidence and magnitude of risks to sustainability |

# 2.0 Project Description

## 2.1 Project start and duration, including milestones

45. The Project Identification Form (PIF) was approved on 1st October 2014 for incorporation into the GEF Council Work Programme for the GEF-6 replenishment cycle. A project preparation phase followed to develop the Project Document and approval for implementation by the GEF CEO was granted on 31 July 2016. The Project Document was signed by the Government of Azerbaijan on 13th December 2016, the official start date of the project. However, the inception workshop was not held until the 29th June 2018, approximately 18 months following the project start date. The delay in commencing project implementation was due to two factors: firstly, it took time to sort out arrangements with the Ministry of Agriculture, which for the first time worked with the UNDP and as an Implementing Partner on a GEF project, and secondly, two procurement rounds for the position of Project Coordinator were unsuccessful[9]. Further delays resulted due to the Covid-19 pandemic and the conflict with Armenia in 2020. Following the MTR (August – October 2020) a request was made and granted for a ten-month extension giving a revised closing date of the 31st October 2022.

[9] PIR 2018

Table 2 Project timeline and key dates

| **Preparation** | |
|---|---|
| Received by GEF | 13 August 2014 |
| GEF Grant approved | 4 September 2014 |
| STAP review | 15 September 2014 |
| PIF approved | 1 October 2014 |
| CEO approval of Project Document | 31 July 2016 |
| **Implementation** | |
| Project Document signature & official start-up | 13 December 2016 |
| Appointment of Project Manager | March 2018 |
| Inception workshop | 29 June 2018 |
| COVID pandemic lockdown | 24 March – 31 Aug 2020 |
| International conflict | 27 September – 9 November 2020 |
| Midterm Review | June - August 2020 |
| 10 months no-cost extension approval | July 2021 |
| Planned project end | 31 December 2021 |
| Terminal Evaluation | June – August 2022 |
| Actual project end | 31 October 2022 |

## 2.2 Development context

46. The Project Document describes the development context and objective setting out a strong rationale for the intervention describing how for the past decade, Azerbaijan's economy has boomed, general macro-economic stability has been maintained, and inflation - on the whole - has been controlled. While some of this improvement was driven by high growth rates, a strong increase in wages, and the introduction of a well-targeted social benefit system, much of it resulted from an increase in oil and gas revenues. The Human Development Index (HDI) for Azerbaijan for 2018 was 0.754, which puts the country in the high human development category, positioning it at 87 out of 189 countries and territories assessed[10]. Between 1996 and 2018, Azerbaijan's HDI value increased from 0.612, an increase of 23.1%[11].
47. While the agricultural sector (including forestry and fisheries) only accounts for 5.3% of GDP, it is a key source of jobs – employing over 37% of the active labour force of the country - and is a national priority in the context of food security.
48. Azerbaijan has 4.8 million hectares of agricultural land, of which nearly 40% is arable. Much of the country's cultivated lands are irrigated by more than 40,000 kilometres of canals and pipelines. Typical of the Caucasus region there is a diversity of climatic zones and geomorphic diversity. However, many areas have suffered salinization and pasture lands have suffered from high levels of stocking density resulting in degradation of these pastures[12] and a high dependency on fodder crops.
49. Although not mentioned in the Project Document or flagged in the MTR, changes that have occurred in land tenure and property regimes resulting from the dissolution of the former Kolkhozes[13] and state farms despite the time since independence, still appear to exert an influence on the agricultural system, in particular in the way that farmers confront risk, utilise land and organise themselves collectively in relation to farming systems and markets[14]. Arguably, the reverberations of these historical and systemic changes persist and continue to exert an influence at the systems-level long after the actual event.
50. Azerbaijan produces a broad range of crops. Crop production accounts for around half of all agricultural production, with livestock farming making up the remaining half. Approximately 1 million hectares (~52% of arable land) is covered by cereal crops (wheat, grains and beans)[4] and 170,000 ha by fruits and vegetables. The major agricultural cash crops are grapes, cotton, tobacco, citrus fruits, and vegetables. Grapes, cotton and tobacco account for over half of all production, while fruits and vegetables accounts for about 30

[10] Briefing note for countries on the 2019 Human Development Report: Azerbaijan. UNDP

[11] Cited in: Midterm Review Report Conservation and sustainable use of globally important agrobiodiversity (Azerbaijan), October 2020

[12] ZH Aliyev; Winter Pasture Lands of Azerbaijan and their Agroecological Features. World Journal of Agricultural and Soil Science, May 02, 2019; & Project Document p. 13

[13] Collective farms

[14] Discussion with PMU, Project Experts and farmers.

percent[15]. Azerbaijan is considered to be part of Vavilov's Asia Minor Centre of origin[16]. The country is the primary focus of origin of a number of globally important food crops, including: wild rye; wheat; barley; millet; wild pears; cherry; and more than 200 varieties of grapes[17].

51. 15. One hundred and twenty genera – represented by 454 species – of the family Poaceae are found in Azerbaijan, 25 of which are under cultivation. There are 16 species of wheat genera, including 43 species of Durum wheat and 87 species of bread wheat. Ten species of barley (with 500 varieties) are found in the country, 2 of which are under cultivation. Five species of rye are found, one of which is cultivated. Only one species of maize (with more than 80 local varieties) and one species of rice (including a number of traditional cultivars) are found. Triticale, sorghum and millet are also naturally widespread across the territory of Azerbaijan. Most of the native varieties are however now either extinct, or in danger of extinction.
52. 16. Four hundred species of legumes (Family: Fabaceae) are under cultivation - typically for food or forage use - in Azerbaijan. Food crops include: chickpea (78 varieties); lentil; bean (68 varieties); fava bean (70 varieties); and groundnut. Cultivated and wild species of alfalfa, shamrock, sweet clover, trefoil, vetch (50 varieties) and sainfoin (Onobrychis) are widely used as forage crops and/or as a disease break in cereal cropping rotations. Wild relatives of cereals and legumes are widely distributed in natural pastures and meadows.
53. 18. In addition, there are a large number of vegetable species, including: tomato (5 varieties); aubergine (3 varieties); sweet pepper (3 varieties); bitter pepper (1 variety); watermelon (1 variety); and potato (3 varieties). The main ex-situ collections of vegetable crops available in the country (933 accessions) don't however fully cover the diversity of these crops in Azerbaijan.
54. 19. The forests of the Greater and Lesser Caucasus Mountains and the Talish Mountains contain wild ancestors of apples, persimmons, walnuts, chestnuts, pistachios and many other species that have been widely domesticated into many different varieties and strains. Some of the wild plants that are extensively used as fruits and vegetables in Azerbaijan include: cherries; plums; cornel; hawthorn; forest strawberry; Russian cherry-plum; sea-buckthorn; apple; medlar; sour cherry; blackthorn; raspberry; and wild varieties of onion[18].
55. 49. Although Azerbaijan has a reasonably developed system of protected areas, none of these specifically target the conservation of wild crop relatives. While populations of many wild crop relatives may occur in existing protected areas, the lack of reliable inventories in these protected areas means that detailed information on their distribution is seldom available. The need to conserve viable populations of wild crop relatives, and their associated habitats, is not yet being adequately addressed in national or regional conservation planning initiatives. Outside formal protected area status, there are also few other formal or informal mechanisms in Azerbaijan to secure the long-term conservation status of core populations of crop wild relatives and landraces[19].
56. The Project Document made a strong case for the intervention positioning agrobiodiversity firmly within the development context in terms of human wellbeing and food security and resilience.

## 2.3 Problems that the project sought to address

57. Having established a strong rationale for the conservation of genetic diversity important to agriculture, the Project Document identified four key threats to this: indiscriminate distribution of uniform exotic crop varieties that displace the genetic diversity of indigenous crops; degradation of agro-ecological systems; land fragmentation; and repeated drought in some areas of high crop diversification[20] as well as the effects of climate change having a complex and detrimental impact on biotic and abiotic components of the agricultural production system. These are briefly described below as:

[15] Source Project Document p 8.

[16] The Phytogeographical Basis for Plant Breeding, N.I. Vavilov, 1935

[17] For a "primer" on Vavilov's Centres see: https://en.wikipedia.org/wiki/Vavilov_center#:~:text=A%20center%20of%20origin%20(or,in%201924%20by%20Nikolai%20Vavilov.

[18] Project Document, p. 8-9, paras. 14-19

[19] Project Document, p. 15, para. 49

[20] Project Document p. 13

58. The replacement of wild crop species (crop wild relatives[21] (CWR)) and adapted local farmer varieties by monocultures of more productive, genetically-improved crop cultivars including genetically modified crop varieties (GMOs) which arguably is a mix of financial and market forces and short-term benefits and longer-term resilience trade-offs or discounts.
59. Soil degradation which occurs on a large portion of land suitable for agriculture due to erosion, salinity, chemical pollution a result of poor irrigation and drainage systems, overstocking of livestock, unsustainable levels of ground water extraction and ongoing deforestation. Often caused by the uncontrolled imports of fertilizers, pesticides, and herbicides into the country and the inappropriate use of these chemicals by local farmers.
60. Land degradation in the grasslands and semi-arid areas of Azerbaijan is increasing at a rapid rate, largely as a result of overgrazing due to continual pressure to increase the size of herds of livestock (mainly sheep, goats and cattle) well beyond the carrying capacity of the vegetation, sometimes to levels 10-50 times higher than the grazing norm in some areas, and even more in others. Increases in both the extent of the areas under grazing pressure, and the intensity of the grazing pressure, even in areas unsuitable for pasturing are resulting in accelerated soil erosion and increasing desertification, intensive pressure on winter pastures and a high demand for fodder crops and silage.
61. Water availability, in many regions, rainfall is both inadequate and unevenly distributed, as are water resources from the rivers. As a result of insufficient precipitation and uneven distribution over the year there is a heavy reliance on irrigation. Approximately 33% of agricultural land is irrigated, and it is this land that accounts for more than 80% of Azerbaijan's total agricultural output. Of the approximately 1 billion $m^3$ of fresh water used each year, just under 350 million $m^3$ is also being lost due to the poor state and management of the water distribution systems in Azerbaijan. Localised flooding affects 300 km2, and every other year washes out up to 1 million $m^3$ of soil and causes significant damage to crop lands.
62. The agricultural sector is particularly vulnerable to the effects of climate change. Although uncertainty remains regarding the degree of warming that will occur in Azerbaijan, over the next 50 years, the average increase in temperature will be about 2.4°C. Precipitation changes are more uncertain than temperature changes and – depending on the climate change scenario – may either modestly decline (medium and high impact) or increase (low impact) over the next 50 years. Climate impacts are anticipated to be greatest during the key period for agricultural production. Increased demand for irrigation water, coupled with decreases in runoff in April through November period, will lead to crop losses of over 60 percent for all irrigated agriculture in some southern regions and losses of over 20 percent for all crops in the Eastern Lower Kur basin[22].
63. Based on this, the Project Document set out a clear rationale for the agrobiodiversity project stating that; Azerbaijan is considered to be part of Vavilov's Asia Minor centre of origin of cultivated plants[23].
64. In general, the wild relatives of cultivated crops in Azerbaijan are genetically diverse, locally adapted and represent a potential source of genes and alleles for adapting crops to the ever-changing environmental conditions and human needs of the country as well as a global importance.
65. The long-term solution, set out in the Project Document, is thus characterized by: (i) the location, description, active management and monitoring of targeted populations of wild relatives of crops, and local landraces, within their natural habitats or where they have developed their distinctive characteristics (*in situ*); (ii) the conservation of the native varieties and wild species in plant gene banks, as a vital source of plant genetic resources for future plant breeding (*ex situ*); and (iii) an increase in the rate of release, and intensification of use of, local crop varieties containing genes from the indigenous wild relatives of crops.
66. Therefore, the Project Document set out a strategy than combined the characteristics of "genetic reserve conservation" and "on farm conservation". The two activities can be described thus:
    - "*Genetic Reserve Conservation: the location, management and monitoring of genetic diversity in natural wild populations within defined areas designated for active, long term conservation*."

[21] "*A crop wild relative is a wild plant taxon that has an indirect use derived from its relatively close genetic relationship to a crop; this relationship is defined in terms of the CWR belonging to gene pools 1 or 2, or taxon groups 1 to 4 of the crop*." (Maxted *et al*., 2006. *Biodiversity and Conservation* 15(8): 2673-2685.

[22] Source Project Document pp. 13 -14

[23] For a brief introduction to Vavilov's centres see: https://en.wikipedia.org/wiki/Vavilov_center

- "*On-farm Conservation: the sustainable management of genetic diversity of locally developed crop varieties (land races)*[24]*, with associated wild and weedy species or forms, by farmers within traditional agricultural, horticultural or agro-silvicultural systems*[25]."

67. Although it should be stated that the on-farm component would take place in a modern and more intensive, mechanised agricultural production landscape.
68. Barriers identified as hindering achievement of the long-term solution outlined above include the following:
    - Barrier 1: Sub-optimal conservation, production, distribution and agricultural use of crop wild relatives and landraces.
    - Barrier 2: Weak institutional capacities to support the adoption of, and limited farmer skills and knowledge to grow, native crops.
    - Barrier 3: Few incentives and mechanisms to grow native crops, and market the products derived from these native crops.
69. Nationally, the project design was aligned with **National Development Plan - *Azerbaijan Development Concept 2020 (NDC 2020): Outlook for the future*** – which provides the overarching framework for mainstreaming agro- biodiversity into the strategic development priorities of the country by contributing to priority 4.2 of the NDC (*The improvement of the economic structure and the development of the non-oil sector*) by: (i) supporting the "production of eco-friendly agricultural and food products in the country"; (ii) implementing measures to "protect genetic reserves and biodiversity'; and (iii) improving 'scientific support and staff training in the agrarian sector", the 2015-2020 ***National Strategy and Action Plan of Republic of Azerbaijan on Conservation and Sustainable Use of Biodiversity*** **(NBSAP).** Among the strategic priorities, the NBSAP calls for more extensive use of native crops to contribute to mitigating the effects of land degradation, improve the adaptation capacity of crops to the impacts of climate change and improve the state of national food security, the ***National Action Plan to Combat Desertification*** **(NAPCD, 2014)** as the national action plan to implement the UN Convention to Combat Desertification (UNCCD). The project design was specifically aligned with the implementation of Action 2.8 (use of native crops and adoption of environmentally-friendly crop production methods and technologies) of the NAPCD. Additionally, the project supported implementation of the ***Ten-year Strategic plan and Framework to Enhance the Implementation of the Convention*** **(2008–2018),** contributing to the indicators for Strategic Objectives 1, 2 and 3 (enhancing productivity and reducing vulnerability to climate change, climate vulnerability and drought) of the UNCCD Strategic Plan by increasing the extent of areas under sustainable crop agriculture.
70. The project objectives were also aligned with the **2016-2020 UNDP Country Programme Document (CPD), based on the United Nations Azerbaijan Partnership Framework (UNAPF)**, specifically UNAPF OUTCOME #3: "*By 2020, sustainable development policies and legislation are in place, better implemented and coordinated in compliance with multilateral environmental agreements, recognize social and health linkages and address issues of environment and natural resources, energy efficiency and renewable energy, climate change and resilience to natural and human- induced hazards*", and CPD Output 3.3: "Agricultural policies are developed and institutions and local farmers are supported to conserve and sustainably use local crop varieties important for biodiversity and sustainable land management".
71. The project's objectives closely align with the **GEF-6 global objectives: BD-3 Sustainably use biodiversity, Program 7: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources**, Outcome 7.1: Increased genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems, and, **LD-1 Agriculture and Rangeland Systems**: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods, Program 1: Agro- ecological Intensification, Outcome 1.2: Functionality and cover of agro-ecosystems maintained.
72. The project also contributes, within the limitations set out in section 3.10 of this report, to **SDG 5: Gender Equality,** as well as four other SDGs (**SDG 2 Zero Hunger, SDG 12 Responsible Consumption and Production, SDG 13 Climate Action, and SDG 15 Life on Land**) with relevance to eleven SDG indicators:

    SDG 14.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

[24] "*A landrace is a dynamic population(s) of a cultivated plant that has historical origin, distinct identity and lacks formal crop improvement, as well as often being genetically diverse, locally adapted and associated with traditional farming systems*." (Camacho Villa *et al*., 2005. *Plant Genetic Resource: Characterization and Utilization* 3(3): 373-384.

[25] Maxted, N., Guarino, L., Myer, L. & Chiwona, E.A., (2002). Towards a methodology for on- farm conservation of plant genetic resources. Genetic Resources and Crop Evolution 49: 31- 46.

SDG 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
SDG 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed
SDG 2a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

## 2.4 Project description and strategy

73. To address these threats and barriers the project's objective, as set out in the Project Document is to ***Ensure the conservation and sustainable use of globally threatened crop varieties important for biodiversity, food security and sustainable land management.*** To achieve this objective three components/ outcomes were described:
74. **Outcome 1 (component):** *In situ* and *ex situ* conservation of agro-biodiversity. Designed to facilitate expansion of knowledge of agrobiodiversity, enhancing the conservation of agrobiodiversity resources, and increasing the intensity and extent of use native crops in the agricultural sector in the three project rayons.
75. **Outcome (component) 2:** Capacity to improve agricultural productivity and reduce land degradation using native crops. The project would build the capacities of and improving the collaboration and cooperation between agricultural institutions and small farmers in order to improve agricultural productivity and reduce land degradation using native crops (i.e., the targeted crop species) in the three project rayons.
76. **Outcome (component) 3:** Incentives and markets to improve the uptake and commercial viability of native crops. Designed to strengthen incentives that encourage the planting of and improve access to commercial markets for agricultural products derived from, the targeted native crop species across the three rayons.
77. The global (GEF) benefits included two strategic objectives; Biodiversity BD-3 and Land Degradation LD-1.

### Table 3 GEF-6 Global Benefits Biodiversity Focal Area

| GEF-6 Biodiversity Results Framework | | | |
|---|---|---|---|
| Objective | Program | Outcome | Indicator (and project contribution to indicator) |
| BD-3 Sustainably use biodiversity | Program 7: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources | Outcome 7.1: Increased genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems | Indicator 7.1: Diversity status of target species.<br><br>Project contribution to indicator: >450 native landraces and varieties |

### Table 4 GEF-6 Global Benefits Land Degradation

| GEF-6 Land Degradation Results Framework | | | |
|---|---|---|---|
| Objective | Program | Outcome | Indicator (and project contribution to indicator) |
| LD-1 Agriculture and Rangeland Systems: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods | Program 1: Agro- ecological Intensification | Outcome 1.2: Functionality and cover of agro-ecosystems maintained | Indicator 1.2: Land area under effective management in production systems with improved vegetative cover.<br><br>Project contribution to indicator: 100,000 ha |

78. The expected results and means of measurement (indicators) are set out in Table 6 below.

## Table 5 Project components, outcomes, outputs and indicators

| | |
|---|---|
| **Objective:** *To ensure the conservation and sustainable use of globally threatened crop varieties important for biodiversity, food security and sustainable land management.* | **Indicator 1:** *Proportion (%) of agricultural crop area of project rayons under native crops.*<br>**Indicator 2***: Estimated value (US$/annum) of the state funding allocation to the conservation and use of agrobiodiversity in Azerbaijan.*<br>**Indicator 3:** *Number of known landraces and varieties under productive crop cultivation in Azerbaijan.*<br>**Indicator 4:** *Extent (ha) of crop area in the project rayons under more sustainable crop agricultural practices.*<br>**Indicator 5:** *Extent (ha) of degraded agricultural land in the project rayons restored to productive use through the planting of native crops.*<br>**Indicator 6:** *Number of households (and number of women) directly involved in the farming of native crops.*<br>**Indicator 7:** *LD-PMAT tracking tool score (average score across 4 criteria under LD-1).* |
| **Outcome 1:** *In situ* and *ex situ* conservation of agro-biodiversity.<br>**Output 1.1:** Improve the knowledge base of crop wild relatives (CWR) and crop landraces.<br>**Output 1.2:** Establish and manage a network of conserved areas for crop wild relatives.<br>**Output 1.3:** Establish and maintain field gene banks for crop landraces.<br>**Output 1.4:** Increase the production, storage and distribution of native crop seeds. | **Indicator 8:** Number and extent (ha) of CWR agrobiodiversity hotspots in the project rayons under some form of conservation tenure.<br>**Indicator 9:** Number of the targeted native crop varieties being actively maintained in field gene banks.<br>**Indicator 10:** Area under each traditional crop variety (hectares) in the four targeted districts.<br>**Indicator 11:** Volume of the targeted native crop seed (tons/annum) made available to seed producers in the project rayons for commercial production.<br>**Indicator 12:** Number of new, registered native crop seed producing farmers in the project rayons. |
| **Outcome 2:** Capacity to improve agricultural productivity and reduce land degradation using native crops.<br>**Output 2.1:** Build the capacity of agricultural institutions.<br>**Output 2.2:** Support the development of farmer organisations.<br>**Output 2.3:** Improve the knowledge and skills of local farmers. | **Indicator 13:** Number of capacitated extension and advisory service officers deployed in the project rayons.<br>**Indicator 14:** Number of state agricultural staff (professional, scientific, and technical) participating in project- funded training and skills development programmes.<br>**Indicator 15:** Number of active farmer-farmer networks established in project rayons.<br>**Indicator 16:** Number of registered members of the regional (i.e., including the project rayons) Wheat Farmers Association.<br>**Indicator 17:** Number of local farmers participating in project-funded information-sharing, training, and skills development programmes. |
| **Outcome 3:** Incentives and markets to improve the uptake and commercial viability of native crops.<br>**Output 3.1:** Strengthen the agricultural incentives toolbox for farmers.<br>**Output 3.2:** Improve access to markets for local farmers. | **Indicator 18:** Number of local farmers benefiting from small grants and average (US$) value of grant/farmer.<br>**Indicator 19:** Number of new supply agreements concluded between farmers in the project rayons and processors/retailers of niche high- value products derived from native crops.<br>**Indicator 20:** Number of processors and retailers trading in niche high-value products derived from native crops, and those benefitting from project grant funding support in the project rayons.<br>**Indicator 21:** Estimated valuation (US$) of trade in the targeted native crops in the project rayons. |

## Table 6 Summary List of Main Stakeholders

| Stakeholder | Roles and Responsibilities (as applicable to PGFRA) | Proposed involvement in the project |
|---|---|---|
| National Government (Ministries, Departments and Agencies) | | |
| Presidential Administration.<br>Agrarian Policy Department of the Presidential Administration. | Determines the state policy on PGRFA. Prepares and monitors the implementation of relevant action plans, state programmes, strategies and political decisions on PGRFA. | Will ensure the political support for the project, and ensure conformance with national policies, strategies and plans. |

| Stakeholder | Roles and Responsibilities (as applicable to PGFRA) | Proposed involvement in the project |
|---|---|---|
| Cabinet of Ministers.<br><br>Agro-industry and environmental departments of the Cabinet of Ministers. | Adopts legislation related to PGRFA.<br><br>Prepares drafts of legislation for adoption by the Cabinet of Ministers. Oversees the implementation of relevant legislation. | Will coordinate the efforts of the different affected Ministry's in the implementation of the project. Will be represented on the project Steering Committee. |
| Ministry of Agriculture.<br><br>State Commission for Testing and Protection of Selection Achievements.<br><br>Agricultural Research Center. | Responsible for the agricultural sector, including the protection and use of agro-biodiversity.<br><br>Responsible for the testing, registration and protection of all crop seed varieties.<br><br>Responsible for the selection, research and production of cereal-grain crops and the maintenance of gene banks of cultivated plants and their wild relatives. | The national implementing partner for the project. Will chair the project Steering Committee.<br><br>Will directly support the implementation of all project activities.<br><br>Will directly support - through the Research Institute of Farming; Research Institute of Forage, Meadows and Pastures; Research Institute of Horticulture and Subtropical Plants; and Research Institute of Vegetable Production - the implementation of all project activities. |
| Azerbaijan National Academy of Sciences.<br><br>Genetic Resources Institute.<br><br>The Institute of Soil Science and Agro-Chemistry. | The primary state scientific and technical research institution.<br><br>Responsible for the research, evaluation, inventorisation, certification, collection, introduction, restoration and reproduction of cultivated plants and their wild ancestors and rare, threatened and endangered genera and species. It hosts the National Gene Bank and is designated as the National Coordinator Institute for PGRFA.<br><br>Responsible for the research, evaluation, monitoring and mapping of agricultural soils (including qualification of impacts, productivity and chemistry). | Will support and/or facilitate the implementation of all project activities. Are a key project partner and will be represented on the project Steering Committee.<br><br>Will support or directly undertake research into the contribution of native crops to mitigating the effects of land degradation. |
| Ministry of Ecology and Natural Resources.<br><br>Biodiversity Protection and Development of Specially Protected Natural Areas Department.<br><br>National Monitoring Department on Environment | Responsible for environmental protection at the national level, including the planning and management of agro-biodiversity, natural pastures, forests, specially protected natural areas, soil conservation and pollution.<br><br>Co-ordinates the development and implementation of biodiversity conservation plans. Administers the national system of Specially Protected Natural Areas (SPNAs).<br><br>Oversees the implementation of all environmental monitoring programmes in the country (atmospheric air, soil, water, geological, biodiversity). | Will provide technical and professional support in the implementation of project activities.<br>Will be represented on the project Steering Committee.<br><br>Will support the project in the establishment and management of a network of protected areas for targeted crop wild relatives.<br><br>Will ensure that the monitoring of the state of crop wild relatives and landraces are aligned with, and integrated into, the national environmental monitoring system. |
| Ministry of Economy and Industry | Supports the development of crop agriculture through the administration of state subsidies, disbursement of soft loans and special funding. | Will facilitate access to agricultural subsidies, grants and loans for project-targeted crop farmers.<br>Will support the development and administration of fiscal incentives for farmers to plant native crops. May be represented on the project Steering Committee. |
| State Committee of Standardization, Metrology and Patents | Responsible for regulating technical standards, measurements, accreditation schemes, quality control management and protection of copyright (including for different agricultural crop varieties). | Will support the project in the branding and certification of agricultural produce derived from native crops. |
| Local Government | | |
| District Executive Authorities.<br><br>Rural land offices of Head of District Executive Power | Responsible for delivering services (e.g. education, health, culture, local infrastructure and roads, communication services, cultural facilities, and social assistance) within their territories that are outside the control of the relevant state programs. | Will facilitate and support the participation in, and direct involvement of, targeted local farmers in project activities. |

| Stakeholder | Roles and Responsibilities (as applicable to PGFRA) | Proposed involvement in the project |
|---|---|---|
| Municipalities & Neighborhood Committees (rural villages) | Management of land use, forests, pastures and cultivated areas (within the framework of the powers granted by relevant legislation). | Representatives of the targeted rayons may be represented on the project Steering Committee. |
| Crop Farmers | | |
| Private farmer and family smallholdings | Farms the majority of agricultural crops in the country. | The primary project beneficiaries. Will be represented on the project Steering Committee |
| Non-government and Community Based Organisations | | |
| Agro Information Center (AIC) | NGO providing technical and professional advice and support to farmers and other agricultural producers. | Will share, coordinate and collaborate with the project as and where relevant. May be contracted to implement specific project activities (e.g. capacity building, training). |
| Ganja Agri-Business Association (GABA) | Agricultural association providing support to farmers and other agricultural producers | May be contracted to implement specific project activities (e.g. developing local farmer networks, training, skills development, marketing, certification and marketing of organic agricultural products). |
| Rüzgar Environmental Association | NGO addressing environmental issues associated with unsustainable agricultural practices (e.g. soil pollution, erosion, salinisation). | Will share, coordinate and collaborate with the project as and where relevant. |
| Private Sector | | |
| Azertokhum LLC, | Private company operating a seed processing and cultivation plant | May partner with the project in increasing the production of seeds of selected native crops. |
| Large seed producers (e.g. Garabagh takhil, Kran Co and Susanagro) | Privately owned seed growing enterprises. | |
| Academic Institutions | | |
| Azerbaijan State Agrarian University (ASAU) | Involved in agricultural education, extension, research, crop seed production and maintenance of field gene banks. | May partner with the project to provide specialised technical support in the implementation of targeted project activities. |
| Development Partners | | |
| GIZ, EU, FAO, World Bank, USAID | Development partners supporting agricultural development projects and initiatives in Azerbaijan will be important project partners. They will share, coordinate and collaborate with the project as and where relevant. May be represented on the project Steering Committee. | |

## Table 7 Project financing

| | | |
|---|---|---|
| PDF/PPG | at approval (US$M) | at PDF/PPG completion (US$M) |
| GEF PDF/PPG grants for project preparation | 4.160502 | 4.310502 |
| Co-financing for project preparation | | |
| Project | at CEO Endorsement (US$M) | at TE (US$M) |
| [1] UNDP contribution: | 0.2 | 0.145363 |
| [2] Government: | 20.5 | 22.141805 |
| [3] Other multi-/bi-laterals: | 0 | 0 |
| [4] Private Sector: | 0 | 0 |
| [5] NGOs: | 0 | 0 |
| [6] Total co-financing [1 + 2 + 3 + 4 + 5]: | 20.7 | 22.287168 |
| [7] Total GEF funding: | 4.160502 | 3.969940 |
| [8] Total Project Funding [6 + 7] | 24.860502 | 26.257108 |

## 2.5 Project Theory of Change

79. The original Project Document was written prior to GEF guidelines requiring a Theory of Change (ToC)[26] as an integral part of developing the project intervention strategy. However, during the MTR a ToC was

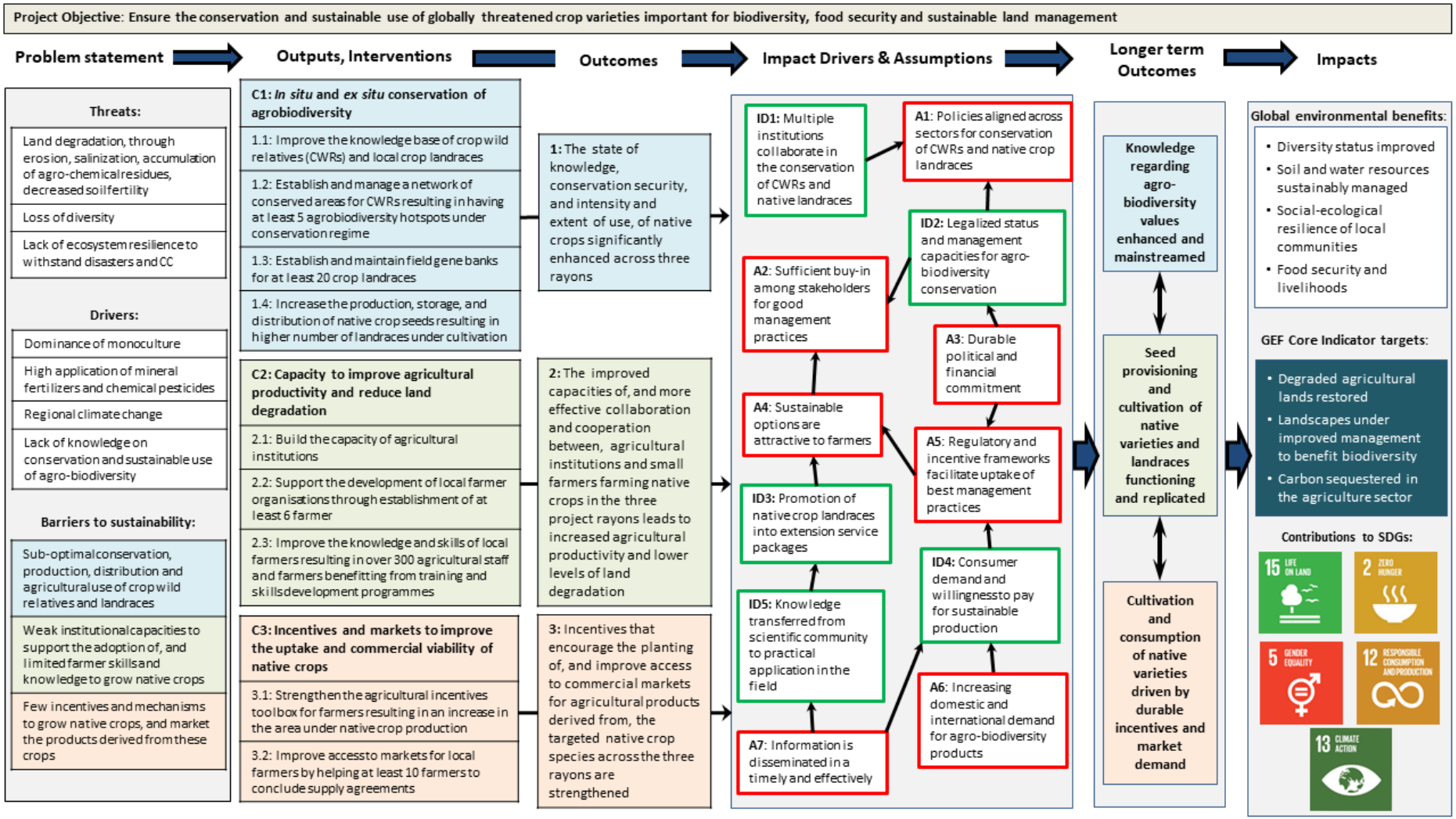
[26] Figure 1 source: Midterm Review Report Conservation and sustainable use of globally important agrobiodiversity (Azerbaijan), October 2020

developed and this is assessed by the TE as being a very clear and concise representation of the project's intentions and pathways.

