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# **TERMINAL EVALUATION REPORT**

## **CLIMATE CHANGE ADAPTATION PROGRAMME IN WATER AND AGRICULTURE IN ANSEBA REGION, ERITREA**

**UNDP PIMS ID 4540**

**Funded By: Adaptation Fund**

**Implementing Agency: UNDP**

**Implementing Partner: Ministry of Land Water and Environment (MoLWE)**

**Responsible parties: Ministry of Agriculture (MoA), & Ministry of Local  
Government (MoLG), Eritrea**

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## EXECUTIVE SUMMARY

### Project Summary Table

Project title	Climate Change Adaptation Programme in Water and Agriculture in Anseba Region, Eritrea			
AF project ID	00061576 (Output ID: 00078054)		<i>at endorsement</i> (Million US\$)	<i>at completion</i> (Million US\$)
UNDP Project ID	00061576 (PIMS ID 4540)	AF financing:	6,010,000	6,010,000
Country	Eritrea	IA/EA own:	-	-
Region	Africa	Government:	-	-
Focal Area	Climate Change	Other:	-	-
FA Objectives, (OP/SP):	-	Total co-financing:	-	-
Executing Agency	UNDP	Total Project Cost:	6,010,000	6,010,000
Other Partners involved	MoLWE, MoA, Zoba Anseba Local Government	Prodoc Signature (date project began):		05.09.2012
		(Operational) Closing Date:	Proposed: November 2018	Actual:

### Project Description (brief)

PIMS 4540, Climate Change Adaptation Programme in Water and Agriculture in Anseba Region in Eritrea was implemented between 2013 and 2018 with AF grant amounting to US\$. 6,010,000 In addition, the Government of Eritrea demonstrated its strong commitment to and ownership of the programme by co-financing to the sum of US\$ 510,850. The overall goal of the programme was to promote increased food security in Eritrea through ecologically sustainable and climate-resilient improvements in agricultural production. The objective of the programme was to increase community resilience and adaptive capacity to climate change through an integrated water management and agricultural development approach in the Hamelmalo and Habero Sub-regions, Anseba Region in Eritrea. The main beneficiaries of the programme were vulnerable Small-scale farmers, Agro-pastoralists, Pastoralists and Rural women.

Upon completion of the programme, the following outcomes were expected to be achieved:

- Increased water availability and erosion control through floodwater harvesting and irrigation technologies (Outcome 1);
- Enhanced climate-resilient agricultural and livestock production (Outcome 2);
- Improved climate risk information and climate monitoring used to raise awareness of and enhance community preparedness to climate change hazards (Outcome 3);
- Lessons learned and shared, and policy influenced through knowledge management system (Outcome 4).

This Terminal Evaluation (TE) was carried out in collaboration with relevant Ministries of the Government of the State of Eritrea, UNDP Eritrea country office, Programme beneficiaries, and the programme coordination team. It uses the UNDP Evaluation Guidance for GEF Financed Projects to critically assess the achievements of the Adaptation Programme by looking into the Programme's design, implementation and results. The TE at the end provides lessons and recommendations moving forward.

## Evaluation Rating Table

<b>Evaluation Rating</b>	<b>Rating</b>
<b><i>Monitoring and Evaluation</i></b>	
Overall quality of M&E	Satisfactory
M&E design at project start up	Satisfactory
M&E plan implementation	Satisfactory
<b><i>IA&amp;EA Execution</i></b>	
Quality of UNDP Implementation	Satisfactory
Quality of Execution - Executing Agency	Satisfactory
Overall quality of Implementation / Execution	Satisfactory
<b><i>Outcomes</i></b>	
Overall quality of project outcomes	Satisfactory
Relevance	Relevant
Effectiveness	Satisfactory
Efficiency	Satisfactory
<b><i>Sustainability</i></b>	
Overall sustainability	Moderately Likely
Financial resources	Moderately Likely
Socio-economic	Moderately Likely
Institutional and governance	Likely
Environmental	Moderately Likely
<b><i>Impact</i></b>	
Overall impact	Minimal
<b><i>Overall programme results</i></b>	<b>Satisfactory</b>