80. The essential distinctive elements of ToC compared to other approaches in project planning and management[27] are to:
    - identify specific causal links among outputs and outcomes, with evidence;
    - describe the causal pathways by which interventions are expected to have effect, and identify indicators to test their validity over time, and;
    - be explicit about assumptions about these causal pathways, which includes an analysis of barriers and enablers as well as indicators of success.
81. The TOC is useful, in this sense, because it sets out the causal pathways from intervention through to the long-term impacts as well as identifying the key drivers shaping the system. A more detailed account of its use is given in the Scientific and Technical Advisory Panel (STAP) guidelines.
82. The TOC developed by the MTR was a robust and accurate depiction of the system and helped to disaggregate a number of key drivers, impact pathways and intermediate stages which is also useful in developing a temporal perspective necessary to for a realistic forecasting of project impacts.
83. Limitations to the ToC is the possibility that aspects of the system are not included due to the complexity (and to some extent, the need to fit a complex and unpredictable system into the confines of an A4 sheet). In this instance there are issues related to the reverberations of the last century which would include the disruption of community-level organisation and attitudes to collective actions and risk, etc. Further drivers might also include persistent and conservative attitudes towards gender which might not be directly related to agriculture, but nonetheless, may have a profound effect on a broad cross-section of stakeholders.
84. Additionally, it does not easily identify those high impact less predictable drivers, the "shocks and surprises" which can dramatically influence a system at different systemic and temporal scales.

[27] Theory of Change Primer A STAP document, December 2019

## Figure 1 Project Theory of Change (MTR)



# 3.0 Findings

## 3.1 Project formulation and design

85. GEF projects are invariably based upon a number of premises or assumptions regarding how a particular system is behaving.
86. This project design provided a sound intervention strategy based on the premise that current farming practices and market forces were resulting in a loss of genetic diversity in crops and CWR. The loss of this *intra* and *inter* specific diversity created significant, long-term, vulnerabilities in terms of socio-ecosystems resilience and food security with national, regional and global implications. Distortions created by historical events, market subsidies and farmer preferences towards short term production and profit maximisation; are combining to degrade the resilience within the system and resulting in a rapid loss of genetic diversity and future crop options. Encompassing all of these, the unpredictable nature of climate change is placing further stresses on the system. Without an intervention to recover genetic diversity within the agricultural landscape and safeguard CWR naturally occurring.
87. The second premise is a reasonable assumption that, in order to avoid the worse impacts of these stresses, to change the direction of travel[28] of the socio-ecosystem in terms of its ability to better absorb and buffer future disturbances without the loss of resilience; it is necessary to protect plant genetic diversity[29] (future options) through *in situ* and *ex situ* means, to increase knowledge and awareness of plant genetic diversity in relation to agriculture (component 1), to build the capacities of institutions, agencies and farmers to utilise crop genetic diversity to their advantage - including making available plant genetic resources such as local varieties and land races (component 2) while developing incentives to promote the use of more resilient and diverse crop varieties, addressing perverse incentives[30] affecting the use of these crops and market distortions which might not be in the best interests of the system *per se* (component 3).
88. If the socio-ecosystem "*resilience can be defined as the capacity of a system to undergo disturbance while maintaining both its existing functions and controls and its capacity for future change*"[31]. Then in relation to those actors (institutions, agencies, organisations, farmers, etc.) who policies, activities, actions and existence exert controls and influence on the system, it is also important to that "*resilience is determined not only by a systems ability to buffer or absorb shocks, but also by its capacity for learning and self-organisation to adapt to change*"[32]. This point was clearly made in the Project Document (components 1 and 2) as well as being repeated in the MTR ToC[33].
89. This logic forms the basis of the project's strategy which is largely covered in narrative of the Project Document and the description of the objective, outcomes and outputs. However, it less well defined in the selection and description of indicators in the project's SRF (see section 3.2).
90. In summary, the project design was a very reasonable approach to address a complex socio-ecosystem including the elements of:
    - "*Genetic Reserve Conservation: the location, management and monitoring of genetic diversity in natural wild populations within defined areas designated for active, long term conservation*."
    - "*On-farm Conservation: the sustainable management of genetic diversity of locally developed crop varieties (land races), with associated wild and weedy species or forms, by farmers within traditional agricultural, horticultural or agro-silvicultural systems*[34]."
91. It was closely aligned with the biodiversity (BD) and land degradation (LD) focal area objectives and programs:

[28] An important facet of systems is that they are not static and an understanding of temporal scales is critical to understanding how a system is behaving.

[29] Plant genetic diversity in this sense is taken to mean CWR, land races, locally developed varieties and includes both *inter* and *intra* specific diversity.

[30] A perverse incentive is an incentive (e.g. a subsidy or other encouragement) that has an undesirable or unintended result contrary to what is needed or intended.

[31] Gunderson, L.H. (2000). Ecological resilience – in theory and application. Annual Review of Ecology and Systematics 31, 425-439.

[32] Gunderson, L.H. and Holling, C.S. Eds. (2002). Panarchy: Understanding transformations in human and natural systems. Washington, DC. Island Press.

[33] P 9 Midterm Review Report Conservation and sustainable use of globally important agrobiodiversity (Azerbaijan), October 2020

[34] *Ibid*.

- **BD-3:** Sustainability use biodiversity; **Program 7**: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources; Outcome 7.1: Increased genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems
- **LD-1:** Agriculture and Rangeland Systems: Maintain or improve flow of agroecosystem services to sustain food production and livelihoods; **Program 1**: Agroecological intensification; Outcome 1.2: Functionality and cover of agro-ecosystems maintained

92. Nationally, the project strategy was aligned with the National Development Plan - *Azerbaijan Development Concept 2020 (NDC 2020): Outlook for the future* – which provides the overarching framework for mainstreaming agrobiodiversity into the strategic development priorities of the country. The project was specifically envisaged to contribute to addressing priority 4.2 of the NDC (The improvement of the economic structure and the development of the non-oil sector) by: (i) supporting the "production of eco-friendly agricultural and food products in the country"; (ii) implementing measures to "protect genetic reserves and biodiversity'; and (iii) improving 'scientific support and staff training in the agrarian sector"
93. The project objective is consistent with the priorities outline in the 2015-2020 National Strategy and Action Plan of Republic of Azerbaijan on Conservation and Sustainable Use of Biodiversity (NBSAP). Among the strategic priorities, the NBSAP calls for more extensive use of native crops that will contribute to mitigating the effects of land degradation, improve the adaptation capacity of crops to the impacts of climate change and improve the state of national food security.
94. The *National Action Plan to Combat Desertification* (NAPCD, 2014) serves as the national action plan to implement the UN Convention to Combat Desertification (UNCCD). The project design is specifically aligned with the implementation of Action 2.8 (use of native crops and adoption of environmentally-friendly crop production methods and technologies) of the NAPCD. Azerbaijan has not yet completed their Land Degradation Neutrality (LDN) country report with voluntary targets; the project will provide good practice and lessons learned in the land degradation focal area.

## 3.2 Results framework and indicators

95. The MTR provided a comprehensive critical review of the project's indicators assessing only five (indicators 8, 9, 14, 16, 17 and 19) of the 21 indicators as meeting the SMART[35] criteria and highlighting critical issues such as the absence of adequate baselines. The TE is broadly in agreement with the MTR assessment of indicators against the SMART criteria and these are provided in Annexes 17 - 18. Table 8 below provides a further critical analysis of the SRF indicators and the TE assessment of their achievement.
96. The SRF as described in the Project Document was a reasonable attempt to set out the indicators for the intervention. However, it illustrates the challenge of developing the monitoring and evaluation framework for complex projects such as this. Some of the baselines could not be confirmed and in the roll-out of the project it became apparent that while some of the indicators were met the SMART, they lacked the utility to fully capture the process and many of the achievements of the project which to some extent led to the confused reporting on indicators (see Table 8).
97. Furthermore, the choice of indicators did not capture many of the "soft" achievements of the project. In particular, it was pointed out by numerous informants (institutional, technical and echoed by the PMU) that the project had brought different agencies and institutions together and that they were "talking to each other" in a constructive manner. Indicators for these "soft" achievements are hard to capture in any SRF.
98. Annex 16 provides an assessment of the project indicators, the MTR assessment the effectiveness of the and subsequent management response.
99. The project's SRF has attempted to capture some of the broader development impacts (i.e. income generation, gender equality and women's empowerment, improved governance, livelihood benefits, etc.) to some extent. However, this reflects the challenge of the larger expectations of the GEF project and providing a monitoring tool which is at scale and responsive enough to address the immediate and reactive needs of project management. Many of the plausible broader development benefits are unlikely to register in sufficient fine-grained and empirical data until after the project has ended, or may not even only manifest (e.g. reduced vulnerability to future catastrophic events or the security of future use options) under specific future circumstances.
100. Two objective indicators appear to capture these broader development objectives:

[35] SMART: Specific, Measurable, Achievable, Relevant, Time-Bound

**Indicator 2***: Estimated value (US$/annum) of the state funding allocation to the conservation and use of agrobiodiversity in Azerbaijan.*
**Indicator 6:** *Number of households (and number of women) directly involved in the farming of native crops.*

101. While 4 outcome indicators, specifically related to outcome 3 (Incentives and markets to improve the uptake and commercial viability of native crops) attempt to capture this information:

**Indicator 18:** Number of local farmers benefiting from small grants and average (US$) value of grant/farmer.
**Indicator 19:** Number of new supply agreements concluded between farmers in the project rayons and processors/retailers of niche high- value products derived from native crops.
**Indicator 20:** Number of processors and retailers trading in niche high-value products derived from native crops, and those benefitting from project grant funding support in the project rayons.
**Indicator 21:** Estimated valuation (US$) of trade in the targeted native crops in the project rayons.

102. Given what the project was attempting to do, these are fairly imprecise measures of the broader development objectives. However, this needs to be weighed against the complexity of the project.

### 3.2.1 Assumptions and risks

103. The Project Document made a number of explicit assumptions contained in the SRF.
104. Assumptions regarding the objective
- *The Ministry of Agriculture, rayon executive committees and village municipalities will continue to promote and support the expansion of agricultural areas under native crop production* – this was a reasonable assumption and there are a mix of motivational drivers such as subsidies for local varieties and resource savings on more eco-adapted local varieties and land races.
- *Wheat, barley, vegetable and forage crop farming remain economically viable agricultural crops in the project rayons* – a reasonable assumption, there are robust markets for these crops and the current global trends make local production and local seed sourcing more competitive.
- *Crop landraces and their traditional varieties can compete with imported crop varieties as economically viable alternative crops* – a reasonable assumption and in some ways re-stating the first two assumptions. Land races are unlikely to ever outcompete local varieties or imported varieties and hybrids except under the most extreme conditions. However, they maintain the genetic diversity and phenotypic traits essential for future use in crop breeding. Furthermore, competition with imported varieties is not such a simple market-driven issue. Perverse incentives and distorting subsidies can affect the competitiveness of crops and it is necessary to take a systemic approach to calculating competitiveness at this level against a range of criteria including discounting or externalising environmental costs (e.g. nitrate in water tables) and broader system resilience (e.g. the drought and directional climate change).

105. Assumptions regarding outcome 1
- *The state agricultural and environmental partner institutions (GRI, research institutes, MENR) have the in- house technical expertise to implement project activities* – a reasonable assumption because a feature of the project is the intellectual capacities and technical adaptability of these key partner organisations. This would have been visible during the project formulation, safe to assume.
- *The rayon executive committees will actively support the conservation of the designated CWR 'hotspots'* – a less explicit assumption but still one which could be addressed through awareness and project support.
- *The MoA will support the formal registration of the new forage and vegetable seed farmers supported by the project* – this was an interesting assumption, but clearly there was a determination to develop local seed registration which has been very successful and linked to other factors such as subsidies and supported through the e-registration system.

106. Assumptions regarding outcome 2
- *The MoA will ensure the ongoing employment of a corps of agricultural extension staff in the project rayons* – this assumption is more problematic. It presupposes a corps of extension staff. Extension services are hard to develop "from scratch" and there are other ways of achieving a working result such as farmer to farmer and community-based "expert farmers".

- *Farmers understand the inherent value of farmer-farmer cooperation and information sharing* – a reasonable assumption and nuanced by historical attitudes to collectivisation, collective action and risk aversion.
- *Vegetable, forage and wheat farmers will voluntarily participate in project-funded information, training and skills development programmes* – a fairly safe assumption as farmers appear to recognise their skill deficits.

107. Assumptions regarding outcome 3

- *There is considerable potential for growth in the production and sale of high value products derived from native crops* – a reasonable assumptions which has been strengthened by international events which have increased agricultural commodity costs.
- *The MoA will support the marketing of organic and traditional products derived from native crops* – a reasonable assumption and within the gift of the project partners.
- *Specialist traders and retailers of niche high value products recognise the value of project support in improving their effectiveness and profitability* – a reasonable assumption, many of the land races of vegetables and fruit already have a significant consumer preference.

108. Three risks were identified (Table 9).

## Table 8 Project risk ratings

| Risk | Rating | Mitigation | TE comment |
|---|---|---|---|
| Farmers in the project rayons are reluctant to switch to planting and growing native crop varieties. | High | Sufficient and appropriate mitigation put in place. | This risk was probably over-estimated and the crops themselves as well as the incentives put in place reduced this risk to Medium. This was reflected in the MTR and by the RTA in the subsequent PIR (2021)[36]. |
| State agricultural institutions working in the project rayons are unable to provide adequate technical and extension support services to the increasing number of farmers farming with native crops. | Medium | Mitigation put in place. Further measures should be considered in legacy plan. | The project has provided considerable and high-quality extension work but this has largely been through project specialists. However, it is not clear how this will continue post project. It will still need significant investment in human resources and training. |
| An increase in demand for irrigation water in the project rayons, coupled with decreased water availability and higher temperatures, leads to substantial native crop losses. | Medium | Sufficient and appropriate mitigation put in place. | This is less of a risk and more of an inevitability. The project has introduced more efficient irrigation and drought tolerant crops which will build resilience into the system. Arguably, native crops are more likely to be resistant to drought. Further measures should consider farming practices which will improve soil organic structure and increase soil moisture. |

109. Risks have been monitored throughout the project, although they were not immediately updated in the risk register and the Social and Environmental Screening Template (SES) has been updated in 2022, there was no reason to believe that the project was ignoring these risks. Two significant risks arose during the project's lifetime, the Covid-19 pandemic and territorial dispute with Armenia, both in 2020. Both have had significant impact on the project, but there is evidence that sufficient actions were taken to address these risks and the risks were recorded in the ATLAS Risk Log. Satisfactory actions were taken, for instance by setting up online seminars and workshops for continuity of those activities suited for remote working. The PIR indicate that the PMU and the RTA were working closely on issues arising during the project's implementation and responses to the MTR, for example in strengthening the project's gender responsiveness.

110. The SES did not flag gender as an issue in the project. This would not be unusual for the time, however, if it was repeated now it would almost certainly pick up gender issues related to women's position in the sector.

[36] The RTA noted that the revised SESP (2019) had a "substantial risk category" and that this should be updated. However, in relation to risk 1 "substantial" was still probably be un-necessarily high because the dynamics of increasing aridity, rising input prices and increasing incidence of crop diseases and linking subsidies with local varieties substantially tipped the balance in favour of locally developed varieties containing genetic material which has evolved under these specific agro-ecological conditions as well as providing a strong motivation for the maintenance of land races and CWRs.

### 3.2.2 Lessons from other projects

111. The Project Document listed 5 projects or initiatives which might provide lessons or supporting activities:
    - **GEF-funded SLM&FM project**, titled Sustainable Land and Forest Management in the Greater Caucasus landscape.
    - **World Bank-funded Agricultural Competitiveness Improvement Project (ACIP)** to ensure complementarity of activities, notably in the following areas: (i) development of the agri-business value chain; (ii) seed research, plant breeding, variety development and seed production and processing; (iii) strengthening the capacities of the state seed inspection services, seed testing commission and private seed growers; and (iv) expanding the availability of financing for agri-business/food processing enterprises.
    - **Azerbaijan Rural Investment Project (AzRIP),** particularly in respect of grant funding to rural farmers for investment in agricultural infrastructure (notably for irrigation purposes).
    - **State Agency on Agricultural Credits (SAAC)** – the implementing agent for both AzRIP and ACIP – in order to identify opportunities for ongoing collaboration.
    - **State Seed Fund** to ensure that it will contribute to the primary objective of the fund of producing, harvesting and storing high-yield and drought-resistant seed varieties.
112. The MTR also noted that there are also potential synergies with the EU funded and FAO implemented "Strengthening of Agricultural Advisory Services" project.
113. With the exception of the GEF-funded SLM&FM project, it is possible to say that the project is so closely nested within the various project partners that there is an often-seamless alignment or synergies between these projects, for instance in relation to seed research and plant breeding, seed production, agricultural support such as irrigation and incentives for local crop and seed production (e.g. e-registration, subsidies linked to local varieties of seeds, etc.).
114. A similar UNDP-GEF project completed in 2010 which had successes in introducing land races to farming practices had also struggled with the genetic reserve component of agrobiodiversity, in particular, how best to integrate genetic reserves within farming systems (field margins, road sides, fallows, rotations, hedgerows, etc, as well as the protected areas), however, this was not noted in the Project Document.

### 3.2.3 Planned stakeholder participation

115. The MTR noted that the majority of UNDP-GEF projects in Azerbaijan had been in cooperation with the Ministry of Ecology and Natural Resources (MENR) and this project was the first occasion that this Ministry had been the lead IP on a UNDP-GEF project. The MTR notes that the "*project has done a good job in engaging key stakeholders in the agricultural sector*". However, it has been less successful in engaging other stakeholders such as the MENR and the Ministry of Economy and Industry, both important players in achieving the project's objective. Furthermore, it described the country ownership as being very high within the agricultural sector.
116. The TE agrees with these statements, but notes that; within the agricultural sector there are a complex number of stakeholders and institutional relationships. The original project design provided a reasonable means to bring these stakeholders together, but arguably, underestimated the scale of this challenge. Therefore, although the project has to some extent been contained within the agricultural institutional sphere, within this it has begun or achieved at least three impact drivers (ID1, ID3 and ID4, see Figure 1) while three key assumptions (A2, A4 and A7) appear to be holding true and A5 is partially met. This suggest that, at least in part, the outcomes have been achieved and are embedded in the agricultural sector.
117. Expanding these linkages into the private sector (none farmers) is happening, the pandemic and the international insecurity have not helped this, but they need to be developed further.
118. The challenge of aligning the different institutional interests of the MENR and the Ministry of Agriculture; conservation and production, is a longer-term goal which will need further support and incentives towards policy conformity and effective collaborative governance. This is likely to be incentivised by the emergence of the Food Standards Agency, national environmental monitoring and linking social and ecosystem resilience with food security within a changing climate crisis.
119. A frequently remarked feature of this project, by informants interviewed during the TE, has been how it has brought together the different institutional interests within the sector, for example in the: Agro-industry and environmental departments of the Cabinet of Ministers, Ministry of Agriculture, State Commission for Testing and Protection of Selection Achievements, Agricultural Research Center, Azerbaijan National Academy of Sciences, Genetic Resources Institute, the Institute of Soil Science and Agro-Chemistry, State Committee of Standardization, Metrology and Patents, Private farmer and family smallholdings, Large seed producers (e.g. Garabagh takhil, Kran Co and Susanagro), Azerbaijan State Agrarian University (ASAU). In

part, the PMU and particularly the project's technical expertise, has contributed to this by providing robust and pragmatic scientific and technical advice in practical, risk-reduced, incremental steps that people have been able to follow.

### 3.2.4 Linkages between other interventions in the sector

120. The project works closely with a number of regional and international organisations such as the International Center for Agricultural Research in the Dry Areas (ICARDA) and the International Crops Research Institute for the Semi-Arid Tropics, among others. An abiding strength of this project is the intellectual strengths of the leading research institutes such as the Azerbaijan National Academy of Sciences, Genetic Resources Institute, Agricultural Research Institute, Vegetable Research Institute, Institute of Crop Husbandry, the Institute of Soil Science and Agro-Chemistry and the agricultural field stations. Many of these institutions already have professional networks and linkages with other international organisations and institutions and there would appear to be a culture of collaboration on issues related to agrobiodiversity.

## 3.3 Project implementation

### 3.3.1 Adaptive management

121. The project has had to be very adaptive in its implementation. The very nature of the project, with its basis, the *raison d'etre,* grounded in a complex mix of genetics, evolutionary biology, population biology, ecology, economics and arguably, value judgements related to *inter alia:* future use options, discounting private and public goods, etc. All GEF projects are dealing with complex systems, the deigns are invariably peppered with assumptions about what is driving the system and how it will respond to change.
122. Once the project had a PMU in place then there is considerable evidence that the PMU's expertise and willingness to challenge and address issues and make changes where necessary has been adaptive. A number of changes were made and the rational documented during the inception phase to address weaknesses in the design or changes in circumstances (e.g. changing the farmer grants). There appears to have been good communications between the PMU, UNDO Country Office and the RTA
123. The Covid-19 pandemic and the international security issue were significant challenges which the project appears to have responded well to putting on line those parts of the project that lend themselves to remote or virtual working. Since the end of the conflict, the project has even expanded some support and considerable upscaling of knowledge and expertise to the newly reopened areas in Tartar.
124. Following the MTR the project has addressed some of the issues raised by the review, such as strengthening the gender-related aspects of the intervention by engaging a gender specialist and undertaking a study[37] which in many ways reveals a more nuanced and complex relationship between gender and the project's objectives.
125. Therefore, the project has been very adaptive, as opposed to expedient, in the changes made to the project's strategy and activities. Where it has been less effective has been in recording these adaptive measures in the SRF, which in part is also due to the weaknesses outlined earlier (Table 8) in the indicators. While these are adequate for basic monitoring, they do not capture the contextual and relational changes that the project appears to be driving. It is hard to measure enthusiasm or expert thinking that facilitates a broad "big picture" view of the system and the direction it is travelling. The PMU could have paid closer attention to the SRF and indicators, but it is worth mentioning that it is unlikely for a project to make significant changes to the SRF indicators, especially when they are under the many pressures of a project that is late in starting. This is captured in a very clear and bold statement in the Inception Report "*While the project has been designed to limit its dependency on pedantic political and bureaucratic processes beyond its immediate control, a number of project activities (e.g. approval and adoption of academic curricula; protected status of CWR hotspots) will still require formal state approvals. The lessons from previous donor-funded projects in Azerbaijan are that these approvals processes may be complex, slow and cumbersome*."[38]
126. The project provided a robust management response to the MTR and has sought to address most of the issues raised in the subsequent PIRs, most notably that of 2022.

[37] Project Conservation and Sustainable Use of Globally Important Agro-Biodiversity, Indigenous crop value chain study, Gender Assessment, Gender Assessment. Final Version 07/12/2021

[38] Project Inception Report, p. 37

### 3.3.2 Actual stakeholder participation and partnership arrangements

127. The country ownership is very high and there is considerable appreciation of the project's catalytic effect in bringing the various stakeholders together. This sense of ownership appears to be strongest within the agricultural sector stakeholders, where there has been the most collaboration.
128. However, the Steering Committee (SC) stating that it has a narrow focus with two members from the State Service for Agricultural Projects and Credit Management, one member from the Sheki Regional Agrarian Science and Information Centre, three members of the PMU and a representative of UNDP.
129. The Project Document described a much broader representation on the SC, stating that it "*may include representation from the MoA, UNDP, MENR, Ministry of Economy and Industry (MEI), Azerbaijan National Academy of Sciences (ANAS), SAAC, District Executive Authorities and individual farmers*"[39]. Clearly, the Project Document had a more diverse group of interests in the SC.
130. For the avoidance of doubt, the PMU should not be on the SC. They can provide non-executive services for the SC, but they should not be members of it. The SC is essentially the primary and strategic executive of the project and should have oversight of the PMU.
131. Despite this narrow representation of the SC the project appears to have reached out to a broad cross-section interests at the same time keeping the focus on agrobiodiversity, although this is somewhat thin when it comes to the genetic reserves and CWR. This was raised in the MTR and is still an issue which needs to be addressed. The MENR was not included in the SC and this has likely contributed to the lesser outcome of the CWR hotspots and integration within the protected areas system, a sizable component of outcome 1.
132. An important facet of understanding agrobiodiversity is conceptualising the continuum from CWR in genetic reserves through semi-altered landscapes to the modern and intensive use of hybrid crops in highly mechanised and industrial farm settings, a highly dynamic system with drivers that affect change at different levels of scale. Stability needs to be measured in terms of disturbance rather than a fixed set of values to be maintained over time.
133. Therefore, it is imperative that, in any intervention, there is a very broad cross-section of stakeholders. The SC, despite its narrow range of interests, still seems to have done well in incorporating different perspectives within the project; up to this point in time. However, it is questionable whether the projects' achievements will persist unless these other interests are formerly included in the decision-making process in the future.

### 3.3.3 Project finance and co-finance

134. Total expenditures of the GEF project grant reported in the UNDP combined delivery reports (CDRs) through 30 June 2022 were US$ 3,946,940 or 94.87% of the US$ 4,160,502 GEF project grant.
135. Project management costs were US$ 199,400 or 4.7% of the total GEF budget which is consistent with the 5% threshold for project management costs.
136. The distribution of spending across the three components is broadly in line with the indicative budget outlined in the project document with an overall variance of 4.58%
137. The highest variance occurred in 2017, unsurprisingly due to the inactivity of the project and late start up. In subsequent years variance between approved Project Document, approved budget (ATLAS) and general ledger expenditure can be explained by the project catching up. A very high variance in project management costs occurred in 2020 largely due to the Covid-19 pandemic, however, the overall variance for this year was only 4.82% suggesting a robust response to the pandemic lockdowns and the territorial dispute in order to continue activities and budget execution.
138. The project has not undergone an independent audit although the M&E Framework in the Project Document required an annual audit to be instigated by the UNDP CO and PMU[40]. An annual audit is excessive at the cost of US$ 3,000/year and would have been unnecessary under the NIM with Support Services arrangement because the UNDO CO undergoes an internal audit process with public disclosure[41]. The last one was carried out in 2020 and the project was generally rated as Satisfactory.
139. The Project Document recorded US$ 20,500,000 of government co-financing. The total recorded government co-financing at the time of the TE is US$ 22,141,805 (Annex 20) including additional leveraged co-financing of US$ 1,641,805. This was made up of a mix of project site, additional (Qakh) district site funding and national funding (Table 9). The TE notes that Co-financing has been forthcoming. However, it

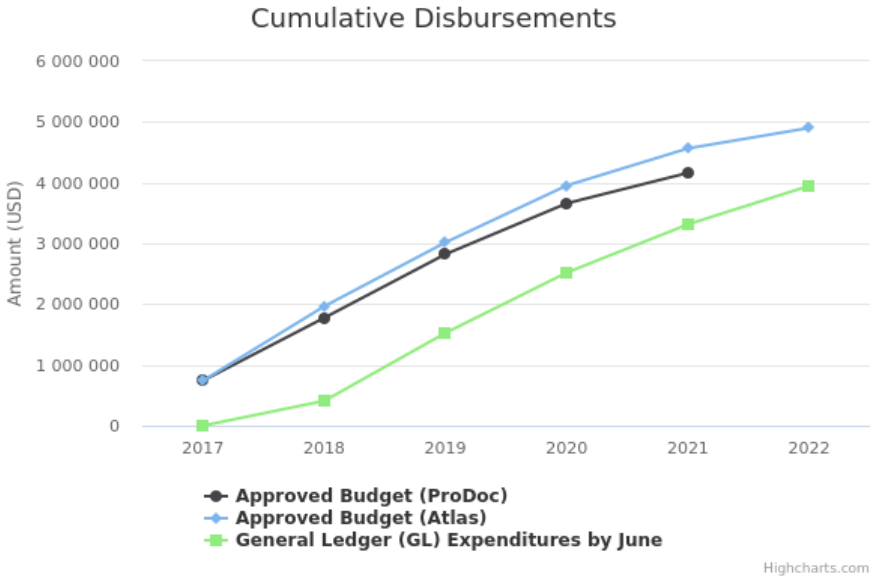
[39] To be clear, the figurative representation of the project implementation arrangements in the Project Document does not include other members such as the MENR.

[40] Project Document p. 73

[41] https://www.undp.org/accountability/audit/disclosure-internal-audit-reports

has not been tracked in the PIR until 2022[42]. In 2018 the GEF produced Guidelines on Co-financing[43] which go a long way to clarify the issue of co-financing. However, the project predates these useful guidelines and the information is hard to disaggregate. What is clear is that there has been considerable investment in the project, some of it is may have been directed towards sericulture, although this still falls within the sphere of agrobiodiversity. But it is less clear where issues such as state subsidies to farmers for planting local varieties and land races should be recorded. This is in-kind co-financing and both a new investment or re-targeting and fine-tuning of an investment mobilised to support a project goal, but it is also a recurrent expense.

Figure 2 Project expenditure (combined delivery report)




[42] An important feature of the PMU has been their readiness to improve project reporting. Co-financing in many GEF projects often proves problematic to report, however, the IP and PMU has consistently tried to improve this.

[43] https://www.thegef.org/sites/default/files/documents/GEF_FI_GN_01_Cofinancing_Guidelines_2018.pdf

## Table 9 Project expenditure

| Component 1 | | YR 1 2017 | YR 2 2018 | YR 3 2019 | YR 4 2020 | YR 5 2021 | YR 5 2022 | Total |
|---|---|---|---|---|---|---|---|---|
| | **Project Document** | $325,550 | $466,550 | $450,050 | $338,550 | $206,550 | $47,724 | $1,787,250 |
| | **Actual** | $33,235 | $553,838 | $313,519 | $352,650 | $404,886 | $47,724 | $1,705,854 |
| | **Variance** | $292,314 | -$87,287 | $136,530 | -$14,100 | -$198,336 | $0.00 | $327,456 |
| | | -89.79% | 18.71% | -30.34% | 4.16% | 96.02% | 0.00% | -4.55% |
| **Component 2** | | | | | | | | |
| | **Project Document** | $253,500 | $319,000 | $284,000 | $206,000 | $149,502 | $55,533 | $1,212,002 |
| | **Actual** | $27,368 | $372,132 | $352,709 | $254,389 | $121,529 | $55,533 | $1,183,662 |
| | **Variance** | $226,131 | -$53,132 | -$68,709 | -$48,389 | $27,972 | $0.00 | $55,899 |
| | | -89.20% | 16.66% | 24.19% | 23.49% | -18.71% | 0.00% | -2.34% |
| **Component 3** | | | | | | | | |
| | **Project Document** | $122,950 | $207,450 | $273,950 | $252,950 | $105,950 | $27,677 | $963,250 |
| | **Actual** | $9,108 | $250,892 | $340,739 | $201,913 | $54,692 | $27,677 | $885,023 |
| | **Variance** | $113,841.75 | -$43,441.59 | -$66,789.74 | $51,036.55 | $51,257.11 | $0.00 | $54,646 |
| | | -92.59% | 20.94% | 24.38% | -20.18% | -48.38% | 0.00% | -8.12% |
| **Project Management**[44] | | | | | | | | |
| | **Project Document** | $39,600 | $39,600 | $39,600 | $39,600 | $39,600 | $15,922 | $198,000 |
| | **Actual** | $1,171 | $41,626 | $38,916 | $68,505 | $29,257 | $15,922 | $195,399 |
| | **Variance** | $38,428 | -$2,026 | $683 | -$28,905 | $10,342 | $0.00 | $8,180 |
| | | -97.04% | 5.12% | -1.73% | 72.99% | -26.12% | 0.00% | -1.31% |
| **Totals** | | | | | | | | |
| | **Project Document** | $741,600 | $1,032,600 | $1,321,550 | $837,100 | $501,602 | $146,857 | **$4,160,502** |
| | **Actual** | **$70,883** | **$1,218,488** | **$1,045,885** | **$877,458** | **$610,366** | **$146,857** | **$3,969,940** |
| | **Variance** | **$670,716** | **-$185,888** | **$275,664** | **-$40,358** | **-$108,764** | **$0.00** | **$190,561** |
| | | **-90.44%** | **18.00%** | **-20.86%** | **4.82%** | **21.68%** | **0.00%** | **-4.58%** |

[44] Note 1: There is $33,500 difference between CDR and report submitted to the GEF in 2018. This amount was registered in CDRs as Undepreciated Fixed Assets and will be equal to zero at the end of the project. Considering advises of the UNDP Finance Unit and GEF, the total amount of procured vehicle was reflected in the budget of 2018. Email correspondence with UNDP Finance Unit 14 January 2019.

## Table 10 Co-financing

| Co-financing type | UNDP financing (US$ mill.) | | Co-financing type | Government (US$ mill.) | | Co-financing type | Partner Agency (US$ mill.) | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Planned | Actual | | Planned | Actual | | Planned | Actual | Planned | Actual |
| Grants | | | Grants | $1,000,000 | $1,079,640 | Grants | | | $1,000,000 | **$1,079,640** |
| Loans/concessions | | | Loans/concessions | | | Loans/concessions | | | $0 | **$0** |
| In-kind | | | In-kind | $19,500,000 | $21,062,165 | In-kind | | | $19,500,000 | **$21,062,165** |
| Cash | $200,000 | $145,363 | Cash | | | Cash | | | $200,000 | **$145,363** |
| Other | | | Other | | | Other | | | 0 | $0 |
| Totals | $200,000 | $145,363 | Totals | $20,500,000 | $22,141,805 | Totals | 0 | 0 | $20,700,000 | **$22,287,168** |

| Sources of Co-Financing | Name of Co-financier | Type of Co-financing | Investment Mobilized | Amount (US$) |
|---|---|---|---|---|
| Partner Agencies | MoA | Grant | | **$1,079,640** |
| | MoA | In-kind | Investment Mobilized | **$21,062,165** |
| Donor Agency | UNDP | Grant | Investment mobilised | **$145,363** |
| Total | | | | **$22,287,168** |

### 3.3.4 Monitoring and evaluation at entry

| Issue | Rating |
|---|---|
| M&E at entry | Moderately Satisfactory |
| M&E implementation | Moderately Satisfactory |
| M&E overall rating | Moderately Satisfactory |

140. Notwithstanding the earlier comments related to the SC The monitoring and evaluation (M&E) plan was prepared using the standard UNDP-GEF template. The estimated cost for implementation of the M&E plan, as recorded in the Project Document, is US$ 223,000, which is approximately 5% of the GEF grant. Allocation of 5% for M&E is consistent with UNDP's current guidance for GEF-7 projects (based on the July 2020 project document template).
141. The SRF presented in the Project Document was reasonable. The selection of indicators, other than those which reflected progress of project activities[45], has been criticised by the MTR and to some extent by the TE. However, it is worth noting that it is unusual to find robust indicators in a UNDP-GEF project given that they are invariably working in complex socio-ecological systems. Given the febrile environment that surrounds the completion of any Project Document, it is likely that these indicators would have seemed quite reasonable for the time.
142. The SES did not record gender issues in Principle 2: Gender Equality and Women's Empowerment. Today, the SES is given greater scrutiny than it would have received in 2014. Women are engaged in the agriculture, most often as lower paid labour in vegetable production. This is likely due to existing stereotypical roles and cultural norms than to any real suitability for specific tasks. At least two of the four questions should have been flagged in the SES which might have triggered a more robust gender-nuanced response. In the event, this did not come until after the MTR.

### 3.3.5 Monitoring and evaluation implementation and overall assessment

143. The project's effective start was delayed by approximately one and a half years[46] which has impacted progress and when combined with the pandemic and international security issue, resulted in a need to extend the project beyond its planned close date.
144. During the inception phase the SRF was reviewed and a number of reasonable changes were reported and accepted during the Inception Workshop.
145. The SC has met five times (2019-01-17, 2019-12-17, 2019-09-27, 2020-12-15, 2021-11-17).
146. There have been five Project Implementation Reports (PIRs) and a draft version issued at the point of the TE prepared during the project, covering the period of June through June (2018 PIR, 2019 PIR, 2020 PIR and 2022 PIR). The internal ratings applied in the 2018 PIR were "satisfactory" for progress toward development objective (DO), and "moderately satisfactory" with respect to implementation progress (IP). DO and IP ratings were "satisfactory" in the 2019 PIR and 2020 PIR. Following the MTR the DO and IP ratings dipped to "moderately satisfactory" in the 2021 PIR. The 2022 PIR (draft) raises the rating to "satisfactory". The TE agrees with this rating and notes that the recent PIR shows an attention to addressing issues raised during the MTR and reported in the 2021 PIR suggesting that the PMU was taking these things on board and responding to them. These internal ratings appear to be broadly realistic.
147. However, the issues related to the indicators (e.g. unclear baseline conditions for some of the project indicators and not identifying the means of verification for monitoring progress towards achievement of some of the end targets difficulty in matching measurements to means of verification, reporting technical experts and not extension workers[47], etc.) would warrant a Moderately Satisfactory rating. The RTA

[45] Indicators 14, 17 and 18
[46] According to the PMU the delay was largely due to a difficulty in engaging a substantive Project Manager and agreeing the implementation arrangements.
[47] To be clear, there was reasonable extension activities, principally through the relevant departments of the Ministry of Agriculture, Genetic Resources Institute of ANAS, the Research Institute of Vegetable Growing, Scientific Research Institute of Fruit and Tea Cultivation and the Research Institute of Crop Husbandry. Special activities related to extension services are carried out in the Ministry of Agriculture, and many specialists are involved in this work every year. The experts of the Sheki and Tartar Institute of Genetic Resources, the Goychay Institute of Fruit and Tea Cultivation Institute, and the Sheki, Tartar and Gobustan experimental stations of the Crop Husbandry Institute were also involved in the trainings held within

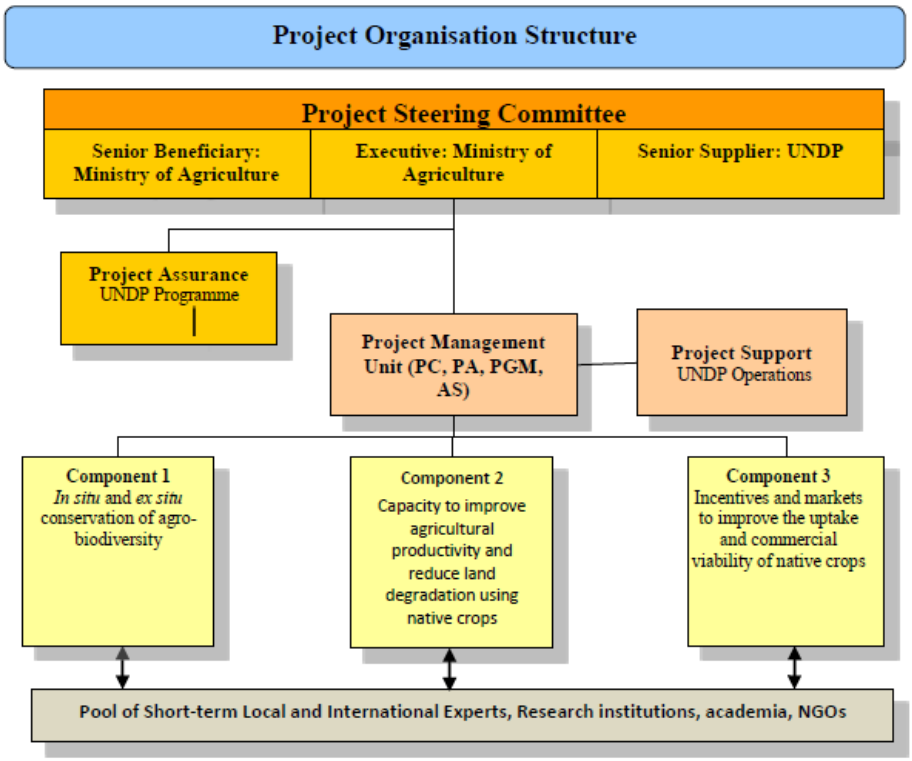
recommended that the risk related to the uptake of local crop varieties which was to be downgraded in line with an advisory note that a new level of risk, "Substantial", could be used if the risk was not "High" and therefore critical. The TE posits that the risk regarding the uptake of crops was more nuanced than was understood in the Project Document and could have been disaggregated along issues such greenhouses, field crops, fruit trees, pasture, etc. The point being, in a project with this complexity would need to be either extremely vague or so fine grained as to place considerable data demands on the PMU.

148. Biodiversity Focal Area – BD Tracking Tool for Programs 3,4,5,6,7,8,9 and 10 should be completed before project close and uploaded with the TE report.

### 3.3.5 UNDP implementation/ oversight

| Issue | Rating |
|---|---|
| UNDP implementation/ oversight | Satisfactory |
| Implementing Partner execution | Satisfactory |
| Overall Implementation/ execution | Satisfactory |

Figure 3 Implementation arrangements




149. The UNDP has carried out its project assurance role assisting with procurement where necessary through UNDP Operations. The PMU personnel are all engaged by UNDP although there is a clear autonomy in their decision-making with appropriate oversight by the UNDP Programme. The UNDP CO Programme Manager and the RTA have taken a keen interest in the project providing support and guidance. The project has had to make adaptive management decisions and to respond to some significant events (e.g. the pandemic, the international territorial dispute) and the PMU has worked closely with the CO and RTA to navigate these challenges with some considerable success. These are clearly traceable in the project documentation (e.g. minutes of SC meetings, PIRs, etc.)

the project. Specialists of the experimental stations carry out extensive work to plant the varieties created in those institutes in large areas; they also carry out a large part of the extension service work. The mentioned Institutes do not have experimental stations in Goranboy district, but since Goranboy district is close to Ganja, scientists and specialists of Azerbaijan State Agrarian University can be active in this region.

### 3.3.6 Implementing Partner execution

150. The concept for the project was very much nationally driven by the Ministry of Agriculture and the Azerbaijan National Academy of Sciences Genetic Resources Institute. It has been very beneficial having the PMU embedded in the offices of the Agency for Agro Credit and Development.
151. However, this was the first GEF project executed by the MoA and in the initial stages there was some confusion regarding the implementing arrangements, which likely contributed to the delayed start of the project. However, these issues were resolved and an effective partnership emerged following the inception phase.
152. The one-and-a-half-year delay cannot be overlooked, however, once a PMU was put in place the project has been professionally implemented. The quality of technical expertise, both within the PMU and the Consultants. The SC, despite its narrow constituency, has worked well with coordinating the stakeholder interests and has provided strategic decision-making when necessary with a transparent decision-making process. It is clear that the PMU, which it should be remembered are all engaged on UNDP Contracts, are well regarded and trusted by the various parties. In summary, the PMU has had a narrow focus of representation of stakeholders and it should not have included members of the PMU in an executive position, however, it appears to have worked very well in providing direction to the project implementation. Even so and for future reference, it should be noted that had something gone seriously wrong in the project, these arrangements may have created significant risks and a possible conflict of interest.

## 3.4 Project results

### 3.4.1 Progress towards objective and expected results

| Objective | Rating |
|---|---|
| Ensure the conservation and sustainable use of globally threatened crop varieties important for biodiversity, food security and sustainable land management | Satisfactory |

| **Objective: Ensure the conservation and sustainable use of globally threatened crop varieties important for biodiversity, food security and sustainable land management** | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator**<br>**Date** | **Baseline**<br>**2016** | **MTR status**<br>**2020 (September)** | **EOP target** | **EOP Status**<br>**2022 (June)** | **MTR Assessment** | **TE Assessment** |
| 1. Proportion (%) of agricultural crop area of project rayons under native crops | Wheat/barley: <2%<br>Vegetable: <0.5%<br>Forage: <0.5% | Wheat/barley: >4%<br>Vegetable: >1.5%<br>Forage: >1% | Wheat/barley: >6% Vegetable: >2%<br>Forage: >2% | Wheat/barley: >9.78 %<br>Vegetable: >6.61 %<br>Forage: >1.78% | On target | Achieved |
| 2. Estimated value (US$/annum) of the state funding allocation to the conservation and use of agrobiodiversity in Azerbaijan | <US$ 30 million/annum | 2020 estimate: USD 10.5 million, including:<br>MoA: USD 3 million in 2020;<br>MENR: USD 1.5 million in 2020;<br>MoA-MENR-ANAS: USD 6 million in 2020 | >US$ 50 million/annum | >US$100 million/annum[48] | Not on target | Achieved |
| 3. Number of known landraces and varieties under productive crop cultivation in Azerbaijan | <400 | Current level nationwide: 460<br>Within project sites, 60 varieties of cereals and vegetables in field gene banks, and sowing of | >450 | Current level = 480 | On target | Achieved |

[48] 173.3 million manat ($101.9 million), the area under crops, for which subsidies were paid (subsidies are now only paid for local varieties and land races), exceeded 880,000 hectares, $ 4.8 ($ 4.2 million in 2021) million for the item "protection of biological richness", The amount of funds allocated for land improvement and reclamation measures in Azerbaijan is also increased. Thus $ 270 million (32 million higher than 2021) has been allocated for land reclamation in the country.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 10 cereal and 22 vegetables in large areas. | | | | |
| 4. | Extent (ha) of crop area in the project rayons under more sustainable crop agricultural practices | <10,000 Ha | Direct (project supported): >9,600 ha Indirect: >30,000 ha | Direct (project supported): >50,000 ha Indirect: >50,000 ha | >10185 ha Direct (fully supported) >40,000 ha (partially supported) Indirect >50,000 ha[49] | Not on target | Achieved |
| 5. | Extent (ha) of degraded agricultural land in the project rayons restored to productive use through the planting of native crops | N/A | 1,000 Ha | > 1,000 Ha | > 1,000 Ha (soil analysis, crop rotation, local varieties, correct fertilizer applications, etc..) | On target | Achieved |
| 6. | Number of households (and number of women) directly involved in the farming of native crops | Vegetables: 5 (1) Wheat/barley: 2 (0) Forage: 1 (0) Fruit: 5 (2) | Vegetables: 65 (15) Wheat/barley: 45 (20) Forage: 14 (5) Fruit: 12 (3) | Vegetables: 17 (5) Wheat/barley: 17 (5) Forage: 12 (2) Fruit: 10 (4) | Vegetables: 55 (25) Wheat/barley: 77 (17) Forage: 14 (4) Fruit: 14 (4) | Achieved | Achieved |
| 7. | LD-PMAT tracking tool score (average score across 4 criteria under LD-1) | LD 1: <1.5 | Internal midterm assessment: LD1.i: 5 (policy) LD1.ii.: 2 (tenure) LD1.iii: 18 (production) LD1.iv: 2 (vulnerability) | LD 1: >3 | LD1.i: 5 (policy) LD1.ii.: 2 (tenure) (baseline 1) LD1.iii: 18 (production) (baseline 2) LD1.iv: 2 (vulnerability) (no change from baseline)<br><br>Since 2021 the project has been reporting against the GEF-7 Core Indicators Worksheet although this has not been retrofitted as a baseline in the PIF the CEO-approved baseline is 1,000 Ha. 2022 Worksheet records:<br><br>4.1 Area of landscapes under improved management to benefit biodiversity: Baseline 150 Ha / EOP achievement 150 ha | Unable to access | Unable to access – there is no score 18 in LD-PMAT<br><br>No baseline for GEF-7 Core Indicators<br><br>Biodiversity Focal Area – BD Tracking Tool for Programs 3,4,5,6,7,8,9 and 10 should be completed before project close and uploaded with the TE report |

[49] Measured from entries into the e-register

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | 4.2 Area of landscapes under sustainable land management in production systems: Baseline 50,000 Ha/ EOP achievement 50,000 Ha. | | |

**Component 1: *In situ* and *ex situ* conservation of agrobiodiversity**

| Outcome 1 | Rating |
|---|---|
| The state of knowledge, conservation security, and intensity and extent of use, of native crops significantly enhanced across three rayons. | Satisfactory |

| **Outcome 1: The state of knowledge, conservation security, and intensity and extent of use, of native crops significantly enhanced across three rayons** | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator**<br>**Date** | **Baseline**<br>**2014** | **MTR status**<br>**2020 (September)** | **EOP target** | EOP Status<br>2022 (June) | MTR Assessment | TE Assessment |
| 8. Number and extent (ha) of CWR agrobiodiversity hotspots in the project rayons under some form of conservation tenure | 0<br>0 Ha | 6 (including 3 in project rayons)<br>0 ha | >5<br>>150 ha | >6<br>>160 ha | Not on target | Partially achieved |
| 9. Number of the targeted native crop varieties being actively maintained in field gene banks | Vegetables: 0<br>Wheat/barley: 0<br>Forage: 0<br>Fruit: N/A | Vegetables: 55<br>Wheat/barley: 39 Forage: 59<br>Fruit: 0 | Vegetables: >8<br>Wheat/barley: >10 Forage: >2<br>Fruit: >3 | Vegetables: 202<br>Wheat/barley/CWR: 380<br>Forage: 85<br>Fruit: 165 | Achieved (except for fruits) | Achieved |
| 10. Area under each traditional crop variety (hectares) in the four targeted districts | Baselines not measured in Year 1 | Baseline conditions not measured.<br>In 2019, wheat/barley: 250 ha<br>In 2019, vegetable crops: 7.8 ha<br>In 2019, forage crops: 20 ha | Increase in area for wheat/barley varieties by approx. 4%<br>Increase in area for vegetable crops by 1.5%<br>Increase in area for forage crops by 1.5% | Wheat/barley: >9.78 %<br>Vegetable: >6.61 %<br>Forage: >1.78% | Unable to assess (baselines not defined) | Unable to assess (baselines not defined) (areas not defined for % increase) |
| 11. Volume of the targeted native crop seed (tons/annum) made available to seed producers in the project rayons for commercial production | Vegetables: 0.1 t/yr<br>Wheat/barley: 80 t/yr<br>Forage: 10 t/yr<br>Fruit: N/A | Vegetables: 0.4 t/yr<br>Wheat/barley: 750 t/yr<br>Forage: 15 t/yr<br>Fruit: 0.1 t/yr | Vegetables: 0.3 t/yr<br>Wheat/barley: 100 t/yr<br>Forage: 30 t/yr<br>Fruit: 0.1 t/yr | Wheat/barley: 11,000 t/yr<br>Vegetables: 0.4 t/yr<br>Forage: 50 t/yr<br>Fruit: 0.5 t/yr | Achieved (except for fruit) | Achieved |
| 12. Number of new, registered native | N/A | Vegetables: 4<br>Forage: 2 | Vegetables: 5<br>Forage: 2 | Vegetables: 4 new varieties | On target | Achieved[50] |

[50] Note: A new seed variety requires many years of testing, as much as 10 – 12 years, longer than the project cycle. Therefore, the number of new varieties of seeds is hard to correlate with a shorter project intervention except in the future. A more important measure is the number of new seed producers producing local varieties because this falls within the project cycle.

| | | | | | | |
|---|---|---|---|---|---|---|
| crop seed producing farmers in the project rayons | | Wheat/barley: 5<br>Fruit: 0 | Wheat/barley: 4<br>Fruit: 1 | 2 seedling producing farmers<br>Forage: 2 new varieties<br>2 seed producing farmers | (should be confirmed) | |

**Output 1.1: Improve the knowledge base of crop wild relatives (CWR) and local crop landraces key achievements:**

- The project supported participatory expeditions in the targeted rayons (and beyond), collecting samples of crop wild relatives (CWRs) in the wild and landraces at the farm level. Expeditions to all regions of Azerbaijan were organized with participation of the Genetic Resources Institute of ANAS and project experts. More than 1,000 accessions of cereals, legumes, feed and vegetable crops were collected, six (6) agrobiodiversity hotspots were identified, and two (2) new biological diversity centers were discovered.
- Plant materials collected during the field surveys were prepared, stored, and documented into the national gene bank hosted by the Genetic Resources Institute.
- An important aspect of this improved knowledge is an increasing understanding of the evolutionary aspects of a system, which is critical in ensuring its resilience, because; "*resilience is determined not only by a systems ability to buffer or absorb shocks, but also by its capacity for learning and self-organisation to adapt to change*"[51]. This is important in shaping future policy where sector or sector component agendas may be driven more by short term production or performance targets which may discount or externalise larger ecosystem costs and future use options.
- The reproduction and structural analysis of seeds of plant materials collected in previous years has continued, the seeds of more than 300 wild barley as well as more than 600 wild plants and more than 150 landraces were increased and kept in the National Gene Bank.
- Using the accumulated experience, project experts and specialists for first time, the project has developed a subject program called - Protection and efficient use of agrobiodiversity. The program is intended for MSc. students studying: Plant breeding, Plant genetics, Ecology, Breeding and seed production specialties at Azerbaijan State Agrarian University and other universities.