(1) 6-point scale: *Highly satisfactory (HS); Satisfactory (S); Moderately satisfactory (MS); Moderately unsatisfactory (MU); Unsatisfactory (U); Highly unsatisfactory (HS)*

(2) 2-point scale : *Relevant (R) ; Non-relevant (NR)*

(3) 4-point scale: *Likely (L); Moderately likely (ML); Moderately unlikely (MU); Unlikely (U)*

(4) 3-point scale: *Significant (S); Minimal (M); negligible (N)*

## Summary of Conclusions, Recommendations and Lessons

### Main Conclusions

#### ***Programme Design / Formulation***

The programme was thoughtfully designed and formulated to comprise of complementary sectoral and enabling activities. The sectoral activities focused on water availability and accessibility (outcome 1) and climate-smart agriculture and livestock production systems (outcome 2) while the enabling activities included climate information (outcome 3) and knowledge management (Outcome 4). The programme document presented the programme's goal, objectives, outcomes, outputs, and activities guided by a logical framework with a clearly defined monitoring and evaluation parameters linked to baselines and SMART indicators and outcome targets.

The programme target groups and beneficiaries were equally identified coupled with other categories of stakeholders at the national, regional and local levels that were necessary for the successful implementation of the programme. The management arrangements were flexible, and the coordination of the programme's activities provided space for a strong local participation of farmers, pastoralist and rural women. The technical design focused on priorities that were relevant not only to the vulnerable local communities but to

Regional Administrations and the Government of the State of Eritrea's National Development Plan and Actions to fight climate change as well. Here, we are talking about reducing climate change vulnerability caused by recurrent droughts, flooding and erosions, erratic rains, and increasing temperatures that negatively affect local communities and their surrounding ecosystems and landscapes.

### ***Programme Implementation***

The implementation of the programme is part of a bigger process under the National Adaptation Programmes of Action (NAPAs) of Eritrea. The programme therefore represents one of the five priority adaptation actions in the agriculture, forestry and water sectors identified in Eritrea's NAPA. While this programme is funded under the Adaptation Fund (AF), there are two others that are supposed to be funded by the Least Developed Country Fund (LDCF).

Within this programme, the international implementing agency (UNDP), the national executing entity (MoLWE) and the national implementing partners (MoLG and MoA) worked closely and effectively to provide quality support and input to ensure timely implementation and accomplishments of the programme's outputs and outcomes. As a result, a majority of the project delivery was recorded and exceeded in some cases with the integration of the Minimum Integrated Household Agricultural Package (MIHAP) and the solar lighting – which were never part of the initial programme document but were in line with the project objectives. The integration of these additional and new activities also demonstrates part of the adaptive management measures employed by UNDP, MoA, and MoLWE in consultation with farmers, local communities and the programme Steering Committee members.

The approval of implementation plans, results, reports as well as the disbursement of the activity budget respected an established participatory M&E process that provided checks and balances from the MoA, MoLWE, the NSC, Ministry of Finance and UNDP. With this in place, the programme budget was appropriate for the level of intervention under the different outcomes. This made it possible for most of the intended outputs to be almost completely achievable for the planned five-year duration of implementation. Even though the programme encountered a 24 months delay and had a 12-month extension, the programme management and M&E process coupled with the results achieved, leaves the evaluators to believe that the capacities of the Implementing Agency and Executing Entities were appropriately effective for the level of programme intervention.

### ***Programme Results***

The programme has benefitted more than the intended 6,141 targeted households (HH). Table 7 provides an idea of the number of households who benefitted from the programme implementation. The programme has successfully increased food and livestock productivity and hence food security. According to information collected from some of the beneficiary farmers, they can now produce more than double or triple the amount of food they need for household consumption. Similarly, milk production has increased from 2L per cow per day to about 5-8 L per cow per day and the excesses are taken to the markets for sales to generate household income.