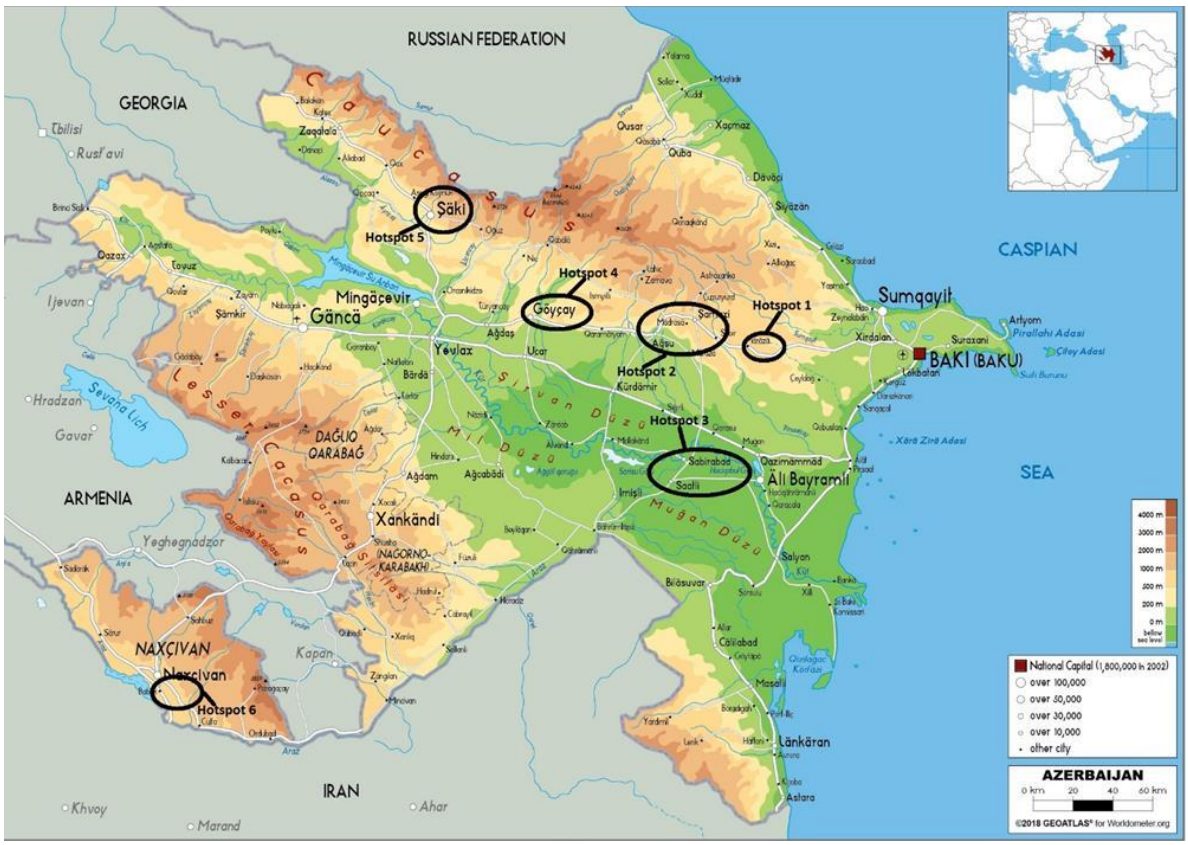
**Output 1.2: Establish and manage a network of conserved areas for CWRs resulting in having at least 5 agrobiodiversity hotspots under conservation regime key achievements:**

- The survey of hotspots was extended from the project areas to a national survey.
- Information obtained during the participatory expeditions carried out under Output 1.1 was interpreted and six (6) agrobiodiversity hotspots were identified at the locations shown on the map below in Figure 4.
- One of these hotspots in Sheki has been protected by the erection of an electric fence to exclude livestock grazing.
- There is a growing understanding amongst experts that agrobiodiversity conservation management is more complex and nuanced than a simple protected areas or production landscape paradigm. Agrobiodiversity is part of a continuum between strictly protected genetic reserve through to industrial agricultural production in greenhouses. For instance, some CWRs may have evolved within traditional farming systems and thrive as a result of traditional farming practices which may be changing due to increased efficiency, mechanisation or changing markets[52]. This is important in shaping future policy formulation.
- It is less clear how this output has created linkages with the MENR in relation to the management of protected areas which have high value as genetic reserves important for CWR.

[51] Gunderson, L.H. and Holling, C.S. Eds. (2002). Panarchy: Understanding transformations in human and natural systems. Washington, DC. Island Press.

[52] A number of CWRs were located on roadside margins/ verges.

## Figure 4 Location of newly identified genetic hotspots




**Output 1.3: Establish and maintain field gene banks for at least 20 crop landraces key achievements:**

- The project has been particularly successful in establishing field gene banks. These field gene banks or living collections are very important in the conservation of agrobiodiversity not least because they maintain the genetic material subject to continuous evolutionary pressures.
- The preliminary assessment of local varieties and forms, as well as the wild ancestors of cultivated plants, the multiplication of their seeds and their use in breeding programs, were carried out in field gene banks. 202 Vegetables, 380 Wheat/ barley/ CWR, 85 Forage and 165 Fruit collection accessions were studied in the field gene banks created in Absheron, Sheki, Gobustan, Tartar, Goychay and Goranboy regions.
- The field station in Tartar was reopened following the liberation of these territories with the inclusion of a field gene bank.
- The field gene banks have become important centres for spreading awareness of land races amongst farmers and stakeholders.
- As the field gene banks are also maintained under production conditions they serve an important function for research and seed production.

**Output 1.4: Increase the production, storage, and distribution of native crop seeds resulting in higher number of landraces under cultivation key achievements:**

- The project has worked closely with local farmers in the target rayons, supporting the establishment of seed production fields for selected native crop varieties.
- At each production field, the project has supported the farmers with training and inputs.
- More than 2,000 new materials have been added to the National Gene Bank and their seeds have been promoted.

- The project has cooperated with existing seed producers with AzerSun Holding, Bravo Market Network, Ganja Basket Shopping Center and AzerSeed Company. The project provided information to AzerSun and AzerSeed about the varieties selected for their high productivity.
- With the project's direct support (in 2018-2020) all wheat and barley yields were used for seed production. Produced seeds were then sold by project partner farmers to other farmers in the target regions for the cultivation of local varieties of wheat and barley on over 9,400 hectares.
- The establishment of the seed certification, linking certification (and quality control) to the e-registration and subsidies as well as developing a chain of custody certification using block chain technology is both sophisticated in its development while simple in its operation.
- The project has helped to establish a cooperative in Goranboy, supported them in obtaining registration for seed production and granted the cooperative machinery for sophisticated and high-quality seed processing.
- Wheat/barley: Seed farms, as well as scientific research institutes, are engaged in seed production of grain crops. 100 tons of ancient varieties and more than 10,000 tons of breeding varieties are being marketed annually.

**Component 2: Capacity to improve agricultural productivity and reduce land degradation**

| Outcome 2 | Rating |
|---|---|
| The improved capacities of, and more effective collaboration and cooperation between, agricultural institutions and small farmers farming native crops in the three project rayons leads to increased agricultural productivity and lower levels of land degradation | Satisfactory |

| **Outcome 2: The improved capacities of, and more effective collaboration and cooperation between, agricultural institutions and small farmers farming native crops in the three project rayons leads to increased agricultural productivity and lower levels of land degradation** | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Baseline** | **MTR status** | **EOP target** | **EOP Status** | **MTR** | **TE** |
| **Date** | **2014** | **2020 (September)** | | **2022 (June)** | **Assessment** | **Assessment** |
| 1. Number of capacitated extension and advisory service officers deployed in the project rayons | 5 | Internal reporting does not match the description of the indicator. | >20 | >20 specialists[53] | Unable to assess | Achieved |
| 2. Number of state agricultural staff (professional, scientific, and technical) participating in project-funded training and skills development programmes | N/A | Total: 80 (10 professional, 60 scientific, and 10 technical) | >30 | >250 | Achieved | Achieved (activity) indicator) |

[53] The Ministry of Agriculture, Genetic Resources Institute of ANAS, the Research Institute of Vegetable Growing, Scientific Research Institute of Fruit and Tea Cultivation and the Research Institute of Crop Husbandry. Special activities related to extension services are carried out in the Ministry of Agriculture, and many specialists are involved in this work every year. The experts of the Sheki and Tartar Institute of Genetic Resources, the Goychay Institute of Fruit and Tea Cultivation Institute, and the Sheki, Tartar and Gobustan experimental stations of the Crop Husbandry Institute were also involved in the trainings held within the project. Specialists of the experimental stations carry out extensive work to plant the varieties created in those institutes in large areas; they also carry out a large part of the extension service work. The mentioned Institutes do not have experimental stations in Goranboy district, but since Goranboy district is close to Ganja, scientists and specialists of Azerbaijan State Agrarian University can be active in this region.

| | | | | | | |
|---|---|---|---|---|---|---|
| 3. Number of active farmer-farmer networks established in project rayons | 0 | 4 (including 2 in Sheki and 2 in Goranboy) | >6 | 6 farmer-farmer networks | On target | Achieved |
| 4. Number of registered members of the regional (i.e., including the project rayons) Wheat Farmers Association | 0 | 30<br>Note: the internal assessment is an estimate; should be based on registration records of the Wheat Farmers Association. | >50 | >50 | On target (needs to be verified) | Achieved (verified) |
| 5. Number of local farmers participating in project-funded information-sharing, training, and skills development programmes | N/A | Vegetable: >74<br>Forage: >20<br>Wheat: >80 | Vegetable: >150<br>Forage: >30<br>Wheat: >100 | Vegetable: 125<br>Forage: 45<br>Wheat: 230 | On target | Achieved (activity) indicator) |

**Output 2.1: Build the capacity of agricultural institutions key achievements:**

- Equipment has been procured to support the technical advisory services of agricultural extension and advisory organizations. The equipment includes an extensively-equipped mobile laboratory (see Figure 8), communications equipment, office and IT equipment, and field tools and supplies.
- The mobile laboratory supported the analysis of production fields covering approx. 250 ha, five (5) more mobile units have been procured by the MA, and technical assistance provided to farmers on sowing of local varieties, proper agrotechnical maintenance, fertilization, and irrigation.
- Advisory service consultants and field monitors have been recruited, supporting the establishment of field gene banks and assessment and monitoring of on-farm activities.
- Three (3) books have been published: "Methodology of working with seeds of cultivated plants and their wild ancestors", Vegetable Encyclopaedia, and "Azerbaijan's wheat gene pool ", these were distributed to specialists.
- More than 60 seminars and a large number of field days were organized on the protection and efficient use of agrobiodiversity, agrotourism, as well as prevention of land degradation. Farmers, experts from local institutions of the Ministry of Agriculture, Azerbaijan State Agrarian University, Genetic Resources Institute of ANAS, Research Institute of Crop Husbandry, The Scientific Research Institute for Vegetable Growing and employees of Fruit and Tea Cultivation Institute also took part in these events.
- Numerous discussions were held with the specialists of the Azerbaijan State Agrarian University, and for the first time, a subject program called "Protection and effective use of agrobiodiversity" was prepared and published.

**Output 2.2: Support the development of local farmer organisations through establishment of at least 6 farmer networks key achievements:**

- The project has supported the establishment of six (6) farmer-farmer networks (2 - Goranboy, 1 - Goychay, 2 - Sheki and 1 - Tartar).
- Three (3) of the networks created in Goranboy and Shaki districts were formalized and two of them turned into cooperatives, suggesting that these are robust networks.
- Farmer-farmer networks have proved effective in farmers sharing and advancing their knowledge and work well with mobile phone technology linking farmers to technical experts to get real-time advice

particularly when farmers negotiate with retailers or need immediate advice on fertilisers, pesticides and seed quality and type.

**Output 2.3: Improve the knowledge and skills of local farmers resulting in over 300 agricultural staff and farmers benefitting from training and skills development programmes**

- The project has delivered numerous trainings to the staff of the Ministry of Agriculture on "Conservation of genetic resources", "Vegetable seed production", "Cereal gene pool and soil degradation". Specialists, including young specialists from the Genetic Resources Institute of ANAS, Institute of Crop Husbandry, Institute of Vegetable Growing, Azerbaijan State Agrarian University and Baku State University, participated in the seminars.
- Seminars and field-based trainings have also been delivered to local farmers, reaching over 200 farmers in the three project rayons.
- The field gene banks/ field stations in Absheron, Sheki, Gobustan, Tartar, Goychay and Goranboy regions are beginning to function as centres for the dissemination of knowledge and skills amongst farmers.
- Farmer-farmer networks and available specialists provide real time knowledge and skills for farmers.
- Inherent gender equalities still effect a bias towards male farmers.

**Component 3: Incentives and markets to improve the uptake and commercial viability of native crops**

| Outcome 3 | Rating |
|---|---|
| Incentives that encourage the planting of, and improve access to commercial markets for agricultural products derived from, the targeted native crop species across the three rayons are strengthened. | Satisfactory |

| **Outcome 3: Incentives that encourage the planting of, and improve access to commercial markets for agricultural products derived from, the targeted native crop species across the three rayons are strengthened** | | | | | | |
|---|---|---|---|---|---|---|
| **Indicator** | **Baseline** | **MTR status** | **EOP target** | **EOP Status** | **MTR Assessment** | **TE Assessment** |
| **Date** | **2014** | **2020 (September)** | | **2022 (June)** | | |
| 1. Number of local farmers benefiting from small grants and average (US$) value of grant/farmer | N/A<br>N/A | 135 farmers supported across the three project rayons with an average level of support of USD 800 per farmer | >400<br>US$ 500 – 1,500 | >400 | On target | Achieved (activity) indicator) |
| 2. Number of new supply agreements concluded between farmers in the project rayons and processors/retailers of niche high- value products derived from native crops | 0 | Internal reporting describes project support in terms of procured equipment and advisory services delivered. Supply agreements not yet concluded. | >10 | >14 supply agreements | Not on target | Achieved |
| 3. Number of processors and retailers trading in niche high-value products derived from native crops, and those benefitting from project grant funding support in the project rayons | <5<br>0 | Consultations have been initiated with Bravo, the largest supermarket chain in Azerbaijan, for supplying native variety vegetables. Processing equipment has been purchased for farmers and farmer associations. | >10<br>>5 | >12 | Not on target | Achieved |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4. Estimated valuation (US$) of trade in the targeted native crops in the project rayons | TBD | Baseline value chain analyses have not yet been made. The project team has estimated the value of USD 2 million in 2019 for local wheat and barley varieties produced by local farmers. | TBD | 2 million US$/year | Unable to assess | Unable to assess because baseline never set |

**Output 3.1: Strengthen the agricultural incentives toolbox for farmers resulting in an increase in the area under native crop production**

- There is now a credible package of incentives in place to provide the motivation for farmers to cultivate native varieties.
- The primary incentive has been the linking of subsidies (paid in three tranches for planting, fertilizer and finally for harvesting) which are now only paid for locally developed varieties and land races. This system is now in place.
- Directional issues such as global farm input prices may also provide incentives to grow hardier varieties and drought tolerant varieties.
- Where vegetables are concerned there is an existing local market preference for local varieties and land races.
- In areas where vegetables (mainly tomatoes) are grown in greenhouses there are market distortions such as insurance[54] attached to seed purchases that often favour imported and hybrid seeds.
- It is not clear how larger, corporate producers will respond to these incentives.
- The system is dynamic and hybrid seed producers can be expected to respond and change the balance of the equation in the future in favour of hybrid seeds.

**Output 3.2: Improve access to markets for local farmers by helping at least 10 farmers to conclude supply agreements**

- A change was made to the output during the inception phase. Rather than provide support through a small grant mechanism, a decision was made to deliver equipment for harvesting, cleaning, and sorting directly to the farmers. This was a reasonable and adaptive change.
- A women's farmer union in Fakhrali village of Goranboy has been supported by purchasing a modern drying equipment for vegetable and fruit plants allowing them to store perishable produce and add value to their product.
- A value chain study has been carried out with particular emphasis on women involvement in farming and the product chain.
- The cooperative in Goranboy was provided with a milling machine and is exploring specialist flours for urban markets.
- Similarly, the same cooperative is now able to sell certified seeds which has opened up considerable markets to them.
- The project has assisted local farmers in entering supply agreements with processors and retailers of niche high-value products derived from native crops, delivering technical capacity for improving quality standards required by processors and retailers, and facilitating expanded partnerships through participation in trade fairs, trade missions, etc.
- The project is now exploring agro-tourism which could provide alternative incomes from very intensive agriculture and help to maintain traditional farming systems.

[54] Many imported hybrid seeds come with a minimum production guarantee. However, these guarantees very likely discount or externalise larger environmental costs.

## 3.5 Relevance

| Issue | Rating |
|---|---|
| Relevance | Highly Satisfactory |

153. There is clear national ownership of the project's objective and outcomes which manifests itself in an enthusiasm and interest in agrobiodiversity. This is particularly high amongst scientific and research institutions.
154. The project strategy was formulated in line with the National Development Plan - Azerbaijan Development Concept 2020 (NDC 2020): Outlook for the future – which provides the overarching framework for mainstreaming agro-biodiversity into the strategic development priorities of the country, and also consistent with the priorities outlined in the National Strategy and Action Plan of the Republic of Azerbaijan on Conservation and Sustainable Use of Biodiversity (NBSAP). This is demonstrated, for instance, by the change in policy to direct subsidies towards local varieties and land races.
155. The project objectives are also directly aligned with the 2016-2020 UNDP Country Programme Document (CPD), which was based on the United Nations Azerbaijan Partnership Framework (UNAPF), specifically UNAPF OUTCOME #3: "By 2020, sustainable development policies and legislation are in place, better implemented and coordinated in compliance with multilateral environmental agreements, recognize social and health linkages and address issues of environment and natural resources, energy efficiency and renewable energy, climate change and resilience to natural and human-induced hazards", and CPD Output 3.3: "Agricultural policies are developed and institutions and local farmers are supported to conserve and sustainably use local crop varieties important for biodiversity and sustainable land management."
156. The project's objectives closely align with the GEF-6 global objectives: BD-3 Sustainably use biodiversity, Program 7: Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources, Outcome 7.1: Increased genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems, and, LD-1 Agriculture and Rangeland Systems: Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods, Program 1: Agro-ecological Intensification, Outcome 1.2: Functionality and cover of agro-ecosystems maintained.
157. Despite the TE concerns regarding the participation of the MENR, stakeholder participation has been remarkably high and there is a complementarity with other emerging issues such as water and food security.

## 3.6 Effectiveness

| Issue | Rating |
|---|---|
| Effectiveness | Satisfactory |

158. The project has effectively contributed towards the UNDP Country Plan and Strategic Plan as documented earlier in this report, it has contributed to eleven targets across five SDGs, two GEF Strategic Priorities (Land Degradation and Biodiversity) as well as national priorities related to food security and national concerns regarding food security.
159. Despite a delay in starting, the project has had an effective and intelligent governance and operation which has made changes where necessary, listened to critical assessment and been adaptive in order t produce results closely aligned with the predicted outcomes and outputs.
160. The project's results have been strongest at a scientific level (including CWR) and at the production level. In the interstitial areas between genetic reserve and crop production, it has been less effective. These are the areas of production landscape where the inefficiencies of traditional farming systems in the past will have maintained agrobiodiversity in an extensive range of microhabitats with considerable additional ecosystem functions and services.
161. Similarly, the project, while it has addressed the issue of soil fertility (e.g. through soil testing, crop rotation and shallow ploughing) it could have done more to promote soil care in terms of the organic component[55]. However, the project, through its activities, has set in place the groundwork necessary to follow these issues up and it is reasonable to state that the project has achieved its expected results.

[55] This should not be confused with certified organic farming, it is the use or organic matter to improve soil structure and function in order to improve microbial activity, water retention and nutrient content.

162. While the original project design did not have a strong gender equality and empowerment approach, this has been corrected in as much as the project's resources allow and highlighted that gender inequalities lead to inefficiencies within the agro-ecological system making the system less resilient.

## 3.7 Efficiency

| Issue | Rating |
|---|---|
| Efficiency | Satisfactory |

163. Despite the eighteen-month delay, it is possible to say that there has been a high degree of efficiency in the project's implementation once the PMU was in place. Financial management has been strong and decisions have been taken rationally and without delay when necessary.
164. Where the project has identified shortcomings (e.g. the distribution of financial grants to farmers, the weak gender strategy, targeting a few cooperatives rather than all farmers, etc.) a reasonable "fix" has been proposed and remedial actions taken without fuss or delay and with support from the SC.
165. Following the initial delay in starting the project financial management has been efficient and annual variance has been related to the delay, the Covid-19 pandemic and the territorial dispute. The project appears to have responded well to both the latter events putting in place effective measures to continue those activities possible under the restrictions.
166. Communication within the project has been very good with a shared enthusiasm and sense of common purpose, as evidenced by the high level of understanding of the project's purpose and outcomes amongst the various institutional stakeholders.
167. The PMU could have moved faster to address some of the weaknesses in the SRF indicators, although this has now largely been achieved with successive increments between the PIR 2021 and 2022 and, furthermore; in comparison to many GEF projects SRF indicators, those weaknesses were not critical issues.

## 3.8 Overall outcome

| Issue | Rating |
|---|---|
| Overall outcome | Satisfactory |

168. Based on the findings documented in sections 3.1 to 3.7 of this report the TE can state with some confidence that it is reasonable to state that the Project Document provided a robust and accurate intervention and that its authors, in as much as it is possible when dealing with these complex and unpredictable socio-ecosystems, knew what they were doing.
169. Within the project partners there is a very high level of technical expertise and this includes the PMU. However, the partners and the PMU have been able to scale this expertise up or down, from pragmatic advice to farmers in the field to high-level theoretical in research or nuanced statements necessary for policy formulation.
170. Implementation, once started, has been effective and efficient and at times it has been adaptive without giving way to expedience. The project has largely achieved all its outcomes, albeit with the benefit of an extension.

## 3.9 Country ownership

171. There is clear national ownership of the project's objective and outcomes which manifests itself in an enthusiasm and interest in agrobiodiversity. This is particularly high amongst scientific and research institutions. As already evidenced in this report the project's objective is closely aligned with national policy as well as preparing the country for some a number of future challenges related to environmental and ecosystem resilience.
172. The original concept for the project appears to have originated in the Azerbaijan National Academy of Sciences Genetic Resources Institute. There is a clear understanding of the aims and objectives of the project within the institutional partners at senior levels and, notwithstanding the issues raised by the MTR and the TE regarding the MENR, there has been good communication between project participants at an institutional level.
173. Supporting policy instruments have been put in place to support the project's outcomes, for instance linking subsidies with locally developed varieties and there has been a significant country investment in equipment (e.g. additional mobile soil testing, scientific equipment, scaling up field gene banks, etc.).

## 3.10 Gender

174. Gender is treated here in this section and in section 3.12 of this report. The issue of gender as addressed in the Project Document was to some extent, downplayed. However, this needs to be considered in the context of the UNDP SES procedures of the time. Therefore, the fact that women are involved in the sector was flagged in the Project Document, however, this was never developed into a gender action plan. During the inception phase this was refined to their involvement in fruit and vegetable production (but very little involvement in cereal farming). The MTR raised the issue of gender and subsequently a study was undertaken of the role of women in the value chain. Furthermore, the project helped start a women's cooperative amongst other gender-related initiatives and identified e-commerce as a pathway to women's entry to markets and negotiating with external agencies.
175. There are significant issues surrounding women's role in agriculture within the project area which might range from stereotypical views of gender segregated work to cultural norms which might exclude women from participating in economic activity or even answering questions without reference to a male member of the household or their participation in work activities which attract lower pay.
176. The project has picked up these issues in the post MTR gender study and it is putting in place activities to address it sufficiently credible and robust to contribute to gender equality. This could be characterised as taking the project, as designed in the Project Document, from gender neutral to gender targeted and, in some activities, gender responsive e.g. establishing a women's cooperative, value chain report, etc.).

## 3.11 Other cross-cutting issues

177. The project strategy was aligned with the 2016-2020 UNDP Country Programme (see section 3.5 this report) and maintains this alignment with the current Country Programme Document for Azerbaijan (2021–2025), aligning with:

    **Indicator (SDG 13.2.1):** Preparation of communication on the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)

    **Indicator (SDG 7.b.1):** Proportion of communities vulnerable to land degradation that have been covered by adaptation policies.

    **Output 3.1** Climate change measures integrated into national policies, strategies and planning frameworks. **Indicator 3.1.1** Number of national and subnational plans and/or strategies that integrate climate change principles developed.

    **Output 3.2** Ensure conservation and sustainable land management important for biodiversity and food security. **Indicator 3.2.1** Number of hectares that is compatible with the integrated regional land-use plans

178. The project also contributes, within the limitations set out in section 3.10 of this report, to Gender (SDG 5: Gender Equality) as well as 4 other SDGs (2 Zero Hunger, 12 Responsible Consumption and Production, 13 Climate Action, and 15 Life on Land) with relevance to eleven SDG indicators:

    SDG 14.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world
    SDG 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality
    SDG 2.5 By 2020, maintain the genetic diversity of seeds, cultivated plants and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed
    SDG 2a Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries

SDG 5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws
SDG 12.2 By 2030, achieve the sustainable management and efficient use of natural resources
SDG 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
SDG 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
SDG 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species
SDG 15.9 Integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts
SDG 15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

## 3.12 Social and Environmental Standards

179. The Social and Environmental Screening Procedure (SESP) prepared during the project's preparation was reasonable for its time because, arguably, at the time of the project's design the SESP was relatively new to UNDP-GEF projects and its importance not necessarily well-understood. However, since then, more attention is paid to the SESP and any risks arising.
180. In the event, the SESP did identify gender. However, it did not identify that women participated in agricultural activities were already marginalised working in lower paid roles and with an apparent segregation of activities based on inherent gender stereotypes (e.g. women don't participate in cereal production because the work is hard or requires mechanisation, etc.). To be fair to the project designers, women are much better represented in higher skilled activities within the sector in research and scientific roles, so the issue of gender is complex and nuanced.
181. The project document indicates a GEN-1 gender marker, which implies that project outputs will contribute "in some way" to gender equality, but not significantly[56]. However, a closer scrutiny of the SESP should have raised the issue of gender segregated roles and lower income levels at the farm level and this might have triggered a more nuanced response in the project's design. But, it is also important to point out that this was flagged during the MTR and subsequently addressed in the management response with the engagement of a gender specialist, a value chain study specifically addressing women's' roles at the production level and a gender strategy.

## 3.13 Sustainability

| Issue | Rating |
|---|---|
| Financial sustainability | Likely |
| Socio-economic sustainability | Moderately Likely |
| Institutional framework and governance sustainability | Likely |
| Environmental sustainability | Likely |
| Overall sustainability | Likely |

182. **Financial sustainability** is likely. There are currently significant financial incentives for utilising agrobiodiversity at the diverse end of the spectrum as opposed to the *homogenous* end which might be characterised as the intensive and agro-industrial use of hybrid varieties and all the external inputs and environmentally negative trade-offs that this normally entails. State subsidies favour the use of resilient crop types, which is arguably an efficient use of funds because of the additional ecosystem benefits. However, this needs to be measured against the financial power of the larger international seed producers and agri-business *per se* which might tip the financial equation in favour of less genetically diverse crops and higher input costs, higher production benefits, but with a decrease in system resilience.
183. **Socio-economic sustainability** is likely. Land races and more particularly locally developed varieties provide a range of benefits to farmers and consumers ranging from greater resilience and lower input costs to consumer preference based on taste. Developing value added processing and marketing will only

[56] Mid-Term Review Report, p. 13

strengthen this likelihood. However, much of this will depend upon the future direction of *inter alia*, markets[57], state subsidies, continued support to institutions such as the Genetic Resources Institute, etc.

184. Furthermore, it is not clear which direction the system may be heading. Moves to increase efficiency in agriculture may come at the cost of social and environmental resilience. Currently, there are large corporate agri-business farms which are more efficient then small-holder farms. Small-holder farmers do not necessarily have the skills and financial resources due to historical reasons. Moves to consolidate farms in the interest of greater efficiency may come at a cost to social and ecological resilience. At present it is not possible to accurately predict how this will play out in the short to medium term and as such, it should not be framed as a *risk,* but rather as an *uncertainty.*

185. **Institutional framework and governance sustainability** is likely. There is a strong institutional network of scientific, policy and operational organisations and agencies. The relationship between these various players appears to provide an interesting and healthy dynamic between political imperatives (e.g. higher production targets) and evidence-based decision-making in policy formulation and future use options. However, this depends upon the continued financial, material and human resources of scientific institutions, in particular, the Genetic Resources Institute. In many ways, the Institute has been instrumental in driving this project, however, in many ways it is the weakest partner in the project in terms of financial resources and yet it has been a driving force in initially developing the project and then in its implementation. Agrobiodiversity is one of the institution's core focuses, *conservation* of agrobiodiversity is a relatively new field, but one it has taken to with considerable effect and the sustainability within this sphere will depend on the continued involvement of the Institute.

186. **Environmental sustainability** is likely. While the project's objective has environmental sustainability at its heart, given the three measures of sustainability above, environmental sustainability is not assured. The project has achieved a number of outcomes which increase sustainability, but these remain vulnerable. Certainly, the project has put in place measures that make the system more resilient to climate change. A genetically diverse crop production process will be more resilient to shocks and surprises presented by climate change in the future as against a genetically depauperate system based on genetically similar hybrid crop varieties. Furthermore, this needs to be considered that while climate change drives the loss of biodiversity, there is an increasing awareness that the loss of biodiversity drives climate change[58].

## 3.14 GEF additionality

### Table 11 GEF alternatives

| Summary baseline scenario | Summary of GEF alternative | TE assessment of increment |
|---|---|---|
| Continued loss of the areas of wild crop relatives of globally important genetic resources due to missing inventory and lack of in-situ protection (no areas in fact are designated as genetic reserves) | Country's first genetic reserves created | Partially achieved – will still require greater policy and agency inclusion and address agro-production landscapes and CWR |
| Low productivity of harvest grown from imported seeds; high susceptibility of crops to wind storms, pests and droughts; high rates of soil erosion. | Agrobiodiversity mapped, inventories, well defined, and put under protection and sustainable management | Achieved and ongoing |
| Existing seed depositories do not have sufficient stock of local varieties, miss sustainable operation plans and proper engagement/cooperation mechanisms with the farmers | | Achieved and ongoing |
| Just 10% of farmers are aware of advantages of local varieties and land races and of technologies for their cultivation using intensive agricultural methods | System for storing seeds, multiplication of local varieties and their distribution and exchange among farmers put in operation | Achieved and ongoing |

[57] For instance, export markets favour hybrid vegetables which have a phenotypical consistency, transportability and due to their uniformity are more suitable for processing.

[58] https://ec.europa.eu/environment/nature/climatechange/index_en.htm

| | | |
|---|---|---|
| Absence of market / brands of local varieties | Capacities of Rayon Agriculture Centers, Sort and Testing Points are sufficient to continuously render extension services to farmers cultivating intensively local varieties and land races | Achieved and ongoing |
| Financial assistance available for better compliance with veterinary norms and standards but only limited financial support of Government to farmers for growing local agricultural crops. Government will continue funding the farmers without differentiating whether they are growing traditional or introduced crops | Farmers organized into association enabling cooperation and economies of scale in land management, crop cultivation, access to market | Achieved but will need constant monitoring to remain proactive |
| High dependence of Azerbaijan agriculture on imported seeds presenting a food security threat | Branding strategies launched for select crops ensuring premium in the market | Achieved and ongoing |
| Missing term strategy and action plan for conservation and sustainable use of agrobiodiversity. | System for on-site training and vocational education for farmers | Partially achieved and ongoing |
| Under-capacitated Regional Agriculture Centers unable to provide extension services in the area of intensive use of local varieties and land races | Legal deficiencies rectified in the area of agrobiodiversity conservation and use | Partially achieved and ongoing |
| Limited cooperation among small-scale land holders and no system for their vocation training | State Government Agricultural program reorients some of its subsidy and micro-loan programs towards financing of intensified cultivation of local varieties | Achieved and ongoing |

## 3.15 Scaling up/ replication effect

187. The project has been successful in scaling up and there are signs already of replication which will in all likelihood, continue after the GEF funding ends.
188. **Scaling up** is evident in, *inter alia,* the expansion of agrobiodiversity (maintenance of land races, development of local varieties utilising CWR and land race genetic material, etc.) in the field station in Tartar, for instance. Farmer selection for seed and a corresponding demand for certified local variety seeds is driven by farmers choice based on input prices and risk calculations with local varieties outperforming hybrid crops in areas such as pest resistance and drought tolerance or flavour and consumer preference in fruit and vegetables. While there is not a legal requirement to plant local varieties the linkage of state subsidies to local varieties and land races will drive scaling up amongst farmers. Furthermore, the project's exploration of agro-tourism is likely to further diversify farmer incomes and link agriculture with landscape and tourism benefits.
189. The UNDP CO are also (since 2021) in partnership with the Government of Azerbaijan and the EU project worth EUR 5.0 million under the "EU for Lankaran" programme[59]. The four-year project titled the "Promoting Competitiveness, Collaboration, and Modernization in Fruit and Vegetable Sector in Lankaran Economic Region" is funded by the EU and implemented by UNDP together with the Azerbaijan's Ministry of Agriculture.
190. **Replication** is taking place. The instances are small at the moment and would likely have been on a greater scale if it were not for the pandemic and the territorial dispute. As the appreciation of the evolutionary aspects of local varieties, land races and their dependence on CWR becomes more widely held replication is likely to be much greater. The use of the field stations to maintain, promote and educate farmers on the benefits of farming with local varieties and land races is an example of this replication. The is increased interest in farmer-farmer networks and establishing formal collective arrangements through cooperatives.
191. **Demonstration** is very prominent in the project. The field centres provide outdoor, living laboratories and class rooms where farmers can observe the benefits of the local varieties and farming methods first hand. This has been very effective. The lessons learned and experience and expertise gained from the project have been widely used in developing the "Promoting Competitiveness, Collaboration, and Modernization in Fruit and Vegetable Sector in Lankaran Economic Region" project.
192. **Production of public good** is evident in the broader objectives of the project which clearly has a public good. While individual farmers will benefit long term, essentially a private good, through risk reduction, more

[59] https://www.undp.org/azerbaijan/press-releases/eu-funded-project-modernising-fruit-and-vegetable-sector-kicks-azerbaijan#:~:text=Lankaran%2C%201%20December%202021%20%E2%80%93%20The,vegetable%20sector%20in%20the%20Lankaran

resilient production techniques and increased income, the net result of this will be socio-ecosystem resilience and a clear public good and the maintenance of genetic material important to global food security has a clear and obvious public good.

### 3.16 Progress to impact

193. The TOC developed during the MTR reasonably describes the project's long term impacts as four global environmental benefits: diversity status improved, soil and water resources sustainably managed, socio-ecological resilience of communities and food security and livelihoods which are reflected in three GEF Core Indicator targets: Degraded agricultural lands restored, Landscapes under improved management to benefit biodiversity and Carbon sequestration in the agricultural sector.
194. The Project document points out that in Azerbaijan the agricultural sector (including forestry and fisheries) only accounts for 5.3% of GDP. However, it is a key source of jobs – employing over 37% of the active labour force of the country - and is a national priority in the context of food security. The impact of agriculture on the continued provision of a range of ecosystem goods and services is underplayed in the
195. A reasonable assumption might be that; in the drive to improve food security and to support a large proportion of the country's labour force, there would be pressure to make the sector more efficient and more productive. However, efficiency in agriculture as measured solely by the magnitude of production targets is not necessarily resilient, indeed there are considerable risks to agro-ecosystem resilience from the intensification of production[60].
196. These alternative drivers, such as the financially competitive advantage that international seed producers might be able to exert (e.g. though crop insurance schemes[61]) or the drive to rationalise farms to develop economies of scale and establish more efficient agri-businesses[62], etc., are not captured in the TOC[63]. However, they may have considerable influence over the direction of the agro-ecosystem in the future with possible and significant impacts on the system's resilience to future shocks and surprises[64].
197. The project strategy to address these challenges was to diversify crops, to increase genetic diversity within the total crop variety inventory available to farmers, safeguard CWR and land races both *in situ* and *ex situ,* and to provide support to individual small-holder farmers to use these genetic resources to their advantage.
198. By doing this, resilience would be increased by the systems ability to absorb and buffer future shocks and surprises while retaining its diversity and future use options while providing a range of additional ecosystem goods and services.
199. Based on the evidence presented to the TE and the information provided by the project partners and stakeholders, it is possible to say that; while the project has not achieved this in its entirety, it has firmly established the institutional support and understanding within the sector which will provide the checks and balances against policies and activities which serve to simplify the system and increase its vulnerabilities. These are not cast in stone yet, however, even based upon the project's moderately useful indicators it is possible for the TE to arrive at this conclusion. However, what is not captured in the SRF indicators is the human capital built during the project's lifetime. This is the enthusiasm of project participants, the understanding that there is a continuum between *in situ* genetic reserve conservation and bio-technology, that everything about the system is not known and there is a need to continuously seek to understand it through research, that the results of this research need to shape policies, that markets can have perverse or unintended consequences, subsidies can distort the direction the system is moving in and it may be necessary to remove them and reapply them to a different part of the system, these things are not easily captured in the SRF. However, even with these indicators it is possible for the TE conclude that the project has had a significant impact and within the system described in the MTR TOC, this impact is moving it in the right direction, it has improved the situation in terms of resilience and larger global benefits[65].

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[60] See, *inter alia*: Urruty, N., Tailliez-Lefebvre, D. & Huyghe, C. Stability, robustness, vulnerability and resilience of agricultural systems. A review. Agron. Sustain. Dev. 36, 15 (2016). https://doi.org/10.1007/s13593-015-0347-5; Brenda B. Lin, BioScience (Vol. 61, No. 3 (March 2011), pp. 183-193 (11 pages). Published By: Oxford University Press, Resilience in Agriculture through Crop Diversification: Adaptive Management for Environmental Change.

[61] Respondents to interviews.

[62] From discussions with interview respondents, PMU & project Technical Experts.

[63] It should be noted that in some ways the limitations of any TOC are how much information it is possible to include in a single A4 page.

[64] The term "surprise" refers to unexpected events (e.g. stochastic events) or unintended consequences arising from policy, regulatory and operational interventions or from external events beyond the system's internal controls.

[65] Global benefits are taken here to be the agreed GEF Global Benefits

Table 12 Progress to impact

| Baseline | EOP | Impact conclusion |
|---|---|---|
| Proportion (%) of agricultural crop area of project rayons under native crops | | |
| Wheat/barley: <2%<br>Vegetable: <0.5%<br>Forage: <0.5% | Wheat/barley: >9.78 %<br>Vegetable: >6.61 %<br>Forage: >1.78% | Genetic diversity & resilience impact |
| Estimated value (US$/annum) of the state funding allocation to the conservation and use of agrobiodiversity in Azerbaijan | | |
| < 30 milion | >US$100 million/annum[66] | State changes in priorities impact |
| Number of land races (identified) | | |
| <400 | Current level = 480 | Increased knowledge & genetic diversity impact |
| Extent (ha) of crop area in the project rayons under more sustainable crop agricultural practices | | |
| 10,000 ha | >10185 ha Direct (fully supported)<br>>40,000 ha (partially supported)<br>Indirect >50,000 ha[67] | Extent of impact |
| Extent (ha) of degraded agricultural land in the project rayons restored to productive use through the planting of native crops | | |
| 0 | > 1,000 Ha (soil analysis, crop rotation, local varieties, correct fertilizer applications, etc..) | Extent of impact |
| Number of households (and number of women) directly involved in the farming of native crops | | |
| Vegetables: 5 (1)<br>Wheat/barley: 2 (0)<br>Forage: 1 (0)<br>Fruit: 5 (2) | Vegetables: 55 (25)<br>Wheat/barley: 77 (17)<br>Forage: 14 (4)<br>Fruit: 14 (4) | Targeted change in gender equality impact |
| Number and extent (ha) of CWR agrobiodiversity hotspots in the project rayons under some form of conservation tenure | | |
| 0 (note some of these are in existing protected areas but not recognized as CWR reserves) | >6<br>>160 ha | Extent of impact |
| Number of the targeted native crop varieties being actively maintained in field gene banks | | |
| Vegetables: 0 Wheat/barley: 0<br>Forage: 0<br>Fruit: N/A | Vegetables: 202<br>Wheat/barley/CWR: 380<br>Forage: 85<br>Fruit: 165 | Genetic diversity conservation impact |
| Volume of the targeted native crop seed (tons/annum) made available to seed producers in the project rayons for commercial production | | |
| Vegetables: 0.1 t/yr<br>Wheat/barley: 80 t/yr<br>Forage: 10 t/yr | Wheat/barley: 11,000 t/yr<br>Vegetables: 0.4 t/yr<br>Forage: 50 t/yr | Scaling up & socio-economic impact |
| Number of state agricultural staff (professional, scientific, and technical) participating in project-funded training and skills development programmes | | |
| 0 | >250 | Knowledge & learning impact |
| Number of active farmer-farmer networks established in project rayons | | |
| 0 | 6 | Social capital impact |

## 4.0 Main Findings, Conclusions, Recommendations and Lessons

200. Based on the evidence set out throughout this report it is possible for the TE to reach the following conclusions summarised below:

### 4.1 Project design and development conclusions

201. The Agrobiodiversity project was based on a sound design. While the design did not take in all aspects of agrobiodiversity it had sufficient breadth to cover the genetic reserve CWR and the intensive crop production aspects or agrobiodiversity. Similarly, it covered the *in situ* CWR and crop (land races and locally developed varieties) production issues as well as the *ex situ* conservation of all three: land races, local varieties and CWR).

202. The project objective was nationally conceived and there has been a strong national ownership of the project's activities, outputs and outcomes which are closely aligned with national, UNDP and GEF strategic priorities.

[66] 173.3 million manat ($101.9 million), the area under crops, for which subsidies were paid (subsidies are now only paid for local varieties and land races), exceeded 880,000 hectares, $ 4.8 ($ 4.2 million in 2021) million for the item "protection of biological richness", The amount of funds allocated for land improvement and reclamation measures in Azerbaijan is also increased. Thus $ 270 million (32 million higher than 2021) has been allocated for land reclamation in the country.

[67] Measured from entries into the e-register

203. The Project design was clear and concise, benefited from local expert knowledge and presented a robust and realistic strategy and assessment of national capacities and institutional arrangements. The monitoring and evaluation framework had some weaknesses; however, these were not considered critical and to some extent they were remedied following the MTR through an adaptive management process.

## 4.1 Project management conclusions

204. Implementation was through NIM with Support Services (from UNDP) with the PMU sitting in the State Agency for Agricultural Credits, Ministry of Agriculture. The implementation and execution arrangements have worked well. Despite a delay on approximately eighteen months, the project has been effectively and efficiently implemented. The PMU has considerable technical and operational capacities and has performed very well. Reporting has been very good and assessments of progress and impact have been realistic. The project underwent an MTR in 2020 and received an overall Satisfactory rating and an eleven month no-cost extension was requested and approved in 2020 taking the actual project closing date to 31st October 2022.
205. Management has been pragmatic and adaptive, making a number of changes to activities and outputs without deviating from the project outcomes and objective. These changes have been discussed and agreed with the SC, UNDP and with support from the RTA. National ownership has been extremely high with remarkable institutional collaboration in the project across a range of agencies and institutions.
206. Financial management has been robust and transparent. Total expenditures of the GEF project grant reported in the UNDP combined delivery reports (CDRs) through 30 June 2022 were US$ 3,946,940 or 94.87% of the US$ 4,160,502 GEF project grant and the project is on track to fully execute the budget by close of project.
207. Project management costs were US$ 199,400 or 4.7% of the total GEF budget which is consistent with the 5% threshold for project management costs.
208. The distribution of spending across the three components is broadly in line with the indicative budget outlined in the project document with an overall variance of 4.58%
209. There has been significant stakeholder participation and the project has increased its focus on gender in the second half of the project.

## 4.2 Project outcome and impact conclusions

210. The project has achieved its outcomes and has had a significant, and very likely sustainable, impact. Six CWR genetic reserves have been identified and it is likely that more will be found and protected in the future. *N situ,* a large number of wild relatives have been located, identified protected in place or placed in field collections where they can be replicated both in number and in time. *Ex situ*, seeds and genetic materials of CWR and land races have been collected and stored in national gene banks as a backstop to catastrophic loss of these resources in the field.
211. The project has built a good knowledge base related to agricultural biodiversity across a broad cross-section of issues ranging from bio-technology through to the ecology of CWRs, as well as the many drivers which may shape the future of these genetic resources, such as gender or markets. It will still take time, and considerably more resources than were available to this project to completely change the perspective of a sector that is more often driven by production targets than broader ecosystem resilience. However, the project has done a credible job in building a knowledge base within the scientific institutional community, providing training for agricultural institutional and agency staff, structured academic courses for future scientists and managers as well as training and knowledge at a practical level for farmers growing these crops.
212. The project has been successful in improving knowledge management with farmers able to access subject matter expertise through structured courses from the field stations to in-time advice through farmer to farmer networks and mobile phone groups providing immediate advice on issues ranging from seed or input purchases to plant pest or disease identification and appropriate treatment.
213. The project also appears to have had considerable political advocacy too, shaping national policies on issues such as farmer subsidies in favour of land races and local varieties or the prohibition of burning cereal stubbles.
214. Technically, the project has introduced a number of innovations and changed farming practices. These range from the scientific management of seed banks and bio-technology or the provision of appropriate machinery and equipment through to basic good farming practices. Minimum tillage and drip irrigation are basic good practices that will benefit farmers and provide environmental benefits, the provision of equipment for seed production and grading allows farmers to enter into the seed market and the introduction of a national block chain seed certification system is a sophisticated system to protect farmers

interests throughout the chain of custody. Mobile soil testing with expert advice will help farmers to use the most appropriate soil treatments with financial and environmental benefits.

215. The project has engaged with markets, it has produced a value chain study with practical recommendations and including an understanding of the gender inequalities in the value chain. Importantly, there is a more nuanced understanding of the markets and their positive or negative influences on the resilience of crop production. Innovations like e-marketing allow women to interact more equitably with these markets and block chain certification protect both seed producers and seed consumers. Importantly, farmers are realising the added value of engaging with a larger spectrum of the value chain, for instance a cooperative in Goranboy is differentiating grain varieties through its own flour mill to produce specialist flour types for markets in Baku.
216. The project has built social capital. It has engaged with farmers, especially smallholder farmers supporting the establishment of several cooperatives navigate the bureaucratic process of registration and in one case, achieve registration for seed production. Initially, there was a reticence amongst smallholder farmers towards farmer collective action and cooperation in areas of sharing tasks and other resources such as machinery and equipment most likely due to a residual memory of the former Soviet Union collectivisation of farming. However, this social capital is growing due to the project's activities with the Wheat Farmers Association, cooperatives (including two women's cooperatives), farmer to farmer networks and a growing sense of collective purpose and interest.
217. The project was slow to realise the inherent issues related to gender equality and women empowerment as a factor in the agriculture. However, since the MTR there has been a growing awareness of the role gender plays within the sector and the resulting inequalities and inefficiencies. Since the MTR the project has begun to address these issues with a gender strategy and engagement with women famers on practical issues such as e-marketing and negotiating with external agencies.
218. Overall, the project governance (PMU, SC, UNDP, RTA) has not just implemented a set of activities described in the Project Document. Rather, it has implemented, watched, monitored, analysed, learned and carefully adapted the intervention. This is not to say that it hasn't made mistakes, however it has had the confidence to learn from those mistakes.

## 4.3 Conservation conclusions

219. Biological diversity in an agricultural context is a complex set of issues which, *inter alia*, encompasses genetics, evolution, ecology, climate, economics, society, it is in many ways; about *life* itself. From a management context, therefore, it encompasses a multiplicity of disciplines and institutions. Furthermore, there are issues scale; spatial scales and temporal scales. Understanding agricultural biodiversity is not only complex; its conservation management is unpredictable because there is a high degree of unpredictability due to the convoluted and dynamic arrangements of cause and effect relationships between drivers[68].
220. *Therefore, "for us to prescribe a concrete set of technologies, practices or policies would be to exclude future options, undermining the notion of sustainability itself. [Agrobiodiversity] management is, therefore, not so much a specific strategy as it is an approach to understanding complex ecological and social relationships in rural areas*"[69] alongside larger external drivers which may be beyond the internal controls of the system.
221. In conservation terms the project has created a space for learning about agrobiodiversity, an institutional community with a common purpose, increasing knowledge and informing future policy and management, it now has the "*capacity for learning and self-organisation to adapt to change*"[70].
222. It has successfully interacted with an institutional culture more normally oriented towards production targets and less inclined to consider resilience in terms of ecosystem goods and services, to the point that it is possible to see the beginning of changes in institutional priorities to include a broader range of ecosystem issues.

[68] In this context a "driver" indicated an issue which create the past, present and future conditions.
[69] Adapted from: Parks, People and Professionals: Putting 'Participation' into Protected Areas Management, Michel Pimbert and Jules N. Pretty. In: Social Change and Conservation, Eds. Khrishna B Ghimire and Michel P Pimbert, Earthscan Publications Ltd. UK, 1997. The original paper is related to protected areas management; however, the broader principles are the same.
[70] Gunderson, L.H. and Holling, C.S. Eds. (2002). Panarchy: Understanding transformations in human and natural systems. Washington, DC. Island Press.

223. Farmer benefits (both direct market benefits and support through financial mechanisms – subsidies) provide the motivation for farmers to maintain these crops as well as the reduction in risks related to drought tolerance and disease resistance.
224. The location of six genetic reserves and their increased protection has improved the status of a large number of CWR and CWR hotspots, and it is highly likely that continued surveying will locate more CWRs and hotspots.
225. Therefore, the project has addressed, to varying extents, the two components of agrobiodiversity conservation:

    "*Genetic Reserve Conservation: the location, management and monitoring of genetic diversity in natural wild populations within defined areas designated for active, long term conservation*."

    "*On-farm Conservation: the sustainable management of genetic diversity of locally developed crop varieties (land races)*[71]*, with associated wild and weedy species or forms, by farmers within traditional agricultural, horticultural or agro-silvicultural systems*[72]."
226. However, by way of observation and not criticism, the project has not addressed two important components of agrobiodiversity and these will need to be followed up. These are:
227. Soil biology: while the project has introduced some measures (e.g. minimum/ shallow tillage ploughs, soil testing, correct fertiliser application) to improve soil fertility, the organic or biological component of soil appears to be overlooked. For the avoidance of doubt, this is different from organic farming. Increasing the organic component of soil improves soil structure, increases the microbial content of the soil increasing the plant's resistance to diseases and pests and improves soil moisture retention as well as increasing the stored carbon in soil.
228. Conservation farming: there was an observed tendency for farmers to utilise the entirety of the field to produce crops, particularly in cereal growing areas. However, there is increasing evidence that field margins, less productive areas of fields, water courses, hedgerows, road side verges, etc., can provide a considerable reservoir of agrobiodiversity[73]. Many of the farming practices which maintained these habitats have disappeared due to mechanisation and other efficiencies geared towards production. There is a growing understanding of the role of these farm features and the ecosystem goods and services they provide as well as their contribution to the landscape aspects of agro-tourism, to the extent that progressive policies may advocate support to farmers to maintain these areas[74]. Not only do they provide a spatial link of corridors between strictly protected and largely unaltered habitats through to production systems, they also provide a temporal link as they are largely undisturbed by destructive farming practices, possibly the reason why the CWR surveys located a number of CWR species along roadside verges.
229. This issue is linked to future directions of agribusiness, changes in land tenure and social change. It is possible that land holdings are consolidated by larger agricultural businesses in the interests of efficiency and the economic benefits of economies of scale. While this may not necessarily be a risk to agrobiodiversity, it raises a future uncertainty with resultant social and ecological change. The project outcomes to a large extent address this uncertainty by supporting and assisting smallholder farmers as well as encouraging women to participate in a wider area of the value chain than is currently accessible to them.
230. Lastly, the success of the project in developing a collective and deep interest in agrobiodiversity should be recognised. Conceptually, the importance of agrobiodiversity can be simply communicated. However, the

[71] "A landrace is a dynamic population(s) of a cultivated plant that has historical origin, distinct identity and lacks formal crop improvement, as well as often being genetically diverse, locally adapted and associated with traditional farming systems." (Camacho Villa et al., 2005. Plant Genetic Resource: Characterization and Utilization 3(3): 373-384.

[72] Maxted, N., Guarino, L., Myer, L. & Chiwona, E.A., (2002). Towards a methodology for on- farm conservation of plant genetic resources. Genetic Resources and Crop Evolution 49: 31- 46.

[73] Inter alia: The Role of Field Margins in Agro-biodiversity Management at the Farm Level. February 2011, Italian Journal of Agronomy 2(2), DOI:10.4081/ija.2007.127; Syngenta, Arcadis, and Bioversity International, (April 2018), 'Multifunctional Field Margins' Assessing the benefits for nature, society and business; a position paper; The Role of Field Margins in Agro-biodiversity Management at the Farm Level [2011]**,** Giulio Lazzerini; Alessandra Camera; Stefano Benedettelli; Concetta Vazzana; Italian Journal of Agronomy ISSN: 1125-4718. https://agris.fao.org/agris-search/search.do?recordID=DJ2012076327

[74] Farming for Natura 2000, Guidance on how to support Natura 2000 farming systems to achieve conservation objectives, based on Member States good practice experiences, Luxembourg: Publications Office of the European Union, 2018

conservation management is less easily understood. This is especially so when one considers that there may be deep rooted and genuinely held institutional cultures directed towards production and striving for excellence.

231. Inherent in understanding agrobiodiversity; is a recognition that within an individual and a population there is a certain amount of genetic redundancy, of inefficiency, which is carried through time within an individual and the overall population, which is the opposite of the purpose of modern hybrid crop varieties. This individual and *intra-specific* diversity, which probably won't produce a phenotype that a crop breeder desires because it is inefficient against a range of selection pressures that the farmer might require, is a genetic insurance against an unpredictable future, this is the diversity necessary for an uncertain future.

## 4.4 Recommendations

| Rec # | TE Recommendation | Entity Responsible | Time frame |
|---|---|---|---|
| A | Category 1: Project closure | | |
| A.1 | Develop the lessons from the value chain and gender study and present them with strategic recommendations to the Ministry of Agriculture through a workshop. | PMU | 10-2022 |
| A.2 | Organise a workshop with the Ministry of Tourism on agro-ecotourism with a focus on rural development, landscape conservation, traditional crops and foods. Use the workshop to explore opportunities to add value through branding and marketing. | PMU | 10-2022 |
| A.3 | Biodiversity Focal Area – BD Tracking Tool for Programs 3,4,5,6,7,8,9 and 10 should be completed before project close and uploaded with the TE report | PMU | 10-2022 |
| B | Category 2: Follow-up | | |
| B.1 | Organise a workshop to develop a legacy plan. The project has generated considerable lessons, institutional and social capital. Developing a legacy plan before the end of the project will ensure that the project benefits continue in an orderly manner after the closure of the GEF-funded project | PMU | 09-2022 |
| B.2 | The project should prepare a policy briefing note on changes in land tenure and the likely positive and negative impacts on agrobiodiversity and ecosystem resilience. This can be communicated at a high level to decision-makers to inform sector policy decisions in the near future. The briefing note should take at least four perspectives (be developed by four technical experts): agronomy, socio-economic and gender, economic and ecological. The briefing note should include the plausible impacts of emerging issues such as food safety standards, water quality and ground water recharge, the importance of soil carbon in reducing emissions, etc. This should be communicated to the EU project in Länkäran. | PMU | 10-2022 |
| B.3 | Explore the synergies between protected areas/ genetic reserves and on-farm conservation of biodiversity with a view to managing a greater range of ecosystem goods and services to shape the utilisation of the annual spending on preventing land degradation. The concept of Other Effective Areas-based Conservation Measures (OECM[75]) is increasingly being used as an approach to managing biodiversity outside of national protected areas systems. However, despite the focus of OECMs being outside the reserved areas they are mutually supporting. The approach lends itself to production landscapes and reduces contradictions between local development needs and wider ecosystem resilience. The PMU should communicate with the EU project in Länkäran and look for synergies with OECM approaches and EU approaches integrating biodiversity into larger production landscapes[76]. | PMU, MA & MENR | 12-2022 |

[75] https://biodiversity.europa.eu/protected-areas/other-effective-area-based-conservation-measures ; https://www.cbd.int/protected/partnership/vilm/presentations/15_oecm_mackinnon.pdf

[76] For example: https://biodiversity.europa.eu/protected-areas/other-effective-area-based-conservation-measures ; https://www.cbd.int/protected/partnership/vilm/presentations/15_oecm_mackinnon.pdf

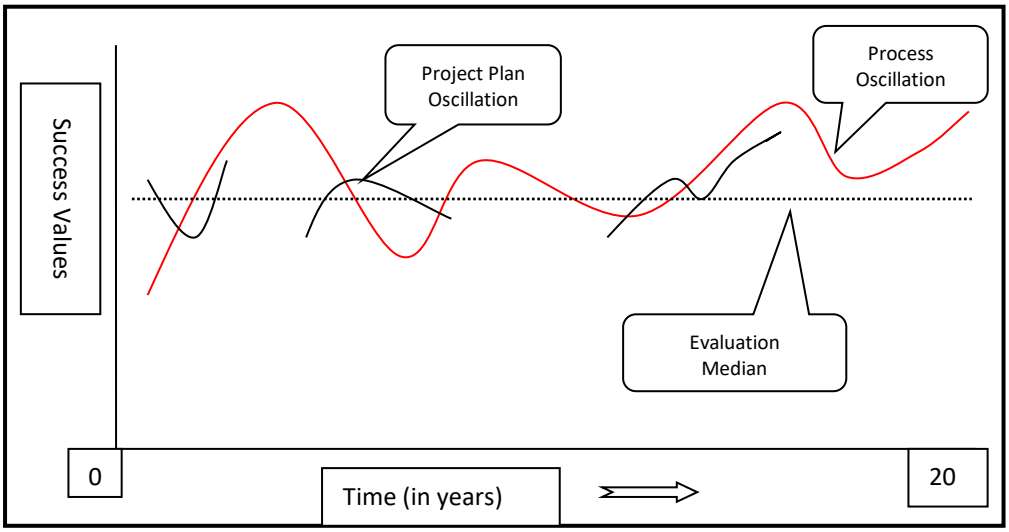
| | | | |
|---|---|---|---|
| B.4 | Develop the Genetic Resources Institute fund-raising capacity to develop partnerships, submit grant proposals and manage grants and partner relations. Grant management and maintaining partnerships can benefit from specialist training and effective grant management can significantly increase the institute's income. | Azerbaijan National Academy of Sciences. | 2022 - 2023 |

## 4.5 Lessons learned

232. Communication and effective relations are important for success: a defining character of this project has been the ability of the PMU to communicate across a range of different stakeholders maintaining the "bigger picture" while speaking to the key interest of a specific stakeholder or stakeholder group. There are a wide variety of different interest perspectives amongst the stakeholders and project partners. While it is all agrobiodiversity, each group has a different perspective or imperative. An expert knowledge and enthusiasm are essential to communicate across these range of interests and ensure that there is relevance to the recipient individual, group or organisation.
233. More thought should be given to issues of gender when examining any socio-ecosystem: gender issues should not be minimised because they appear beyond the control or remit of the project. Invariably, GEF projects are dealing with systems, complex and unpredictable socio-ecosystems, this project was no different. If there are gender inequalities due to existing social norms, gender stereotypes or historical causes; then they should not be seen in isolation from what the project is trying to do. Gender inequalities in the workforce and unequal involvement in the value chain should be identified early on, it is part of the system that is not working efficiently.
234. A project cannot ignore the larger processes shaping the socio-ecosystem and, because of time scale differences, the real benefit of the project may not be evident until after it is completed: One of the challenges of evaluating a project like the Agrobiodiversity project is understanding the system dynamics that are shaping not only agrobiodiversity, but also the processes that drive the agencies and communities whose decisions and activities agrobiodiversity is interacting with. Furthermore, these driving forces are operating in different time scales for example; driving forces that effect change in community perceptions and values operate over a much longer time frame than the time frames expected by project cycles. *This inconsistency sets up a tension between "project" vs "process". In natural resource management we are further influenced by even greater ecological time scales, which because they are so long (e.g. CWR, evolution, etc.) we tend to cast aside as unmanageable*[77].
235. In conservation terms it is also important to consider these much longer timeframes than those expected in a typical project cycle, and to bear in mind that there are often long recovery or rebound times. Therefore, over the last 100 years, within the farming systems that the project is working, as well as the societies living there, have been subject to a range of driving forces which would have led to a loss of genetic diversity and other ecosystem goods and services.
236. As evidenced in this report, the project has done well. However, this needs to be seen in the context of the overall process, which will operate over a much longer time frame. The simplistic conceptual model below attempts to explain this relationship, although in reality it is far more complex and the relationship between the driving forces is not yet fully understood.
237. One of the challenges of evaluating a project like the Agrobiodiversity project is understanding the system dynamics that are shaping not only agrobiodiversity, but also the processes that drive the agencies and communities whose decisions and activities agrobiodiversity is interacting with. Furthermore, these driving forces are operating in different time scales for example; driving forces that effect change in community perceptions and values operate over a much longer time frame than the time frames expected by project cycles. *This inconsistency sets up a tension between "project" vs "process". In natural resource management we are further influenced by even greater ecological time scales, which because they are so long (eg. CWR, evolution, etc.) we tend to cast aside as unmanageable.*

[77] WILDLIFE DIVISION (FORESTRY COMMISSION), Republic of Ghana, Wildlife Division Support Project, (WDSP), *CREMA Review* (WDSP Report No.56), Michael J Murphree, October 2005, in collaboration with IUCN. Diagram and notes adapted and reproduced here with kind permission of Mike Murphree

Figure 5 Conceptual model of project vs process interaction




238. As evidenced in this report, the project has done well. However, this needs to be seen in the context of the overall process, which will operate over a much longer time frame. The simplistic conceptual model below attempts to explain this relationship, although in reality it is far more complex and the relationship between the driving forces is not yet fully understood.