The objective of this programme has been successfully met due to a number of factors. Worth mentioning are the adaptation practices related to: soil and water conservation practices, livelihood diversification strategy especially through the MIHAP and other programme activities, the use of climate-smart technologies and varieties of crop and livestock, the change of lifestyle from pastoralists to agro-pastoralists, and the deliberate integration of gender consideration in the implementation of the programme (see Gender Perspective under section 3.3.6 on Mainstreaming).

The assessment of the overall attainment of the results is strongly influenced by the satisfactory and highly satisfactory performances of outcomes 1 and 2 respectively. While outcomes 3 and 4 performances were marginally satisfactory, almost all the farmers' interest, focus and priorities were on outcomes 1 and 2 – making water available and accessible and increasing agricultural and livestock productivity. Further assessment of the results under the separate outcomes is presented below.

**Outcome 1:** *Increased Water Availability and Erosion Control through Groundwater Recharge, Rainwater Harvesting, Irrigation and Soil and Water Conservation Measures.* The effectiveness of outcome 1 is satisfactory due to the successful implementation and achievement of almost all the planned activities. These include the construction of diversion structures and associated irrigation technologies, micro-dams and SWC activities. Some changes were made related to the construction of subsurface dams while over-sowing of grasses was not carried out as planned. The programme was able to increase the availability of water by about 1 to 2 million m<sup>3</sup> but fell short of the initial target of 4.3 million m<sup>3</sup>. A possible explanation is: 1) the setting of a very ambitious and unrealistic programme baseline and target. 2) the capacity of the sub-surface dam was not decided at the project design stage, therefore, when it was substituted by surface dams the water storage capacity was not considered.

**Outcome 2:** *Climate-Resilient Agricultural and Livestock Production Enhanced.* The effectiveness of outcome 2 is assessed as highly satisfactory. Climate-resilient agricultural technologies, methods and trainings were provided to farmers. The minimum integrated household agricultural package (MIHAP) coupled with traditional improved fuel-efficient stoves and solar panels provided resources to improve climate adaptive capacities and resilience of many vulnerable farming households through diverse livelihood options and opportunities. The initial results are appreciated by many of the farmers. Their adaptive capacity and that of their production systems are increasing as they experience increasing crop and livestock productivity and sales.

**Outcome 3.** *Improved Climate Risk Information and Climate Monitoring Used to Raise Awareness of and Enhance Community Preparedness to Climate Hazards.* The effectiveness of outcome 3 is assessed to be marginally satisfactory. While the creation of 6 meteorological stations was a major progress to generate climate data and information in the medium and long term beyond the programme's lifetime, the programme failed to capitalize on existing traditional climate forecasting knowledge to enhance the development of community-based early warning systems in the short term and within the lifetime of the programme. The programme equally failed to integrate in its design the time consuming process of installing meteorological stations, train the staff, generate and analyse climate data, test and validate the generation results before preparing credible, scientifically valid climate information for dissemination to and uptake by farmers and extension workers.

**Outcome 4.** *Knowledge Management System Established, and Knowledge Management Activities Implemented.* Outcome 4 is assessed to be marginally satisfactory, representing the least performing component of the programme due to the absence of a coherent knowledge management system. Knowledge management activities were very negligible with a few studies and a video in the making and total absence of lessons learned documents, policy and information briefs for policy advocacy. Without lessons learned documents, it is not easy to successfully upscale similar programme activities in different locations.

## **Recommendations**

### **Outcome 1**

**Recommendation 1.** Experience sharing and learning on SWC and livelihood diversification as adaptation strategies should be encouraged by the government (MoLWE, MoLG, MoA) and UNDP at all levels. Implementation of SWC measures should be enhanced in the catchment to reduce risk of siltation while planted trees should be properly protected and managed by communities.