239. Notes on the conceptual model:

1. Success values are often different for communities, governments and donors.
2. Communities and agencies are NOT static entities they are in a constant state of change and their fortunes rise and fall with a range of internal and external driving forces. However, in relation to projects this rate of change is quite slow. Theoretically it would be possible to plot the driving forces that are creating positive or negative shifts in the oscillation.
3. The representation of projects as short lines is important to understanding how even a four, or five-year project may only represent a brief period in the overall process.
4. Do projects influence process? Yes; they do and sometimes this can be dramatic. However, <u>because of time scale differences the real benefit of the project may not be evident until after it is completed.</u>
5. Evaluating projects tends to be done against a specific set of “outputs”, “deliverables” or “outcomes” as determined by the project log frame or such other tool. To evaluate a process, it is more effective to monitor trend – if the trend is negative then it may be possible to use a project to correct the trend.
6. In the hypothetical scenario of the first project. The project due to “technical problems” has a difficult start but with an overall positive shift in the process this influences a positive shift in the project that ends above expectations. The importance of this is that it is not always the project that lifts the process sometimes the process lifts the project.
7. The second project is a “good project” but comes at a time of stress within the overall system. Despite having initial success, the project is unable to immediately counteract the negative trend and ends below expectations and is judged to have “failed”. However, in the interim the project has influenced the long-term trend which improves after the project has ended.
8. The third project comes in at a slightly negative point in the process. With some strategic interventions it influences a positive shift in the process. Even with some small “technical difficulties” the project ends well above expectations and is judged a “success”.

# Annexes

## Annex 1 Terminal Evaluation Terms of Reference

**TERMS OF REFERENCE**
**INTERNATIONAL CONSULTANT FOR THE TERMINAL EVALUATION OF THE CONSERVATION AND SUSTAINABLE USE OF GLOBALLY IMPORTANT AGRO-BIODIVERSITY PROJECT (PIMS 5482)**

**Services/Work Description:** UNDP/GEF Project Terminal Evaluation

**Project/Programme Title:** Conservation and sustainable use of globally important agro-biodiversity

**Consultancy Title:** International Terminal Evaluation Consultant

**Duration:** 15 June – 31 August 2022, Total working: 6 weeks (40 days)

**Location**: Home based (potential 1-week mission to Azerbaijan depending on Covid-19 situation/restrictions)

**Format of the terminal evaluation:** Format of the evaluation depends on the Covid-19 situation/restrictions in the country. In case of Covid-19 restrictions the entire evaluation will be virtual, and the National Consultant will support TE in field missions, translation and etc. If COVID-19 protocols allow, the consultant should conduct a 1-week mission in Azerbaijan.

**Expected start date: June 15, 2022**

**1. BACKGROUND**

**Introduction**

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP- supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the Conservation and sustainable use of globally important agro-biodiversity project titled PIMS 5482 implemented through the UNDP and Ministry of Agriculture of the Azerbaijan Republic. The project document signed on the 13 December 2016 and actually started on the 01 November 2017 and is in its final year of implementation. The TE process must follow the guidance outlined in the document 'Guidance For Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects'.

In general, the wild relatives of cultivated crops in Azerbaijan are genetically diverse, locally adapted and represent a potential source of genes and alleles for adapting crops to the ever-changing environmental conditions and human needs of the country. The project seeks to: (i) improve the protection of viable populations of indigenous wild relatives of crops and local landraces in their natural habitats; (ii) augment the conservation of indigenous wild relatives of crops and local landraces in plant gene banks to ensure an adequate source of genetic resources for plant breeding; and (iii) increase the production, and extent of use, of local landraces in agricultural small holdings and commercial farms.

The project is implemented in three regions of Azerbaijan - Sheki, Goranboy and Goychay. Within these three regions, the project will further focus on selected crop wild relatives, cultivated native species and cultivated landraces of wheat, vegetable and forage crops.

The project has been structured into three complementary components.

The first component seeks to expand the state of knowledge of agro-biodiversity, enhance the conservation of this agro-biodiversity and increase the intensity and extent of use native crops in the agricultural sector in the three project regions. Work under this component will be focused around four key areas of project support, as follows: (i) Improve the knowledge base of crop wild relatives (CWRs) and local crop landraces (Output 1.1); (ii) Establish and manage a network of conserved areas for CWRs (Output 1.2); (iii) Establish and maintain field gene banks for crop landraces (Output 1.3); and (iv) Increase the production, storage and distribution of native crop seeds (Output 1.4).

The second component seeks to build the capacities of, and improve the collaboration and cooperation between, agricultural institutions and small farmers in order to improve agricultural productivity and reduce land degradation using native crops (i.e. the targeted crop species) in the three project regions. Work under this component will be focused around three key

areas of project support: (i) Build the capacity of agricultural institutions (Output 2.1); (ii) Support the development of local farmer organisations (Output 2.2); and (iii) Improve the knowledge and skills of local farmers (Output 2.3).
The third component seeks to strengthen incentives that encourage the planting of, and improve access to commercial markets for agricultural products derived from, the targeted native crop species across the three rayons. Work under this component will be focused around two key areas of project support: (i) Strengthen the agricultural incentives toolbox for farmers (Output 3.1); and (ii) Improve access to markets for local farmers (Output 3.2).

## 2. SCOPE OF WORK, RESPONSIBILITIES AND DESCRIPTION OF THE PROPOSED WORK

### 1. OBJECTIVES OF TERMINAL EVALUATION

The TE report will assess the achievement of project results against what was expected to be achieved,draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments.
The overall objective of the Terminal Evaluation is to review the achievements made to deliver the specified objectives and outcomes of the “Conservation and sustainable use of globally important agro-biodiversity" Project (PIMS 5482).
The TE will establish the effectiveness, efficiency, relevance, performance and success of the project, including the sustainability of results and the project exit strategies. The evaluation will also collate and analyze specific lessons and best practices pertaining to the strategies employed, and implementation arrangements, which may be utilized to inform future programming.
The International Consultant (IC) will be responsible for the preparation of a high quality report and timely submission.

### 2. TE APPROACH & METHODOLOGY

The TE report must provide evidence-based information that is credible, reliable and useful.

The TE team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions,lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team will review the baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement and midterm stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the Regional Technical Advisor, direct beneficiaries and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should includeinterviews with stakeholders who have project responsibilities, including but not limited to:

- Ministry of Agriculture of the Azerbaijan Republic
- Genetic Resource Institute under ANAS
- UNDP Program Advisor
- Project Staff
- Project key experts and consultants
- Farmers

Additionally, the TE team is expected to conduct field missions to Azerbaijan, including the following project sites Sheki, Goychay, Goranboy. In case of a quarantine and travel restrictions due to COVID-19 pandemic interviews should be conducted online. The Independent Evaluation Office (IEO) of UNDP has updated the COVID-19 evaluation guidance, issued in June 2020, supporting evaluation planning and implementation during COVID-19.
The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time anddata. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women’s empowerment, as well as other cross-cutting issues and SDGs are incorporated into the TE report.

The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Report and be fully discussed and agreed between UNDP, stakeholders, and the TE consultant.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

*In case of a quarantine and travel restrictions due to COVID-19 pandemic, the TE consultant will have to conduct the review using virtual and remote methods. An independent National Consultant will support TE in field missions, translation etc. If Covid-19 protocols allow, the international consultant should undertake a 1-week mission in Azerbaijan.*

The TE consultant will be responsible for the design of the evaluation methodology. The consultant must conduct the following:

1. Desk review of project documents, outputs, monitoring reports, mid-term evaluation report. The project manager will ensure that the TE consultant receives all relevant documentation to enable a thorough desk review. The project team will arrange translation of select project documentation (in some cases, summaries of the documents could be sufficient), as discussed with the TE consultant and project manager.
2. Review of specific products including datasets, management and action plans, publications and other material and reports
3. Interviews with farmers. The questionnaire will be prepared and sent in advance by the TE consultant and translated to Azerbaijani (translation shall be arranged by the project team) in order to reach more beneficiaries.
4. Interviews with staff and stakeholders of the project will take place offline or in case of COVID-19 restrictions via phone, skype, zoom etc. The project manager will provide the list with contact details. The project team will arrange the service of an independent interpreter to support the TE consultant during the interviews.

The Inception Report should be produced before the virtual interviews are undertaken to ensure that methods are aligned with the GEF guidelines for final evaluation. The Inception Report will outline the proposed approach to the assignment and will include, but not be limited to, a detailed work plan of activities, and methodologies of approach. It is anticipated that the Consultant will look at the entire evaluation and its activities in a holistic manner to maximizes efficiencies.

The project manager will provide support and further explanation to the evaluation consultant as needed.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

**3. DETAILED SCOPE OF THE TE**

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework. The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects.

The Findings section of the TE report will cover the topics listed below.

The asterisk "(*)" indicates criteria for which a rating is required.

Findings

a. Project Design/Formulation

- National priorities and country driven-ness
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Safeguards
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks
- Lessons from other relevant projects (e.g. same focal area) incorporated into project design
- Planned stakeholder participation
- Linkages between project and other interventions within the sector
- Management arrangements

b. Project Implementation

- Adaptive management (changes to the project design and project outputs duringimplementation)
- Actual stakeholder participation and partnership arrangements
- Project Finance and Co-finance
- Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E(*)
- Implementing Agency (UNDP) (*) and Executing Agency (*), overall projectoversight/implementation and execution (*)
- Risk Management, including Social and Environmental Standards

c. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress foreach objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (*), Effectiveness (*), Efficiency (*) and overall project outcome (*)
- Sustainability: financial (*), socio-political (*), institutional framework and governance (*),environmental (*), overall likelihood of sustainability (*)
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-Southcooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.

- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses and results of the project, respond to key evaluation questions and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make.The recommendations should be specifically supported by the evidence and linked to the findingsand conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to incorporate gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown below:

**ToR Table 1. Evaluations Ratings Table for Conservation and sustainable use of globally important agro-biodiversity**

| Monitoring & Evaluation (M&E) | Rating |
|---|---|
| M&E design at entry | |

| | |
|---|---|
| M&E Plan Implementation | |
| Overall Quality of M&E | |
| Implementation & Execution | Rating |
| Quality of UNDP Implementation/Oversight | |
| Quality of Implementing Partner Execution | |
| Overall quality of Implementation/Execution | |
| Assessment of Outcomes | Rating |
| Relevance | |
| Effectiveness | |
| Assessment of Outcomes | Rating |
| Relevance | |
| Effectiveness | |
| Efficiency | |
| Overall Project Outcome Rating | |
| Sustainability | Rating |
| Financial resources | |
| Socio-political/economic | |
| Institutional framework and governance | |
| Environmental | |
| Overall Likelihood of Sustainability | |

**3. Expected Outputs and deliverables**

**TIMEFRAME**

The total duration of the TE will be approximately 6 weeks starting from June 15, 2022. The TE timeframe is as follows:

The tentative TE timeframe is as follows:

| Timeframe | Activity |
|---|---|
| By 11 April 2022 | Application closes |
| By 22 April 2022 | Selection of TE team |
| By 15 June 2022 | Preparation period for TE team (handover of documentation) |
| By 23 June 2022 | Document review and preparation of TE Inception Report |
| By 26 June 2022 | Finalization and Validation of TE Inception Report; latest start of TE mission |
| By 10 July 2022<br>(1 week) | TE mission: stakeholder meetings, interviews, field visits, etc. |
| By 15 July 2022 | Mission wrap-up meeting & presentation of initial findings |
| By 15 August 2022 | Preparation of draft TE report |
| By 20 August 2022 | Circulation of draft TE report for comments |
| By 31 August 2022 | Comments incorporated and Final Report ready |
| By 25 August 2022 | Preparation and Issuance of Management Response |
| By 15 September 2022 | Finalize the report and ready for submission |
| By 30 September 2022 | Management response finalized and posted to ERC site |

Options for site visits should be provided in the TE Inception Report.

**4. Institutional arrangements/reporting lines**

The principal responsibility for managing the TE resides with the UNDP Azerbaijan Country Office. All reports shall be reviewed and endorsed by the Ecosystems and Biodiversity Team and the Regional Technical Advisor.

**Table. TE Ratings & Achievement Summary Table for "Conservation and sustainable use of globally important agro-biodiversity" Project.**

| Measure | TE Rating | Achievement Description |
|---|---|---|
| **Project Strategy** | N/A | |
| **Progress Towards Results** | Objective Achievement Rating: (rate 6 pt. scale) | |
| | Outcome 1 Achievement Rating: (rate 6 pt. scale) | |
| | Outcome 2 Achievement Rating: (rate 6 pt. scale) | |
| | Outcome 3 Achievement Rating: (rate 6 pt. scale) | |
| | Etc. | |
| **Project Implementation & Adaptive Management** | (rate 6 pt. scale) | |
| **Sustainability** | (rate 4 pt. scale) | |

*The final TE report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.

**5. Experience and qualifications**

An international consultant shall be hired as the evaluator to prepare the Terminal Evaluation Report and other outputs as specified in the TOR.

The International Consultant should have prior experience in evaluating similar projects. The evaluators selected should not have participated in the project preparation and/or implementation and should not have conflict of interest with project related activities

Academic Qualifications:

- Master's degree in agricultural economics or other related fields: agriculture; environmental sciences; agrobiodiversity, environment and natural resources management, or any related course

II. Years of experience:

- Recent experience (minimum 10 years) with result-based management evaluation methodologies and applying SMART indicators, reconstructing or validating baseline scenarios;
- Work experience in relevant technical areas for at least 10 years (sustainable management of agriculture; biodiversity conservation or productive systems);
- Project evaluation/review experiences within United Nations system;
- Experience working with the GEF-UNDP Project evaluations;
- Demonstrated direct experience in relevant field in Southern Caucasus;

- Competence in Adaptive Management, as applied to conservation or natural resource management will be considered as an asset;
- Demonstrated understanding of issues related to gender and agriculture experience in gender sensitive evaluation and analysis will be considered as an asset.
- Demonstrable analytical skills

III. Language:

- Excellent communication skills in English (written and spoken)

IV. Competencies:

- Demonstrate commitment to UNDP's mission, vision and values;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability

**6. Payment Modality**

Payment to the individual contractor will be made based on the actual number of days worked, deliverables accepted and upon certification of satisfactory completion by the manager.

- 20% of payment upon approval of the TE Inception Report
- 40% upon submission of the draft TE Report
- 40% upon finalization of the TE Report

## Annex 2 Agenda of the Field Trips with International Consultant for Project Terminal Evaluation

**Date: 22 June 2022**

| Time | Program |
|---|---|
| **08:00** | Meet-up at the Dalga Plaza, discussion of visits and depart to Gobustan |
| **10:30** | Trip to the local station of Agricultural Research Institute in Gobustan |
| **11:00** | Departure for Sheki |
| **14:30** | Dinner at Sheki |
| **15:00** | Visit to filed genbanks, Meet-up with local farmers, visit to BioGarden |
| **19:00** | Dinner Break (stay in Sheki) |

**Date: 23 June 2022**

| Time | Program |
|---|---|
| **09:00** | Meet-up for the departure for Goychay |
| **10:30** | Arrival to Goychay |
| **11:00** | Visit to field genbank and meeting with local farmers |
| **13:00** | Lunch Break |
| **14:00** | Departure to Tartar |
| **15:30** | Visit to filled gene banks |
| **19:00** | Dinner |
| **20:00** | Departure to Ganja |
| **21:15** | Arrival to Ganja, stay in Ganja |

**Date: 24 June 2022**

| Time | Program |
|---|---|
| **09:00** | Meet-up for the departure to Goranboy, |
| **10:00** | Arrival to Goranboy, meeting with farmers |
| **14:00** | Lunch |
| **15:00** | Departure to Ganja |
| **16:00** | Visit to Training center in ASAU |
| **17:00** | Meeting with experts for education |
| **19:00** | Dinner in Ganja |
| **20:00** | Departure for Baku |

**Date: 25 June 2022**

| Time | Program |
|---|---|
| **00:20** | Arrival to Baku |
| **10:00** | Meeting at the UNDP Government House |
| **14:00** | Lunch |
| **15:00** | Meeting at the UNDP Government House |
| **19:00** | Dinner |

**Date: 26 June 2022**

| Time | Program |
|---|---|
| **10:00** | Review of information |

**Date: 27 June 2022**

| Time | Program |
|---|---|
| **10:00** | Meeting with project manager and staff |
| **14:00** | Lunch |
| **15:00** | Meeting with project experts |
| **19:00** | Dinner |

**Date: 28 June 2022**

| Time | Program |
|---|---|
| **09:00** | Visit to Crop Husbandry Institute |
| **10:00** | Visit to filed Genbank |
| **11:00** | Visit to Vegetable Institute |
| **14:00** | Lunch |
| **15:00** | Visit to Genetic Resources Institute |
| **15:30** | Visit to genbank |
| **19:00** | Dinner |

**Date: 29 June 2022**

| Time | Program |
|---|---|
| **11:00** | Meeting with project Technical Experts |
| **13:00** | Lunch Break |
| **15:00** | Meeting with project main beneficiary State Agrarian Services Agency under the Ministry of Agriculture |
| **19:00** | Dinner Break |

## Annex 3 Stakeholders interviewed

| | Name of stakeholders and farmers | Distrcits |
|---|---|---|
| 1. | Garib Novruzov (Head of state agrarian development center) | Sheki |
| 2. | Geysar Farajov (Head of experimental station of Crop Husbundry İnstitute) | Sheki |
| 3. | Joshgun Mammadov (Head of experimental station of Genetic Resources İnstitute of ANAS) | Sheki |
| 4. | Etibar Nuriyev (Owner of Biogarden) | Sheki |
| 5. | Asif Humbatov (farmer) | Sheki |
| 6. | Tahir Imamverdiyev (farmer) | Sheki |
| 7. | Rana Novruzova (farmer) | Sheki |
| 8. | Allahverdi Shahverdiyev (farmer) | Sheki |
| 9. | Mehti Kazimov (farmer) | Sheki |
| 10. | Fikret Kazimov (farmer) | Sheki |
| 11. | Dagbayi Shadmanov | Sheki |
| 12. | Elshan Ismayilov | Sheki |
| 13. | Huseyn Huseynov | Sheki |
| 14. | Samad Muradov | Sheki |
| 15. | Baylar Babayev | Sheki |
| 16. | Balakishi Abdulrahimiv | Sheki |
| 17. | Nizami Abdulrahimov | Sheki |
| 18. | Nizami Samadbayov | Sheki |
| 19. | Rafiq Humbatov | Sheki |
| 20. | Elkhan Ilyasov | Sheki |
| 21. | Bahar Allahverdiyev | Sheki |
| 22. | Firuddin Ziyaddinov | Sheki |
| 23. | Rahman Amirov | Sheki |
| 24. | Nizami Ismayilov | Sheki |
| 25. | Chingiz Bakirov | Sheki |
| 26. | Shahmar Allahverdiyev | Sheki |
| 27. | Kishbar Ahmadova | Sheki |
| 28. | Sharafat Salimova | Sheki |
| 29. | Mais Maharramov | Sheki |
| 30. | Vugar Farajli | Sheki |
| 31. | Faiq (head of experimental station of İnstitute of fruit plants and tea) | Goychay |
| 32. | Famil Nabiyev | Goychay |
| 33. | Dashdamirov Ayaz | Goychay |
| 34. | Macidov Atraf | Goychay |
| 35. | Leyla (Head of experimental station of crop husbandry institute) | Tartar |
| 36. | Abidin Abdullayev (cereal breeder) | Terter |
| 37. | Sayyar – field monitor | Terter |
| 38. | Hamid Mehdiyev (head of experimental station of Genetic Resources İnstitute of ANAS) | Terter |
| 39. | Mohammad Shirinov (Agronom) | Terter |
| 40. | Anar Hatamov (education expert) | Ganja |
| 41. | Fridun Gurbanov (professor of university) | Ganja |
| 42. | Abbas İsmayilov (Head of department) | Ganja |
| 43. | Farmanov Zaur | Goranboy |
| 44. | Mammadov Zahid | Goranboy |

| | | |
|---|---|---|
| 45. | Huseynov Ruslan | Goranboy |
| 46. | Ismayilov Arzu | Goranboy |
| 47. | Qasimov Fuad | Goranboy |
| 48. | Namazov Qasim | Goranboy |
| 49. | Piriyev Arzu | Goranboy |
| 50. | Mammadov Royal | Goranboy |
| 51. | Namazov Shamsi | Goranboy |
| 52. | Sevda Valiyeva | Goranboy |

## Annex 4 Project experts interviewed

Khanbala Rustamov (Agrobiodiversity Conservation Expert)
Faig Khudayev (Agrobiodiversity Specialist)
Aybaniz Huseyn (Gender and Women's Economic Empowerment Specialist)
Aytan Tahmazova (Communication Specialist)
Elmeddin Namazov (previous Land Degradation Expert)
Dario Caccamisi (Agro-business and Agro-tourism international Expert)
Ramil Gadirov (National GIS and Data Manager)

## Annex 5 PMU and UNDP interviews

| | | |
|---|---|---|
| UNDP Country Office | Senior Programme Advisor, Governance | Mr. Shamil Rzayev |
| UNDP Bureau for Policy and Programme Support, Istanbul Regional Hub | Regional Technical Advisor | Ms. Kaavya Varma |
| UNDP-GEF Project | Project Coordinator | Mr. Farid Abbasov |
| UNDP-GEF Project | Project Agricultural Scientist | Mr. Mehraj Abbasov |
| UNDP-GEF Project | Project Administrative Clerk | Mr. Ashraf Mammadov |
| UNDP-GEF Project | Project Finance Assistant | Ms. Rustam Isgandarov |

## Annex 6 Documents reviewed

| | Date | Name |
|---|---|---|
| 1 | 2015 | Project Identification Form (PIF) |
| 2 | 2016 | Project Document: UNDP-GEF Project: “Conservation and Sustainable Use of Globally Important Agro-biodiversity" Project |
| 3 | 2020 | http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf). |
| 4 | Dec-19 | Theory of Change Primer A STAP document |
| 5 | 2017, 2018, 2019, 2020, 2021, 2022 | Annual Work Plan |
| 6 | ?????? | Annual Report |
| 7 | 2018, 2019, 2020, 2020 | Project Implementation Report (PIR) |
| 8 | | Stakeholder Engagement Plan |
| 9 | Jul-18 | Project Inception Report |
| 10 | ??????? | Electronic copies of project outputs (booklets, manuals, technical reports, articles, etc.) LIST |
| 11 | | Consultant report: land degradation expert |
| 12 | | Consultant report: agrobiodiversity conservation specialist |
| 13 | | Consultant report: agrobiodiversity specialist |
| 14 | | Consultant report: national GIS and data manager |
| 15 | 2017 - 2022 | Steering Committee Minutes of Meetings |
| 16 | Jul-05 | “Conservation and Sustainable Use of Globally Important Agro-biodiversity" Project Mid-term Review |
| 17 | ?????? | Project Audit Reports |
| 18 | | UNDP Social and Environmental Screening Procedure (SESP) and associated management plans (if any) |
| 19 | 15/12/2020 | Management Response (to MTR) |
| 20 | | CEO Endorsement Request |

| | | |
|---|---|---|
| 21 | | Progress reports (quarterly, semi-annual or annual, with associated workplans and financial reports) |
| 22 | | Oversight mission reports |
| 23 | | GEF-7 Core Indicators Worksheet |
| 24 | | LD-PMAT tracking tool (Indicator 7) |
| 25 | | Annual financial project reports (combined delivery reports - CDR), broken down by components and project management |
| 26 | | Co-financing data with expected and actual contributions broken down by type of co-financing, source, and whether the contribution is considered as investment mobilized or recurring expenditures |
| 27 | | Sample of project communications materials |
| 28 | | Summary list of formal meetings, workshops, etc. held, with date, location, topic, and number of participants |
| 29 | | UNDP Country Programme Document (CPD) 2016-2020 |
| 30 | | Project deliverables that provide documentary evidence of achievement towards project outcomes |
| 31 | 2019 | socio-economic and ecological situation analysis on selected projects in the target rayons |
| 32 | 2019 | Brief report on the assessment of the initial gender situation in the target regions, 20190907 |
| 33 | 2019 | The Sixth National Report of the Republic of Azerbaijan on the Conservation of Biological Diversity |
| 34 | May-19 | Agriculture in Azerbaijan bulletin |
| 35 | | Communication products and social media links |
| 36 | 15/09/2014 | STAP Review Comments |
| 37 | | Briefing note for countries on the 2019 Human Development Report: Azerbaijan. UNDP |
| 38 | | Midterm Review Report Conservation and sustainable use of globally important agrobiodiversity (Azerbaijan), October 2020 |
| 39 | 07/12/2021 | Project Conservation and Sustainable Use of Globally Important Agro-Biodiversity, Indigenous crop value chain study, Gender Assessment, Gender Assessment. Final Version 07/12/2021 |
| 40 | | https://www.undp.org/azerbaijan/press-releases/eu-funded-project-modernising-fruit-and-vegetable-sector-kicks-azerbaijan#:~:text=Lankaran%2C%201%20December%202021%20%E2%80%93%20The,vegetable%20sector%20in%20the%20Lankaran |
| 41 | 16/06/2016 | GEF-6 FULL-SIZED PROJECT FOR ENDORSEMENT, CEO Endorsement |
| 42 | | SECTION IV, PART VI: Social and Environmental Screening Template |
| 43 | 18/12/2018, 02/11/2018, 27/05/2022 29/10/2021, 22-24/06/2020 20-22/01/2022, 11-15/07/2022, 29-31/05/2020, 22-28/12/2019, 10- | Minutes of Scientific Meetings |
| 44 | 13/08/2018 | Field trip notes |
| 45 | 2021 | Country programme document for Azerbaijan (2021–2025) |
| 46 | 2022 | Conservation and Sustainable Use of Globally Important Agrobiodiversity, Strategies for agrotourism in Azerbaijan, Dario Caccamisi, Draft, June 2022 |

## Annex 7 Detailed methodology

The TE will utilize three sources of primary data and information:

**Desk review:** the documentation covering project design, implementation progress, monitoring and review studies, local and national development plans, policies and regulatory instruments. This will cover and elaborate on the documents listed in the UNDP TOR, a working list of which is presented in Annex 8.

**Interviews, stakeholder consultations and field missions:** additional information collection and validation will take place through remote and (where possible) face-to-face consultations with a wide range of stakeholders (Annex 6), using "semi-structured interviews" with a key set of questions in a conversational format. This will be accompanied by site visits to the pilot projects. The questions asked will aim to provide answers to the points listed in the evaluation matrix in Annex 9. The initial list of generic questions will be refined according to specific stakeholder interviews during the field mission and any by follow up Skype/Zoom, WhatsApp, etc., calls as

necessar[78]. Interviews will be confidential and the information used discreetly without accreditation. Information from interviews will be triangulated and validated, where necessary, before inclusion in the analysis and reporting. Interviews will start with an introduction about the aims and nature of the evaluation and informing the interviewee that they have the right not to respond if they so wish.