**Recommendation 2.** Community organisations, local leaders and extension agents should ensure that a robust, systematic and community-based maintenance scheme should be in place to either reduce or timely respond to physical damages to the irrigation infrastructures including dams and diversion canals that are often hit by seasonal flash floods.

**Recommendation 3.** In similar future projects, a ground water monitoring system should be introduced by national research institutes such as the Hamelmalo Agricultural College with the support of technical and

financial partners, in order to compare the recharge of underground water as a result of the dams constructed with a benchmark. This will provide a more reliable and scientific method to inform decision making and management around water sources in Eritrea.

## **Outcome 2**

**Recommendation 4.** The administration or UNDP should create a support system for very successful farmers who are able to transform their livelihoods (that has been supported by this programme MIHAP activities) into a thriving small business model that can be replicated in other communities in Eritrea.

**Recommendation 5.** Manufacturers of energy efficient stoves need to design and adapt the stoves to local contexts. They should be accompanied by continuous technical support, monitoring and checkup by extension agents and locally trained technicians to address complaints and challenges. Researchers should conduct an integrated analysis to understand reasons for using or not using energy efficient stoves. Such a research might facilitate the adoption of the stoves by communities.

**Recommendation 6.** Extension agents, MoA and the MoLG should promote farmer-led conflict prevention, management and resolution in relation to water and land utilization for agriculture. The government authorities should allow farmers to decide on water utilization and management approaches that work for them – based on their previous or existing practices. The government administration is encouraged to rather focus on extension services and other technical support.

**Recommendation 7.** In similar future projects, local ownership should be encouraged by project proponents in project design and implementation: As seen in the programme, this entails strong involvement of farmers in the implementation; part time job creation for farmers and youths; training of community members to acquire new skills and reinforcing their sense of ownership of the programme.

**Recommendation 8.** Farmers should be encouraged or trained by project proponents on how to transform by-products from their farms into compost as there is often a high demand for fertilizer for various crop production activities.

## **Outcome 3**

**Recommendation 9.** The various institutions running the meteorological stations should make sure that the climate data being collected is analyzed and disseminated to the end-users – who are especially the farmers and extension agents. The Government and UNDP should follow up and support the effective functioning and utilization of the stations.

## **Outcome 4**

**Recommendation 10.** The GoSE, UNDP and partners should make efforts to prepare knowledge products especially a few key documents on best climate change adaptation practices in the different aspects of the programme related to SWC, MIHAP, Community-led micro dam construction and maintenance, irrigation systems etc.

## **Recommendation on future directions underlining main objectives**

**Recommendation 11.** The government and its partners should consider a second phase of the programme. This means that the core objective will not be very different. A potential option is to upscale the programme activities to cover more regions and target more farmers. The challenges and shortcomings of the current programme should be incorporated into the phase two as additional aspects of the programme. A tentative title can be: Ecosystem-based Adaptation (EbA) of Anseba River catchment for integrated rural development. Potential funding source can be the Green Climate Fund (GCF) which will therefore require the preparation of a (pre)feasibility study and a concept note. The feasibility study and concept note will greatly benefit from the current programme document and experience. A GCF simplified approval process

(SAP) of maximum 10 Million USD or a small size GCF project between 10 to 50 Million USD can be explored by the programme proponent.

## **Lessons Learned**

**Diversion structures contribute to farmers' resilience by making water available continuously at no cost.** All the farmers where water from the canals is reaching their field have to do is to direct it to the right place using hoes and letting the water also pass through the canals to the other fields downstream. The water from upstream is full of nutrients from the silt that help fertilize the fields hence providing farmers with increasing water availability, nutrients, ability to control erosion and increase crop cultivation for most parts of the year - making them more resilient to climate impacts related to drought, floods and erratic rains.