Interviews and the information collected will be disaggregated to reflect the different stakeholders (e.g. Implementing Agency – Executing Agency – PMU – implementing partners – beneficiaries as well as gender). Information from the interviews will be collated and analyzed to provide evidence-based conclusions on the overall performance, impact and achievements of the project as well as crosscutting issues.

**Direct observations of project results and activities:** wherever possible from the project area including consultations with local government and local agencies, local community representatives, project partners, CSOs and participants in field activities. A list of stakeholders to be interviewed is in Annex 3.

**The TE will review the Theory of Change** to the project's strategy prepared during the MTR.

Gender equality and women's empowerment will be assessed through collecting gender-disaggregated results arising from project activities, inclusion of women participants and relevant women's groups in the evaluation interviews and specific questions regarding the extent to which they were included in project's design and implementation and/or benefited from the project. Gender and disadvantaged groups will be included in all appropriate questions and crosschecked against specific questions related to these issues. Specific attention will be given to analyzing examples, best practices and lessons learned regarding women's empowerment arising through the project's scope of activities.

Following the data collection phase, the TE will analyze the information according to the TE guidelines and the ToR in order to draw conclusions and propose recommendations. A draft TE Report will be circulated to key stakeholders for comment and feedback. Section 6 provides a timeframe for key deliverables and milestones. The final TE Report will be submitted including an audit trail documenting the feedback from stakeholders and how these have been addressed by the TE.

Due to the Covid-19 pandemic this TE faces a number of challenges which may result in delays. In order to avoid these delays and meet the wider GEF milestones the TE team will begin detailed analysis of the components of the project which do not need primary information from stakeholders and project sites. In particular this will entail discussions with the PMU and service providers to develop a collective understanding of the emergent complexities and emerging issues related to the project and relevant sector partners. Furthermore, interviews with stakeholder in the field necessitating a field visit and those who can be interviewed using remote means by internet will take place concurrently.

[78] A Google Forms survey was carried out during the MTR and this will be repeated if practicable during the TE using the same format and questions.

## Annex 8 Evaluation Question Matrix

| Evaluative Criteria Questions | Indicators | Sources | Methodology |
|---|---|---|---|
| Relevance: How does the project relate to the main objectives of the GEF Focal area, and to the environment and development priorities at the local, regional and national level? | | | |
| To what extent are the project's objectives consistent with beneficiaries' requirements, country needs, national priorities and policies, global priorities and partners' and GEF policies and priorities? | Adequacy of activities in relation to policies and stakeholders' needs.<br>Alignment of project objective and outcomes with policy objectives.<br>Alignment of projects strategy and theory of change with country situation and national priorities. | Conventions, Project Document, UNDP Country Programme, sector policies and regulatory frameworks, regional agreements and programmes | Interviews of stakeholders / beneficiaries<br>Interviews steering committee members<br>Review of documents |
| To what extent were decision-making processes during the project's design phase reflecting national priorities and needs?<br>Were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process, considered during project design processes? | Effectiveness of partnerships arrangements since inception, co-financing budget execution | Project Document, Inception Report, PIRs, minutes of SC meetings, TOC. | Document review, interviews with government agency stakeholders and project partners, analysis. |
| How relevant is the project strategy to the situation in the project area/ national context and circumstances?<br>Does it provide the most effective route towards expected/intended results?<br>Were lessons from other relevant projects properly incorporated into the project design? | Coherence between project design and implementation – what changes have had to be made. Should changes have been made? Level of project resources assigned to tasks. | Project Document, Inception Report, Consultant's studies and reports, minutes of Steering Committee/PB and Technical Working Groups<br>MTR & Management Response | Document review, interviews with government agency stakeholders and project partners, analysis. |
| What was/is the problem addressed by the project and the underlying assumptions?<br>What has been the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document?<br>Was the problem correctly identified? | Suitability of specific components of the project to address issues and achieve results areas. Changes to the strategy, changes to the interventions.<br>Completeness of interventions by mid-term. | Project Document, Inception Report, Work Plans, PIR and NSC/PB minutes of meetings, Consultants reports, MTR report. | Documents, interviews with stakeholders, project implementing partners, PMU and project Consultants. |
| Does the project's Theory of Change reflect the complexity, uncertainty and framework of national government agencies? | Review MTR TOC and test hypothesis against SRF.<br>Project TOC causal pathways, outputs and outcomes, emergent or unidentified risks, weak links in the cause and effect relationships | MTR TOC, Project Document strategy, risk register, NC field mission findings, PMU, implementing partners | Discussion and analysis |
| To what degree is the project's implementation a participatory and country-driven processes:<br>Do local and national government stakeholders support the objectives of the project? | Gender disaggregated data, level of co-financing commitment/ expenditure, workshop and meeting attendance, degree of ownership of project community-based/ civil society initiatives | Project reports, PIR, workshop reports, co-financing records, SC meeting minutes | Documents, interviews with stakeholders, project implementing partners. |

| | | | |
|---|---|---|---|
| Do they continue to have an active role in project decision-making that supports efficient and effective project implementation? If so, how is this achieved? | | | |
| Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? | National policy priorities and strategies, as stated in official documents. Approved policy and legislation related to biodiversity, land use and land use planning, climate change, budgets, etc. | National policy and regulatory framework documents | Document review, interviews with high-level project partners. |
| Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved? | | | |
| To what extent have the expected outcomes and objectives of the project been achieved? | SRF indicators & EOP targets | Project Document, SRF, PIRs, results, MTR report, LD-PMAT Tracking Tool LD1.i.: 5 (policy) LD1.ii.: 2 (tenure) LD1.iii: 18 (production) LD1.iv: 2 (vulnerability) / GEF-7 Core Indicators Worksheet? | Document review, analysis, interviews with stakeholders and beneficiaries |
| To what extent did the project contribute to the Country Programme outcomes and outputs, the SDGs, the UNDP Strategic Plan and Country Programme, GEF strategic priorities, and national development priorities? | Alignment and synergies of outcomes | Project Document, CPAP, SDGs, GEF strategic priorities, LD-PMAT Tracking Tool LD1.i.: 5 (policy) LD1.ii.: 2 (tenure) LD1.iii: 18 (production) LD1.iv: 2 (vulnerability) / GEF-7 Core Indicators Worksheet? | Document review, high-level stakeholder interviews, analysis |
| What factors have contributed to the achieving or not achieving intended outcomes and outputs? Could the project include alternative strategies? | Progress towards results, efficiency of project strategy, adjustments to strategy<br>Number of key priorities that have been met through the project<br>Assumptions not met / unpredictable effects | SRF, Project Document, PIR, risk log, MTR report & Management Response | Document review, interviews, analysis |
| Has the project produced unintended results - positive or negative? If there are negative results, what mitigation activities are in place? | Progress towards results, efficiency of project strategy, adjustments to strategy<br>Number of key priorities that have been met through the project<br>Assumptions not met / unpredictable effects | SRF, Project Document, PIR, risk log, MTR report & Management Response | Document review, interviews, analysis |
| To what extent the project has demonstrated: a) scaling up, b) replication, c) demonstration, and/or d) production of public good | Number of relevant initiatives not directly financed by the project, take up of initiatives outside the project realm | PIR, other project reports | Document review, interview with PMU, UNDP, PB, stakeholder, beneficiaries, government agencies |
| What evidence is there to suggest that the project will/ has achieve the outcomes and objective by the close of the GEF-fund? | Budget execution, realism of work plans, results to date | SRF indicator EOP targets, PMU, project documentation | Document review, interviews, field visits |
| Efficiency: Was the project implemented efficiently, in line with international and national norms and standards? | | | |

| | | | |
|---|---|---|---|
| To what extent has the project completed the planned activities and met or exceeded the expected outcomes in terms of achievement of global environmental and development objectives according to schedule, and as cost-effective as initially planned? | Activity modifications (removal / adding)<br>Budget revisions<br>Circumstances for no-cost extension<br>Functionality of M&E system<br>Compliance with UNDP-GEF rules | UNDP finance & project staff<br>Project Director interview<br>Annual reports, CDR | Interviews, analysis, field visits |
| To what extent were project funds and activities delivered in a timely manner? | As above | As above | As above |
| How did the project adapt to the new normality COVID-19? Did the project contribute to minimizing the socioeconomic effects of the Pandemic? | Implementation adjustments (e.g., remote training, more widespread use of technology for communication / decision-making | Interviews steering committee/ PB members<br>Interviews of activity implementers<br>Interviews of project team<br>Covid-19 plan | As above |
| Financing and co-financing | | | |
| Are there variances between planned and actual expenditures? What are the main reasons?<br>To what extend did financial controls allow the project management to make informed decisions regarding the budget?<br>What extra resources has the project leveraged? How have they contributed to the project's ultimate objective? | Disbursement trends<br>Follow-up and adjustments of procurement plan<br>Co-financing complementarities / substitution<br>M&E system updates and annual/intra-year budgetary adjustments | UNDP finance & project staff<br>Project Director interview<br>Annual reports, CDR | Interviews, analysis |
| Implementation, Oversight and Execution | | | |
| To what extent has UNDP delivered effectively on activities related to project identification, concept preparation, appraisal, preparation of detailed proposal, approval and start-up, oversight, supervision, completion and evaluation?<br>To what extent has the Implementing Partner effectively managed and administered the project's day-to-day activities? How was UNDP's overall oversight and supervision? | Changes in UNDP staff<br>Periodicity of technical meetings with project team & relevant support / timeliness of recruitments<br>Changes in project team staff<br>Activity / staff / service payment delays… | Annual reports, PIR<br>UNDP, MoA & project team interviews<br>CDR | Interviews, document review, analysis |
| Sustainability: To what extent are there financial, institutional, socio-political, and/or environmental risks to sustaining long-term project results? | | | |
| How are risks monitored and managed? | Project risk log in ATLAS and management responses, communication with partners and stakeholders | Project Document, Annual Project Review/PIRs and the ATLAS Risk Register, project communications strategy, MTR & Management Response | Review, interviews, analysis |
| What is the likelihood of financial and economic resources not being available once the GEF assistance ends? | Public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes) | National policies and plans, local policies and plans, NGO feedback, private sector feedback, project exit arrangements. Consultants and service providers reports | Review, interviews, analysis |

| | | | |
|---|---|---|---|
| What are the long-term socio-political risks to the outcomes of the project? | Partner and stakeholder ownership, public / stakeholder awareness in support of the long-term objectives, sharing of information on risks, adjustments to interventions to address specific risks | National policies and plans, local policies and plans, NGO feedback, private sector feedback, project exit arrangements. Consultants and service providers reports | Review, interviews, analysis |
| What are the environmental risks to the sustainability of the project's outcomes? How are these managed and mitigated? | Climate data and forecasts. National disaster risk reduction strategies and plans | National data, policies and plans | Review and analysis, field visits |
| Gender equality and women's empowerment: How did the project contribute to gender equality and women's empowerment? | | | |
| How were gender and human rights considerations integrated in the project's design, including analysis, implementation plan, indicators, targets, budget, timeframe and responsible party?<br>To what extent has the project contributed to gender equality, the empowerment of women and human rights of disadvantaged or marginalized groups?<br>To what extent did women, poor, indigenous, persons with disabilities, and other disadvantaged or marginalized groups participate and benefit from the project?<br>Was the UNDP Gender Marker rating assigned to the project document realistic and backed by the findings of the gender analysis?<br>Is there any potential negative impact on gender equality, women's empowerment, disadvantaged or marginalized groups? If so, what can be done to mitigate this?<br>To what extent was the SESP realistic, followed and monitored.<br>Were gender related/ affecting activities, gender-blind, -negative, -targeted, -responsive, - transformational? | M&E system covering gender<br>Activity adaptability as per gender and target beneficiaries' types<br>Degree of project targeting of vulnerable people<br>Number of women & vulnerable people that were direct beneficiaries from project's results<br>Level of participation of vulnerable groups & women in activities' operationalization<br>Safeguarding actions and activities<br>FPIC | Gender-specific & marginalized group interviews (focus groups)<br>Project team interview<br>Municipalities interviews<br>Annual reports<br>SESP, MTR & Management Response | Documentation review, interviews, field visits, analysis |
| Other cross-cutting issues | | | |
| How have the project activities contributed to poverty reduction and sustaining livelihoods?<br>To what extend has the project contributed to better preparations to cope with disasters or mitigate risk, and/or addressed climate change mitigation and adaptation?<br>To what extend has the project incorporated capacity development activities? Were results achieved? | Conversion incentives success rate<br>Increased resources through improved technology (& capacity building) / diversification<br>Pilot-project appropriation and empowerment | Interviews project staff<br>Interviews final beneficiaries<br>Interviews community members / representatives | Documentation review, interviews, field visits, analysis |
| Stakeholder engagement and partnerships | | | |
| Where all key stakeholders identified, were they categorised correctly?<br>To what extent do project stakeholders share a common understanding and are involved in the decision-making process of the project? | Degree of active participation in project activities / capacity building training<br>Project responsiveness re. final beneficiary/community needs | Project staff & MoA, MoE interviews<br>Interviews of community representatives and municipalities | Documentation review, interviews, field visits, analysis |

| | | | |
|---|---|---|---|
| To what extent did stakeholder's participation mechanisms in place lead to empowerment and joint ownership of the project? What should be done better to increase their participation and engagement? | Degree of participation of stakeholders in project (annual) planning | | |
| Results framework | | | |
| To what extent the project's objectives and components are clear, practicable and feasible within its time frame?<br>Was there a clearly defined and robust Theory of Change?<br>Were the indicators in the Results Framework SMART? | Number of activities that were amended / terminated and reasons<br>Follow-up of Capacity Score Card indicators<br>Changes of indicators during implementation, number of indicators not assessed<br>Usability of baseline studies<br>Cost-effectiveness of indicators | Interviews project team<br>Interviews of ministry<br>Interviews steering committee members, SRF/ log frame<br>Project strategy, MTR TOC | Documentation review, interviews, field visits, analysis |
| Monitoring and evaluation | | | |
| To what extent did the Monitoring systems allow the collection, analysis and use of information to track the project's progress, risks and opportunities toward reaching its objectives and to guide management decisions?<br>Were the budget and responsibilities clearly identified and distributed? | Level of functionality of M&E system; updating and effective integration into decision-making (planning + adjustments)<br>Cost effectiveness of indicators | Interviews project team, RTA, UNDP | Documentation review, interviews, field visits, analysis |
| Risk Management, Social and Environment Standards and Adaptive Management | | | |
| To what extent were risks (both threats and opportunities) properly identified and managed?<br>To what extent did the project maximize social and environmental opportunities and benefits and ensured that adverse social and environmental risks and impacts were avoided, minimized, mitigated, and managed? What "safeguards" did the project implement?<br>Were the project's changes based on evidence? Were they properly managed? | Updating of assumptions and risks realistic<br>Relevant project implementation changes<br>M&E system operationality | Project team interviews, UNDP interview, ATLAS risk log, PIRs, RTA | Documentation review, interviews, field visits, analysis |
| GEF additionality | | | |
| To what extent has the project lead to additional outcomes?<br>Global Environmental Benefits<br>Livelihood improvements and/or social benefits<br>Innovation Additionality | Overall increase / stabilization of ecosystem benefits/services<br>High-profile species/ crop status<br><br>LD-PMAT Tracking Tool LD1.i.: 5 (policy) LD1.ii.: 2 (tenure) LD1.iii: 18 (production) LD1.iv: 2 (vulnerability) / GEF-7 Core Indicators Worksheet? | MoA, MoE, other implementing partners<br>Interviews project team<br>Annual reports | Documentation review, interviews, field visits, analysis |
| Impact: Are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status? | | | |

| | | | |
|---|---|---|---|
| To what extent are there indications that the project has contributed to, or enabled progress toward reduced environmental stress and/or improved ecological status?<br>To what extent have the Rio Conventions been mainstreamed | Specific changes to sector policies and operational practices<br>Reduction of pressures (fisheries, agriculture, plantations, mining, (through behavior change and threat reduction and mitigation) | Technical reports<br>Monitoring reports<br>Interviews of implementing partners, NGOs & community representatives<br><br>LD-PMAT Tracking Tool LD1.i.: 5 (policy) LD1.ii.: 2 (tenure) LD1.iii: 18 (production) LD1.iv: 2 (vulnerability) / GEF-7 Core Indicators Worksheet? | Documentation review, interviews, field visits, analysis |

## Annex 9 Signed Evaluation Consultant Agreements Form

**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.
8. Must ensure that independence of judgement is maintained and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

**MTR Consultant Agreement Form**

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

Name of Consultant: **Francis Hurst**

Name of Consultancy Organization (where relevant): _____

**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**

Signed at Moncarapacho, Portugal on Monday 15th June, 2022

Signature:  Francis Hurst

**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.
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7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.
8. Must ensure that independence of judgement is maintained and that evaluation findings and recommendations are independently presented.
9. Must confirm that they have not been involved in designing, executing or advising on the project being evaluated.

**MTR Consultant Agreement Form**

Agreement to abide by the Code of Conduct for Evaluation in the UN System:
Name of Consultant: **Francis Hurst**
Name of Consultancy Organization (where relevant): _____
**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**
Signed at Baku, Azerbaijan on Friday 17 June, 2022

Signature:  Kamil Nazarov

## Annex 10 Ratings Tables

| Monitoring & Evaluation | Rating |
|---|---|
| M&E design at entry | |
| M&E at implementation | |
| Overall quality of M&E | |

| UNDP Implementation/Oversight & Implementing Partner Execution | Rating |
|---|---|
| Quality of UNDP Implementation/Oversight | |
| Quality of Implementing Partner Execution | |
| Overall Quality of Implementation/Oversight and Execution | |

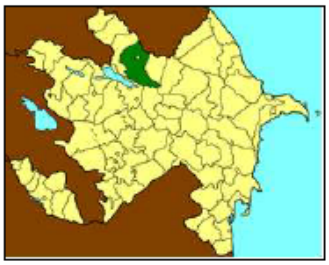
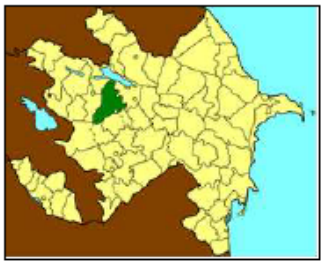
| Assessment of Outcomes | Rating |
|---|---|
| Relevance | |
| Effectiveness | |
| Efficiency | |
| Overall Project Outcome Rating | |

| Assessment of Outcomes | Rating |
|---|---|
| Financial resources | |
| Socio-political | |
| Institutional framework and governance | |
| Environmental | |
| Overall Likelihood of Sustainability | |

| Ratings for Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight, Execution, Relevance | Sustainability ratings: |
|---|---|
| 6 = Highly Satisfactory (HS): exceeds expectations and/or no shortcomings<br>5 = Satisfactory (S): meets expectations and/or no or minor shortcomings<br>4 = Moderately Satisfactory (MS): more or less meets expectations and/or some shortcomings<br>3 = Moderately Unsatisfactory (MU): somewhat below expectations and/or significant shortcomings<br>2 = Unsatisfactory (U): substantially below expectations and/or major shortcomings<br>1 = Highly Unsatisfactory (HU): severe shortcomings<br>Unable to Assess (U/A): available information does not allow an assessment | 4 = Likely (L): negligible risks to sustainability<br>3 = Moderately Likely (ML): moderate risks to sustainability<br>2 = Moderately Unlikely (MU): significant risks to sustainability<br>1 = Unlikely (U): severe risks to sustainability<br>Unable to Assess (U/A): Unable to assess the expected incidence and magnitude of risks to sustainability |

## Annex 11 Project areas (excluding Tartar)

Source Project Document

| | SHEKI RAYON | GORANBOY RAYON | GOYCHAY RAYON |
|---|---|---|---|
| *Location (highlighted in green)* |  |  |  |
| *Overview of agricultural context* | Situated in northern Azerbaijan, on the southern part of the Greater Caucasus mountain range. It is the largest grain-growing rayon in the country, producing 14% of the countries wheat harvest. Vegetables, melons, grapes and tobacco are grown in the lower-lying irrigated areas. | Situated in the north-eastern part of Azerbaijan, and including the mountainous areas and foothills of the Greater Caucasus mountain range. Winters are relatively severe, while summers are mild to hot. Fodder (for livestock) and cereals are the most extensively grown crops, while the most economically productive are fruits, vegetables and cotton. | Located in the central part of Azerbaijan on the foothills of the Greater Caucasus mountain range. The crop agriculture sector is primarily based on grain, fodder, vegetables and fruit. The Rayon is famous for its pomegranate-growing industry and is a developing wine region. |
| *Main crop types under cultivation (in ha) 2013* | Cereals and legumes 82,505<br>Maize 1,082<br>Tobacco 626<br>Sugar-beet 127<br>Fodder crops 6,755<br>Sunflower 26<br>Potato 799<br>Vegetable 944<br>Melon 283<br>Fruit and berry 2,103<br>Grape 283<br>Hazelnuts 372 | Cereals and legumes 24,090<br>Cotton 928<br>Sugar-beet 114<br>Sunflower for grains 1,727<br>Potato 351<br>Vegetable 1,257<br>Melon 248<br>Fruit and berry 2,682<br>Fodder crops 13,975<br>Grape 80 | Cereals and legumes 15,209<br>Maize 80<br>Potato 149<br>Vegetable 1,139<br>Melon 67<br>Fruit and berry 5,364<br>Fodder crops 5,568 |

## Annex 12 Project objective indicators SMART analysis objective

| Indicator | Baseline | End of Project Target | TE & MTR SMART Analysis | | | | |
|---|---|---|---|---|---|---|---|
| | | | S | M | A | R | T |
| **Objective: Ensure the conservation and sustainable use of globally threatened crop varieties important for biodiversity, food security and sustainable land management** | | | | | | | |
| 1. Proportion (%) of agricultural crop area of project rayons under native crops | Wheat/barley: <2%<br>Vegetable: <0.5%<br>Forage: <0.5% | Wheat/barley: >6%<br>Vegetable: >2%<br>Forage: >2% | Q | Q | Q | Y | Y |
| 2. Estimated value (US$/annum) of the state funding allocation to the conservation and use of agrobiodiversity in Azerbaijan | <US$ 30 million/annum | >US$ 50 million/annum | N | Q | Q | Y | Y |
| 3. Number of known landraces and varieties under productive crop cultivation in Azerbaijan | <400 | >450 | N | Q | Y | Y | Y |
| 4. Extent (ha) of crop area in the project rayons under more sustainable crop agricultural practices | <10,000 ha | Direct (project supported): >50,000 ha, Indirect: >50,000 ha | Q | Q | Q | Y | Y |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 5. | Extent (ha) of degraded agricultural land in the project rayons restored to productive use through the planting of native crops | N/A | >1,000 ha | Q | Q | Q | Y | Y |
| 6. | Number of households (and number of women) directly involved in the farming of native crops. | Vegetables: 5 (1) Wheat/barley: 2 (0) Forage: 1 (0) Fruit: 5 (2) | Vegetables: 17 (5) Wheat/barley: 17 (5) Forage: 12 (2) Fruit: 10 (4) | Q | Q | Q | Y | Y |
| 7. | LD-PMAT tracking tool score (average score across 4 criteria under LD-1) | LD 1: <1.5 | LD 1: >3 | Q | Q | Q | Y | Y |

## Annex 13 Project objective indicators SMART analysis outcome 1

| Indicator | | Baseline | End of Project Target | TE & MTR SMART Analysis | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | S | M | A | R | T |
| **Outcome 1: The state of knowledge, conservation security, and intensity and extent of use, of native crops is significantly enhanced across three Indicator Baseline End-of-Project target rayons** | | | | | | | | |
| 8. | Number and extent (ha) of CWR agrobiodiversity hotspots in the project rayons under some form of conservation tenure | 0<br>0Ha | >5<br>>150 ha | Y | Y | Y | Y | Y |
| 9. | Number of the targeted native crop varieties being actively maintained in field gene banks | Vegetables: 0<br>Wheat/barley: 0<br>Forage: 0 Fruit: ?? | Vegetables: >8<br>Wheat/barley: >10<br>Forage: >2 Fruit: >3 | Y | Y | Y | Y | Y |
| 10. | Area under each traditional crop variety (hectares) in the four targeted districts | TO BE MEASURED IN YEAR 1 | Increase in area for wheat/barley varieties by app. 4%<br>Increase in area for vegetable crops by 1.5%<br>Increase in area for forage crops by 1.5% | N | N | Q | Y | Y |
| 11. | Volume of the targeted native crop seed (tons/annum) made available to seed producers in the project rayons for commercial production | Vegetables: 0.1 t/yr<br>Wheat/barley: 80 t/yr<br>Forage: 10 t/yr Fruit: ?? | Vegetables: 0.3 t/yr<br>Wheat/barley: 100 t/yr Forage: 30 t/yr<br>Fruit: 0.1 t/yr | Q | Q | Q | Y | Y |
| 12. | Number of new, registered native crop seed producing farmers in the project rayons | N/A | Vegetables: 5<br>Forage: 2<br>Wheat/barley: 4<br>Fruit: 1 | Q | Q | Q | Y | Y |

## Annex 14 Project objective indicators SMART analysis outcome 2

| Indicator | | Baseline | End of Project Target | TE & MTR SMART Analysis | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | S | M | A | R | T |
| **Outcome 2: The improved capacities of, and more effective collaboration and cooperation between, agricultural institutions and small farmers farming native crops in the three project rayons leads to increased agricultural productivity and lower levels of land degradation** | | | | | | | | |
| 13. | Number of capacitated extension and advisory service officers deployed in the project rayons | 5 | >20 | Q | Q | Q | Y | Y |
| 14. | Number of state agricultural staff (professional, scientific, and technical) participating in project-funded training and skills development programmes | N/A | >30 | Y | Y | Y | Y | Y |
| 15. | Number of active farmer-farmer networks established in project rayons | 0 | >6 | Q | Q | Q | Y | Y |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 16. | Number of registered members of the regional (i.e., including the project rayons) Wheat Farmers Association | 0 | >50 | Y | Y | Y | Y | Y |
| 16. | Number of local farmers participating in project-funded information-sharing, training, and skills development programmes | N/A | Vegetable: >150<br>Forage: >30<br><br>Wheat: >100 | Y | Y | Y | Y | Y |

## Annex 15 Project objective indicators SMART analysis outcome 3

| **Indicator** | | **Baseline** | **End of Project Target** | **TE & MTR SMART Analysis** | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | **S** | **M** | **A** | **R** | **T** |
| **Outcome 3: Incentives that encourage the planting of, and improve access to commercial markets for agricultural products derived from, the targeted native crop species across the three rayons are strengthened** | | | | | | | | |
| 18. | Number of local farmers benefiting from small grants and average (US$) value of grant/farmer | N/A<br>N/A | >200<br>US$1000-US$2000 | Y | Q | Q | Y | Y |
| 18. | Number of new supply agreements concluded between farmers in the project rayons and processors/retailers of niche high-value products derived from native crops | 0 | >10 | Y | Y | Y | Y | Y |
| 18. | Number of processors and retailers trading in niche high-value products derived from native crops, and those benefitting from project grant funding support in the project rayons | <5<br>0 | >10<br>>5 | Q | Q | Q | Y | Y |
| 18. | Estimated valuation (US$) of trade in the targeted native crops in the project rayons | TBD | TBD | Q | Q | Q | Q | Y |

## Annex 16 MTR and TE assessment of indicators and reporting

| Indicator | MTR comment | Addressed in subsequent (2021) PIR | TE comment & assessment (2022) PIR |
|---|---|---|---|
| **Objective:** Ensure the conservation and sustainable use of globally threatened crop varieties important for biodiversity, food security and sustainable land management. | | | |
| **Indicator 1:** Proportion (%) of agricultural crop area of project rayons under native crops. | Source of the baseline conditions presented is unclear and the means to verify the end target is also not specified. | Reporting continues to include considerable extraneous information indirectly related to the indicator. The TE considers this to be due to the weakness of the SRF which might not have been obvious at the time of project development. Issues related to this are that production of local varieties is geared towards seed production, fodder as opposed to pasture, etc. Furthermore, the project reports on the increase in the number of varieties entering the market which, while important, are not speaking directly to the indicator. Other issues are the inclusion of field gene banks which are really important and related to the indicator but not directly answering to the means of measurement. | The MTR comments are valid. However, the e-registration (e.g. seed variety + land area planted) and GIS developed by the project have made this indicator more measurable now. The reporting on this indicator is still problematic, but the TE is convinced that the end of project target (EOP) has been exceeded not least because the use of more resilient local varieties is under-pinned by financial supports not available to imported hybrid strains. |
| **Indicator 2:** Estimated value (US$/annum) of the state funding allocation to the conservation and use of agrobiodiversity in Azerbaijan. | Baseline figure for Indicator No. 2 (value of state funding allocated to conservation and use of agrobiodiversity in Azerbaijan) is set at <USD 30 million; however, there is no available information supporting this figure, and the Ministry of Agriculture officials indicated that they are not accounting separately funding for agrobiodiversity related issues, rendering the achievability and measurability of this indicator questionable. | Reporting on this indicator has improved although this includes "every year, the amount of funds allocated to agriculture increases, which in turn increases funds for the protection of agro-biodiversity". This is not the same as a proportional change in sector spending. However, the is sufficient evidence that this EOP has been exceeded.<br>In 2021, more than US$ 943 million will was allocated to agriculture in Azerbaijan, where the amount of subsidies for the cultivation of local varieties was $ 47 million. In 2021, the state budget allocated $ 4.2 million for the item "protection of biological richness". The project has also included the amount available for land reclamation in 2021 ($ 238 million) which is reasonable. | The MTR comments are valid. However, the considerable project co-financing and subsequent leveraged co-financing could be disaggregated to address this indicator. The TE is confident that this EOP has been exceeded, however, it would be useful to develop a more detailed analysis of this investment for future use. For instance, investment in agrobiodiversity needs to be compared with larger private sector investments in hybrid varieties and perverse incentives such as seed producer crop insurances which will guarantee minimum production, but these are largely discounting and externalizing environmental costs. The e-registration system should make this process easier to monitor going forwards. |
| **Indicator 3:** Number of known landraces and varieties under productive crop cultivation in Azerbaijan. | Baseline for Indicator is <400 known landraces and varieties under productive crop cultivation. Means of verification is indicated to be the database of the Genetic Resources Institute. The MTR was unable to verify the baseline and check the current number of landraces and varieties registered on the database. | Reporting on this indicator still appears to be confused including newly registered varieties. A more useful measure is also included in the 2021 PIR:<br>*Seed supply of 3 varieties created last year has also started. Currently, 13 wheat / barley, 22 different vegetable crops, as well as 6 different varieties of fodder crops are widely planted in the target areas.*<br>This is a more accurate measure as varieties entering commercial seed production are entering the wider production system. The TE is confident that if fruit are included into this figure then overall the project will have reached, if not exceeded, this target, but the exact figure is not available and would need to be more specific in the 2022 PIR. | The database of the Genetic Resource Institute registers varieties and land races. However, the new e-land register will record the type/ variety of crop planted and this would need to be registered in the database to qualify for subsidies/ incentives. The EOP was revised from 420 to 450 in the Inception Report. |
| **Indicator 4:** Extent (ha) of crop area in the project rayons under | There is uncertainty with respect to the means of verifying the extent of crop area in the project rayons under more sustainable agricultural | Despite the concerns related to this indicator it is possible for the TE to conclude that the EOP has been met:<br>Direct (project-supported) >9700 ha | The MTR concerns regarding the measurement of the baseline are still relevant. The e-registration, which needs the crop variety to be included to qualify for subsidies, and linked to the project-developed GIS will have made this clearer. However, the term "sustainable crop practices" would |

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| more sustainable crop agricultural practices. | practices, and the baseline figure of <10,000 ha could not be validated during the MTR. | 9400 ha of cereal plants, 200 ha of vegetable crops and 100 ha of fodder crops were planted with local varieties due to the support provided under the project.<br>Indirect >50,000 ha<br>local varieties are being cultivated directly / indirectly in an area of 59,700 hectares, including spring crops. The issue of certified seeds, which are also used in subsidies in 2021, has led to the widespread cultivation of local varieties. | need to be clarified and would require a range of good management measures in addition to the use of local varieties or land races. A revised (from 100,000 Ha) target in the Inception Report was:<br>Direct (project-supported) >50,000 ha<br>Indirect >50,000 ha.<br>The production of Certified seeds linked to subsidies through the e-registration system will drive an increase in areas under production, however, this should be linked with a number of other sustainable land management practices. |
| **Indicator 5:** Extent (ha) of degraded agricultural land in the project rayons restored to productive use through the planting of native crops. | Term "degraded agricultural land" is not defined in Indicator. This is significant, considering the project is designed partly under the Land Degradation focal area. The means of verification is also not defined, e.g., the indicator implies that information across the entire rayons should be considered, not only the plots where the project is engaging with local farmers. | In 2021, the state budget allocated $ 238 million for reclamation measures, as a result of which the work to improve the degraded areas in the country has been significantly intensified. The mobile soil laboratory launched within the project, soil analysis was conducted in the fields of 150 farmers and relevant recommendations were given to them – The Institute of Crop Husbandry has purchased 5 more of these mobile soil labs.<br>In total, more than 1,000 hectares of land have been directly supported to improve their condition through regular training in soil erosion and degradation prevention. The covid pandemic has disrupted this to some extent.<br>Equipment purchased through the project has also contributed to this, especially with minimal tillage approaches.<br>The project is also reporting on CWR for this indicator – in this respect CWR are a separate measure unless they were incorporated into farm site management (e.g. through set aside areas on farm, field margins, hedgerows, etc…). | The MTR concerns are valid (to some extent this also re-states indicator 4). This would need a mix of criteria related to both the physical status of the land the farming practices employed on the land. The project is addressing some of these such as fertilizer applications, etc., but these would need to be made explicit in defining the indicator. There is also a significant assumption that native crops can restore land to productive use. |
| **Indicator 6:** Number of households (and number of women) directly involved in the farming of native crops. | As above, Indicator is unclear in the phrasing of the indicator whether the entire country, only the project rayons, or only the targeted farmers are relevant. The baseline figures could not be validated during the MTR. | The project has validated these figures and exceeded them in the EOP achievements. In terms of gender balance women appear to mainly involved in vegetables and fruit production and very often this is only as labour in the value chain process and many of the barriers to their entering into the sector remain and would not necessarily be removed through focusing on crop varieties alone (i.e. there are substantial and systemic barriers to their active participation). The TE considers that it is not necessarily important whether the EOP targets are in the project area or nationally because the project was beginning to effect areas outside the project areas. | This indicator could have been more gender sensitive to reflect the gender inequalities within the agricultural sector *per se*. To some extent the project has, within its time, financial, material and human resources, addressed this with the gender report and is a work in progress. |
| **Indicator 7:** LD-PMAT tracking tool score (average score across 4 criteria under LD-1). | Part of the LD tracking tool was embedded into the project results framework. The particular indicator is from the GEF-5 LD tracking tool, not the GEF-6 one. The baseline LD | This indicator was further changed on advice from GEF by the (Regional Technical Adviser) RTA to the GEF Core Indicators (specifically 3 and 4)[79]. Since 2021 the project has been reporting against the GEF-7 Core Indicators Worksheet although this has not | 50,000 Ha (probably exceeded but it is difficult to determine exactly how the figure has been calculated, e.g. direct/ indirect).<br>Biodiversity Focal Area – BD Tracking Tool for Programs 3,4,5,6,7,8,9 and 10 should be completed before project close and uploaded with the TE |

[79] PIR 2021 RTA comments p. 32

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| | tracking tool provided to the MTR for review was the GEF-6 one; the project team is unaware of the details of this indicator and how to measure it. | been retrofitted as a baseline in the PIF the CEO-approved baseline is 1,000 Ha. 2022 Worksheet records:<br>4.1 Area of landscapes under improved management to benefit biodiversity:<br>Baseline 150 Ha / EOP achievement 150 ha<br>4.2 Area of landscapes under sustainable land management in production systems:<br>Baseline 50,000 Ha/ EOP achievement 50,000 Ha. | report. This was included in the Project Document but was not picked up by the MTR.<br><br>The project has reported on the GEF-6 LD-PMAT as well as starting with the GEF-7 Core Indicators Worksheet. However, this lacks a baseline and in terms of what the project was attempting is a very blunt measure of the project's achievements. |
| **Outcome 1 (component):** *In situ* and *ex situ* conservation of agro-biodiversity. | | | |
| **Indicator 8:** Number and extent (ha) of CWR agrobiodiversity hotspots in the project rayons under some form of conservation tenure. | SMART-compliant. Means of verification needs to be described. | This indicator on the surface appears logical. However, the nature of agrobiodiversity is more complex than just a genetic reserve arranged around protected areas. CWR of many species can be conserved through a conventional protected areas system. However, many of the CWR are commensal with traditional agro-ecosystems and persist in field margins, hedgerows, fallow ground and road verges or are dependent upon traditional agro-pastoral systems. The baseline should not have been 0 because some of these sites were already inside protected areas. Alternatively, the indicator might have defined specific management measures and regulatory instruments. | 7 sites have been identified and 10 Ha have been specifically protected by electric fencing to reduce grazing pressure on CWR. The study was expanded to the national level. However, the linkages with the MENR which is the statutory agency in relation to protected areas as well as expanding protection/ management measures outside the protected areas to provide a broader set of ecosystem goods and services (including agrobiodiversity) within an intensive agricultural production landscape. |
| **Indicator 9:** Number of the targeted native crop varieties being actively maintained in field gene banks. | SMART-compliant. | The project has done particularly well in achieving this indicator. Field gene banks are particularly important because they maintain genetic reserves in accord with "real time" evolutionary pressures. Fruit land races and local varieties were already widely used by farmers due to consumer preference. However, establishing gene field banks for these (e.g. pomegranate) are a very important achievement. Furthermore, | Absheron Experimental Station of the Vegetable Institute, as well as in Yolpag village of Goranboy region and an additional station was reopened in the recently reopened region of Tartar.<br>The number of field gene banks is important because it reduces risk of catastrophic loss and they also have a demonstration and seed/ planting material distribution function. |
| **Indicator 10:** Area under each traditional crop variety (hectares) in the four targeted districts. | An extensive list of traditional crop varieties was included in the project results framework, with a note indicating that the area under cultivation for each of these varieties would be measured during Year 1 of the project. The baseline areas have not been determined and, therefore, the end targets (as percent increases in cultivated area) cannot be measured. Baseline conditions should be described for the individual varieties. End targets should be set as area (ha), rather than % increase. Means of verification need to be described. | The project has attempted to "rationalize" this indicator. The indicator is made confusing by listing traditional/ local varieties as the baseline. Subsequently this was revised by including area measurements in the EOP targets. However, it appears to have included unforeseen issues such as seed multiplication which has been a considerable achievement of the project but is not captured in the original indicator. | Reporting on this indicator illustrates some of the challenges in developing indicators for this project and the weaknesses in the SRF which threaten to overshadow some of the achievements of the project and the challenges that lie ahead.<br>In responding to the indicator there is an "explosion" of information which is important for future use, but need not necessarily be recorded in the SRF in this manner.<br>Forage: >1.49% |
| **Indicator 11:** Volume of the targeted native | The baseline figures (volume of targeted native crop seed available | Indicator 11 and 12 should be considered together, they are largely the same because | The reporting is still confused on this indicator although it would appear that the project has done remarkably well on achieving this indicator. |

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| crop seed (tons/annum) made available to seed producers in the project rayons for commercial production. | to seed producers in the project rayons for commercial production) could not be validated, and the means of verification of the end target is unclear. | The TE adds that; language is important "native" crop seed is used here. A more accurate term would be "local varieties" and "land races", but might also include "locally developed none-native varieties". | Given just how complex it is to set up certified and reliable seed production, the indicator may have been overly-ambitious. Furthermore, the inclusion of fruit as a seed is probably un-necessary and should be number of saplings/ grafted trees. |
| **Indicator 12:** Number of new, registered native crop seed producing farmers in the project rayons. | The means of verification (number of new, registered native crop seed producing farmers) is unclear. | This indicator is essentially the same as indicator 11 in many ways. A registered seed producer is one certified by the state to sell seed. Locally produced seed producers are certified and the seed produced has a clear and transparent chain of custody because the project has developed a seed certification system based on a block chain IT system which generates a unique bar code number which can be checked against a central database and therefore certifies seed providence. This is not quite the same as the indicator, however, it is a considerable achievement, including the investment necessary for seed processing. | Reporting on this indicator continues to be confused (with defined EOP targets as number of varieties and reporting largely on the process of building the necessary actions for seed distribution) and therefore does not capture the complexity of the activities and the achievements of the project which has included not just establishing a small number of local seed producers but also setting in place a credible certification system[80] and a range of instruments which move the market in favour of local varieties and local seed production without loss of quality. The project has established a community-based (cooperative) and equipped it for seed production of local varieties, principally cereals. |
| **Outcome (component) 2:** Capacity to improve agricultural productivity and reduce land degradation using native crops. | | | |
| **Indicator 13:** Number of capacitated extension and advisory service officers deployed in the project rayons. | Unclear whether the baseline figure of "5" refers to the number of extension and advisory service officers stationed in the project rayons, or rather the number of officers who have capacity in agrobiodiversity issues. This renders the measurability and achievability of this indicator questionable. | The project design called for "d*esign and implement an in-service training programme for all agricultural extension and advisory officers (including induction training, annual refresher training and intermittent specialist skills development training) that are located in the Sheki and Ganja regional Agrarian Scientific Centres*". Seemingly, there was an assumption that there was an effective agricultural extension programme in existence which could absorb the new skills and knowledge. The TE agrees with the MTR assessment of this indicator. | The project has carried out considerable extension work in terms of reaching out to farmers, building farmer capacity and knowledge and linking farmers to advisory expertise through available technology such as smart phones. However, the PIR are reporting on the technical expertise provided by the project, the project subject matter Consultants. While these of the very highest caliber and have provided excellent technical advice – they are not extension officers as such. For instance, the DAIM in Goychay is training farmers regularly, with a team of seven specialists (seed specialist, agro-chemistry specialist, three agronomists and two plant protection specialists). The project is aware of the sustainability issues post GEF project. The project has made agricultural expertise more accessible to farmers, but this does not equate to an extension service. |
| **Indicator 14:** Number of state agricultural staff (professional, scientific, and technical) participating in project- funded | SMART-compliant | This is a project performance indicator (effectively an activity) not an outcome indicator. | The project has been particularly successful in building a community of interest within academic institutions related to all aspects of agrobiodiversity and conservation agriculture. There have been numerous training seminars, workshops and resources (e.g. "Methodology of working with seeds of cultivated plants and their wild ancestors", a Vegetable Encyclopedia, and "Azerbaijan's wheat gene |

[80] Azerbaijan Republic Ministry of Agriculture, Agrarian Services Agency under the Ministry of Agriculture, STATE REGISTER of selection achievements protected and authorized for the use of agricultural production in the territory of Azerbaijan Republic (official release), Baku, 2022

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| training and skills development programmes. | | | pool"). The Agricultural University has included agrobiodiversity within its curriculum as well as research and considerable co-financing investment in facilities and equipment. During the pandemic lock down the PMU was able to take advantage of web-based tools to maintain interest and momentum. |
| **Indicator 15:** Number of active farmer-farmer networks established in project rayons. | The term "active farmer-farmer networks" is not clearly defined in indicator, and the means of verification is not specified. | The TE agrees with the MTR assessment of this indicator. The indicator should have been better defined although this still might not have been possible during the Inception Phase, because it was an "idea" and not a fully thought through concept. However, as it became more apparent how this would work the indicator should have been better defined. These are loose networks of farmers who share knowledge, normally through WhatsApp groups and linked to technical experts who can identify pests and diseases, provide advice on seed selection, equipment and input purchases (often at the point of purchase which is particularly important), and many other aspects of farming. | These are quite effective with a number of informants citing how they used them for advice on purchasing of seed, fertilizers and especially pesticides as well as on their application.<br>However, an important point to make is that access to Smart phones, necessary for the participation in these networks, is gender biased with many women not having access to Smart phones or being technically able to access web-based resources. This is an important issue and reflects deeper (than just related to agriculture) inequalities and inefficiencies within the overall system. |
| **Indicator 16:** Number of registered members of the regional (i.e., including the project rayons) Wheat Farmers Association. | SMART-compliant. | | |
| **Indicator 17:** Number of local farmers participating in project-funded information-sharing, training, and skills development programmes. | SMART-compliant. | This is a project performance indicator (effectively an activity) not an outcome indicator. | The project has been very active in reaching out to farmers. An assumption of the Project Document was that agricultural networks and extension services were more developed than they were in the project areas. However, much of this work has had to begin from a very low baseline. During the pandemic the project was able to maintain some of this impetus through online means, notwithstanding the gender-based inequalities in access to the internet. |
| **Outcome (component) 3:** Incentives and markets to improve the uptake and commercial viability of native crops. | | | |
| **Indicator 18:** Number of local farmers benefiting from small grants and average (US$) value of grant/farmer. | End target (number of local farmers benefitting from small grants and average value of grant/farmer) was adjusted at project inception. However, the project also decided not to proceed with the small grants mechanism and rather disburse inputs directly to farmers, focusing on farmer groups. This target does not capture the adaptive management approach taken. | This is a performance indicator (effectively an activity indicator) not an outcome indicator.<br>A decision was made during the Inception Phase to distribute these grants as equipment and materials rather than cash. This was a reasonable decision. | The average value of support (US$ 800/ farmer).<br>The grants were "in-kind) involving the supply of fertilizers and seed material to farmers.<br>Assistance was also provided to farmers engaged in vegetable growing on proper packaging and marketing.<br>The project constructed and equipped flour mills.<br>Agricultural machinery was purchased and provided to farmers' associations/ cooperatives. This was a considerable investment which should be utilized by a large number of small-holder farmers. This was a necessary investment due to the mechanized nature of agriculture in the project area. The purchase of a seed sorting and cleaning plant and various other equipment necessary for certified seed production and |

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| | | | distribution should have a significant impact on local seed production and distribution. |
| **Indicator 19:** Number of new supply agreements concluded between farmers in the project rayons and processors/retailers of niche high- value products derived from native crops. | SMART-compliant | Reporting on this indicator continues to be confused with mention of the distribution of the resources covered under indicator 18, although some of this assistance has gone towards improving the supply chain. The project has produced a value chain study[81]. Processing of flour should also improve this situation and there are talks underway with a major national retailer Bravo with regards vegetables. | At the 2022 PIR reporting on this indicator was still confusing and appeared more in line with indicator 18 related to the small grants (now direct purchase of materials/ equipment). |
| **Indicator 20:** Number of processors and retailers trading in niche high-value products derived from native crops, and those benefitting from project grant funding support in the project rayons. | Baseline, (number of processors and retailers trading in niche high-value products derived from native crops, and those benefitting from project grant funding support in the project rayons), the baseline of <5 could not be validated. It is, therefore, difficult to ascertain the achievability of the end targets. | These baselines would have been very hard to illustrate and the indicator and targets would have benefitted from greater detail and clarity. This also contains elements of project implementation, i.e. it measures an activity – the distribution of grant funding and is therefore not an outcome indicator. | Discussions are underway; however, this would really require a dedicated effort, probably by an agency currently outside the project. Farmers Associations or unions are often a strong advocate for the promotion of these products and the protection of farmer's interests in the face of buyers and retailers' hold on the market. These groups and interests need to be fostered and grown. The project is providing technical advice on issues such as increasing market competitiveness at the national and international level and expanding into agro-tourism. |
| **Indicator 21:** Estimated valuation (US$) of trade in the targeted native crops in the project rayons. | For Indicator (estimated valuation of trade in the targeted native crops in the project rayons), the envisaged approach called for conducting value chain analyses at project inception and then again at the end of the project. This indicator does not seem to be relevant to the project rayons, where most of the farmers cultivating native crops are holding small plots of land, and the value chains are not extensive (or non-existent in some cases). | It is not possible to assess this indicator. A detailed study could be made but it would need to clearly set out the assumptions and estimates. | The project is reporting an increase in incomes of farmers. It puts this in the range of US$ 2 million/annum. However, it is not possible to say if this is an increase or how it has been calculated and what the difference between incomes from local varieties and imported cultivars and hybrid crops might be. |

[81] Indigenous crop value chain study. Final Version 02/12/2021

## Annex 17 Progress towards results table

| Measure | TE Rating | Achievement Description |
|---|---|---|
| 1. Monitoring & Evaluation (M&E) | | |
| M&E design at entry | MS | The overall strategy was well prepared. However, there were a number of weaknesses related to indicators (e.g. means of verification, defining degraded land, some indicators tracking activities and not outcomes) which should have been clarified. |
| M&E Plan Implementation | MS | Changes were made to the SRF during the inception phase. However, these were largely directed towards targets and not in refining the indicators. Reporting on the indicators was at time somewhat confusing. However, following the MTR the project has made significant moves to address these issues. |
| Overall Quality of M&E | MS | It is not unusual for there to be weaknesses in any M&E plan at the point of design, the purpose of the inception phase is to address these and changes were made to the SRF at this time. The project has carried out all M&E activities with regular review and adaptive changes agreed between PMU, SC, UNDP and RTA. However, the project has been slow to address the underlying weaknesses in issues such as means or clarification of verification, etc. |
| 2. Implementing Agency (IA) Implementation & Executing Agency (EA) Execution | | |
| Quality of UNDP Implementation/Oversight | S | UNDP has provided sufficient oversight during implementation, challenging the project were necessary and responsive, assisting with procurement and other matters. The PMU personnel are on UNDP Contracts but there is a sufficiently robust firewall between operations and oversight. |
| Quality of Implementing Partner Execution | S | The Implementing Partner has been active and effective in implementing the project providing material and organisational support. The Ministry of Agriculture and the Azerbaijan National Academy of Sciences Genetic Resources Institute. It has been very beneficial having the PMU embedded in the offices of the Agency for Agro Credit and Development. There is high level of collaboration and sense of common purpose amongst the implementing partners. The technical Consultants/ subject matter specialists engaged by the IP have been of a very high standard providing very good technical advice. |
| Overall quality of Implementation/Execution | S | NIM has worked very well in this project with an effective partnership between implementation and execution. |
| 3. Assessment of Outcomes | | |
| Objective | S | The project has raised the profile of agrobiodiversity through a broad cross-section of stakeholders. There is now a good understanding of the benefits of agricultural diversity within the farming system and this is now imbedded in the various agency and institutional agendas, as well as the livelihood options of the farmers. These achievements have also been reinforced by various fiscal, market and livelihood strategies which incorporate elements of private and public good. |
| Outcome 1 | S | The project has identified six agrobiodiversity hotspots and put in place some measures to affect their conservation as genetic reserves. The conservation status of CWR have been improved and there is an dramatic increase in the knowledge and enthusiasm for their conservation and further investigation which will continue after the project. This has been reinforced through the various institutional and academic partnerships. Local varieties and land races have been incorporated into farming systems which will have long term conservation benefits including supporting resilience of the system's ability to continue to provide important ecosystem goods and services. |
| Outcome 2 | S | There has been considerable training and capacity building at all levels of the management/ agricultural production process. Academic, practical technical, research and farmer skills have been raised in relation to agrobiodiversity. The use of field stations as centres of training and information exchange will very likely continue after the close of the project. Support to build social capital has been effective with farmer to farmer networks, the development of a small number of effective functioning cooperatives and farmer access to expert, real time technical advice will likely continue to improve the status of agrobiodiversity and the livelihoods of farmers. The project was slow to develop a gender strategy; however, it has made considerable progress on gender equality within the value chain and it is important that this is expanded in the future. |
| Outcome 3 | S | Providing material support to farmers and in particular a number of cooperatives has been effective, especially in upscaling seed production of certified, high quality local varieties and land races. The introduction |

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|---|---|---|
| | | of block chain technology in seed certification and the linking of local varieties and land races to state agricultural subsidies is very important and effective. The study of the value chain for select crops is important in further understanding the challenges of farmers in equality of participation in the value chain, particularly for women producers. Agro-tourism also offers opportunities for farmer livelihood diversification and a motivation to maintain traditional farming systems. An important achievement of the project has been to bring together all the different interests and aspects of the system to work towards a common purpose. |
| Relevance | HS | The project is closely aligned with national policy direction, UNDP Country Programme objectives and the GEF LD and BD Focal Areas. |
| Effectiveness | S | Although there was an 18-month delay in effectively starting the project's activities, the close working relationship between UNDP and the MoA has resulted in the effective implementation of the project. The SC has meet regularly and provided timely decisions to the PMU. There has been sufficient oversight without being obstructive. |
| Efficiency | S | Despite the 18-month delay there has been a high degree of efficiency in the project's implementation once the PMU was in place. Financial management has been strong and decisions have been taken rationally and without delay when necessary. Communication within the project has been very good. When issues have been identified (e.g. changing the farmer grants to the provision of materials and equipment, the weakness in the project's gender response, etc.), then the project has put in place adaptive solutions. |
| Overall Project Outcome Rating | S | Good design, high levels of technical expertise, built knowledge and knowledge management, good communication and participation, good financial management and adaptive management. |
| 4. Sustainability | | |
| Financial sustainability | L | There is likely to be continued budget support to aspects of the project including financial mechanisms such as subsidies, the EU project in Länkãran offers an opportunity for continued external project support for the project's achievements. |
| Socio-political sustainability | ML | It is likely; however, external drivers can exert considerable pressures on the overall system and the lessons from this project need to be upscaled and mainstreamed into the national policy framework to make this likely |
| Institutional framework and governance sustainability | L | This is considered to be likely, however, it is important to stress that the field of agrobiodiversity can become institutionally compartmentalised and it is important that there are research institutions such as the Genetic Resources Institute which ensure that issues such as production targets, perverse incentives, market dominance and distortions do not over-ride the critical issue of resilience from a genetic perspective are financially secure and funded sufficiently to take on roles like this. |
| Environmental sustainability | L | Future external system drivers such as climate change, water security and external input commodity costs in the short to medium time will support a more holistic and diverse farming system with a view to building in resilience. |
| Overall Likelihood of Sustainability | L | The outputs, outcomes and institutional and social capital built during the project's lifetime as well as incorporating this into the EU project in Länkãran are likely to make the project's achievements sustainable. |

## Annex 18 Signed UNEG Code of Conduct form

**Evaluation Consultants Agreement Form To be signed by all consultants as individuals (not by or on behalf of a consultancy company) before a contract can be issued.**

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

**Name of Consultant:** Francis Hurst

**Name of Consultancy Organisation** (where relevant): N/A

**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**

Signed at Moncarapacho, Olhão, Portugal on 15th June 2022

Signature: 

**Evaluation Consultants Agreement Form To be signed by all consultants as individuals (not by or on behalf of a consultancy company) before a contract can be issued.**

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

**Name of Consultant:** Kamil Nazarov

**Name of Consultancy Organisation** (where relevant): N/A

**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**

Signed at Baku, Azerbaijan on Friday 17 June, 2022

Signature: 

## Annex 19 Signed TE Report Clearance form

| |
|---|
| Evaluation Report Reviewed and Cleared by<br>UNDP Country Office<br>Name: _____<br>Signature: _____ Date: _____<br>UNDP GEF RTA<br>Name: _____<br>Signature: _____ Date: _____ |

## Annex 20 Co-financing government

**To: Mr. Francis Caleb HURST**

**International Project TE Evaluator**

*About co-financing on "Conservation and sustainable use of globally important agro-biodiversity" project*

**Dear Mr. Francis Caleb HURST,**

I am pleased to note that The Ministry of Agriculture of the Azerbaijan Republic has provided the total - USD 22,141,805.01 co-financing support as a grant and in kind to the project "Conservation and sustainable use of globally important agro-biodiversity" for 2016-2022.

**Attachment**: 2 page

**Regards,**

**Acting Chairman, Deputy Chairman** **Leyli Aghayeva**

# Annex 20 Co-financing UNDP



**United Nations Development Programme**

Ref: UNDP/OL/22/21647

04 August 2022

Dear Mr Francis Hurst,

***Subject: UNDP fund expenditure of PIMS 5482: Conservation and Sustainable Use of Globally Important Agrobiodiversity Project***

Please, accept this letter as a confirmation of that "Conservation and Sustainable Use of Globally Important Agro-Biodiversity" Project's UNDP fund expenditure is USD 145,362.75 by 30th of June 2022.

Below shown the first table summarizes expenditure from the start of the project till 30.06.2022, while the second one planned allocation of the remaining four months.

**Table 1. UNDP fund expenditure as of 30th of June 2022**

| Year | Budget code | Amount in USD | Description | Totals |
|---|---|---|---|---|
| 2022 | 71400 | 6,558.16 | Direct Project Costing | |
| | 72310 | 1194.93 | Fuel for project vehicles | |
| | 72505 | 208.48 | Office supplies | 7,961.57 |
| | 64397 | 14000 | Direct Project Costing | |
| | 71400 | 3,687.82 | Pro rata cost of Project Manager's salary | |
| | 72310 | 1,771.30 | Fuel for project vehicles | |
| 2021 | 72505 | 896.06 | Office supplies | 20,355.18 |
| | 64397 | 13310 | Direct Project Costing | |
| | 75105 | 293.78 | General Management Support | |
| 2020 | 71300 | 366.67 | Security charges for Individual contractors | 13970.45 |
| | 64397 | 14000 | Direct Project Costing | |
| | 71400 | 29180.72 | Pro rata cost of Project Manager's salary<br>Project Administrative Clerk's salary | |
| | 72505 | 451.54 | Office supplies | |
| 2019 | 74510 | 114.92 | Bank Charges | 43,747.18 |
| | 64397 | 14000 | Direct Project Costing | |
| | 75105 | 2336 | General Management Support | |
| 2018 | 71400 | 28211.65 | Pro rata cost of Project Manager's salary<br>Project administrative clerk's salary | 44547.65 |
| | 64397 | 14000 | Direct Project Costing | |
| 2017 | 71400 | 780.72 | Pro rata cost of Project Manager's salary | 14780.72 |

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Annexed in a separate file: TE Audit Trail

Annexed in a separate file: relevant terminal GEF/LDCF/SCCF Core Indicators or Tracking Tools, as applicable