**Increasing availability of water is changing pastoral to agro-pastoral lifestyles in Habero.** A more sedentary way of life has been created with the programme because of the raising of dairy cows, cultivation of fruits, vegetables and cereal crops production. This new sedentary lifestyle provides more livelihood security and diversification to livestock owners in terms of access to land, water and fodder while reducing conflicts with other farmers and promoting sustainable land management practices. The programme has helped to bring about 120 ha of land to be cultivated under supplementary irrigation at Fiza and Lemayt diversions. The diversion has helped increase the yield of sorghum and pearl millet and forage production throughout the year.

**Increasing productivity should be accompanied by enhancing marketing components.** The programme did not support marketing of surplus produce. The lack of a strong marketing of excess agriculture and livestock produce was a missing link of the programme design and implementation that would have created even better results in terms of increasing the income of farmers and enhancing their adaptive capacity to respond to climate impacts. The programme was not well prepared to help farmers market their surplus produce that is ever increasing over time. During the FGD, farmers mentioned problems with finding market for their milk and difficulties in transporting their milk on time to the nearby market in Keren. To help solve this problem, the programme provided farmers with churners to make butter from excess milk– a partial solution because all the butter is not consumed locally and therefore still needs to be marketed.

**If not well planned, adaptive management might limit the achievement of some of the initially expected results.** The Programme did more than expected under outcome 2 with the addition of MIHAP and Solar lighting, but in the process, lost focus on some programme targets (water access in Hamelmalo) and disproportionately laid more focus on sectoral activities (outcome 1 related to increasing water availability especially in Habero, and outcome, and 2 related to increasing productivity) and less on enabling activities (outcome 3 related to climate information, and outcome 4 on knowledge management). During FGD and interviews with resource persons, it was clear that activities and efforts regarding the creation and functioning of knowledge management systems was a much bigger problem encountered in other similar programmes and projects in Eritrea. The people will do very good work on the ground but often fail to adequately and systematically document them for replication, upscaling, teaching and transferability.

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## *Acronyms and Abbreviations*

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AE	Accredited Entity
AF	Adaptation Fund
BSE	Bureau of Standards and Evaluation
DG	Director General
DoE	Department of Environment
DoL	Department of Land
EbA	Ecosystem-based Adaptation
EA	Executing Agency (also referred to as Implementing Partner)
EE	Executing Entity
FGD	Focus group discussion
FWA	Forestry and Wildlife Authority
GCF	Green Climate Fund
GEF	Global Environment Facility
GoSE	Government of State of Eritrea
HAC	Hamelmallo Agricultural College
IA	Implementing Agency
IR	Inception Report
MIHAP	Minimum Integrated Household Agricultural Package
MND	Ministry of National Development
MoA	Ministry of Agriculture
MoEM	Ministry of Energy and Mines
MoLG	Ministry of Local Government
MoLWE	Ministry of Land, Water and Environment
MoND	Ministry of National Development
MoT	Ministry of Transport
NAPA	National Adaptation Programme of Action
NARI	National Agricultural Research Institute
NSC	National Steering Committee
NUEYS	National Union of Eritrean Youth and Students
NUEW	National Union of Eritrean Women
PPR	Project Performance Report
SWC	Soil and Water Conservation
TE	Terminal evaluation
ToR	Terms of reference
UNDP	United Nations Development Programme
WRD	Water Resource Department

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## **1. INTRODUCTION**

### **1.1. Purpose of the Terminal Evaluation**

The Terminal Evaluation (TE) is aimed at critically assessing the achievements of the “Climate Change Adaptation Programme in Water and Agriculture in the Anseba Region of Eritrea”. The evaluation looks into the programme design and implementation while the lessons learned section is aimed at capturing key lessons that can both improve the sustainability of benefits from this programme, and aid in the overall enhancement of the Government of State of Eritrea (GoSE) and UNDP programmes. Specific recommendations are also provided on future replication and upscaling to further expand the benefits of the programme.

### **1.2. Scope of the Terminal Evaluation**

The “Climate Change Adaptation Programme in Water and Agriculture in the Anseba Region of Eritrea is evaluated using the UNDP-GEF criteria for project evaluation. This terminal evaluation is therefore assessed using the following criteria:

- Relevance;
- Effectiveness;
- Efficiency;
- Impact; and
- Sustainability.

As indicated in the Terms of Reference in Annex 1, the evaluation equally covers different aspects of the programme design and implementation. They include but are not limited to the programme logical framework, stakeholder participation, management and institutional arrangements, adaptive management, partnership arrangements, monitoring and evaluation activities, etc.

### **1.3. Structure of the Evaluation Report**

The TE report is structured according to the following six sections:

- Executive Summary presents the programme summary, key findings and recommendations.
- Chapter One is the introduction - purpose, scope, methodology and limitations of the TE.
- Chapter Two highlights the programme description and development context.
- Chapter Three deals with the findings in terms of programme design, implementation and results.
- Chapter Four concludes and presents recommendations and lessons from the programme.
- Annexes section contains supplementary information regarding the TE.

### **1.4. Methodology**

#### **1.4.1. General Approach of the TE**

The Evaluation Team worked closely with the project team throughout the TE. The team was specifically guided by evaluation criteria and guidance given in the Terms of Reference in undertaking the TE and preparing the evaluation report. Further guidance was provided by the programme coordinator and experts from UNDP Eritrea and the Department of Environment (DoE) of the Ministry of Land, Water and Environment (MoLWE) – Government of the State of Eritrea (GoSE).

The Team used triangulation of data and information to conduct evidence-based evaluation. The three main sources of evidence were the programme documents and reports, interviews and discussions with stakeholders and programme beneficiaries and field observation of programme activities and results. The

field observations permitted the Team to validate most of the views and evidences presented by the programme reports and programme stakeholders and beneficiaries.

#### **1.4.2. Phases of the TE**

A three-phase approach was used in the TE: Inception phase; Data collection and analysis phase and Close out phase.

##### ***Inception Phase***

During this phase the Evaluation Team, in consultation with UNDP, the programme coordinator and the DoE, delineated the boundaries of the assignment. The Team was briefed by UNDP (Mr Adam Habteab) as soon as contracts were signed. The Team also consulted with the DoE and the programme coordinator and their feedback was integrated into the inception report. The inception report provided a more realistic work plan, identified stakeholders to be contacted, identified a list of relevant documents to be collected, field mission and methodology, timeline, report preparation and other relevant details pertaining to the execution and accomplishment of the TE. At the end of the inception phase the Team submitted an updated version of the Inception Report to UNDP.

##### ***Data Collection and Analysis Phase***

This phase represented the core of the TE. In order to carry out a full and as objective an evaluation as possible, the Team collected detailed and critical primary and secondary data from two sources: desk review and stakeholders' consultation.

**Desk review and research:** The Team identified, collected and analysed key programme documents and reports. The documents included, but were not limited to: programme document, annual programme reports; financial reports, work plans, baseline and monitoring reports. See Annex 3 for the complete list of documents consulted. The Team also reviewed other relevant sources of information about the programme such as videos / documentaries.

**Stakeholders' interviews and discussions:** The Team visited the two main programme locations - sub regions of Hamelmalo and Habero in the Anseba region in order to conduct face-to-face, group and focus group discussions. The UNDP Expert in consultation with the programme coordinator, representatives of MoA and DoE and community representatives discussed and set up meetings with the different programme stakeholders both in Asmara and the programme sites in the two sub-regions. A list of the people consulted during this evaluation can be seen in Figure 1 below and Annex 2.

The interviews and discussions with the programme beneficiaries and other stakeholders aimed at eliciting qualitative and quantitative information related to the relevance, efficiency, effectiveness, impact and sustainability of the programme. Discussions with other stakeholders especially from the implementing institutions covered aspects related to the programme design and implementation. A list of some of the guiding questions can be seen in Annex 5. As indicated in the programme logical framework, some of the indicators and information gathered were disaggregated by gender.

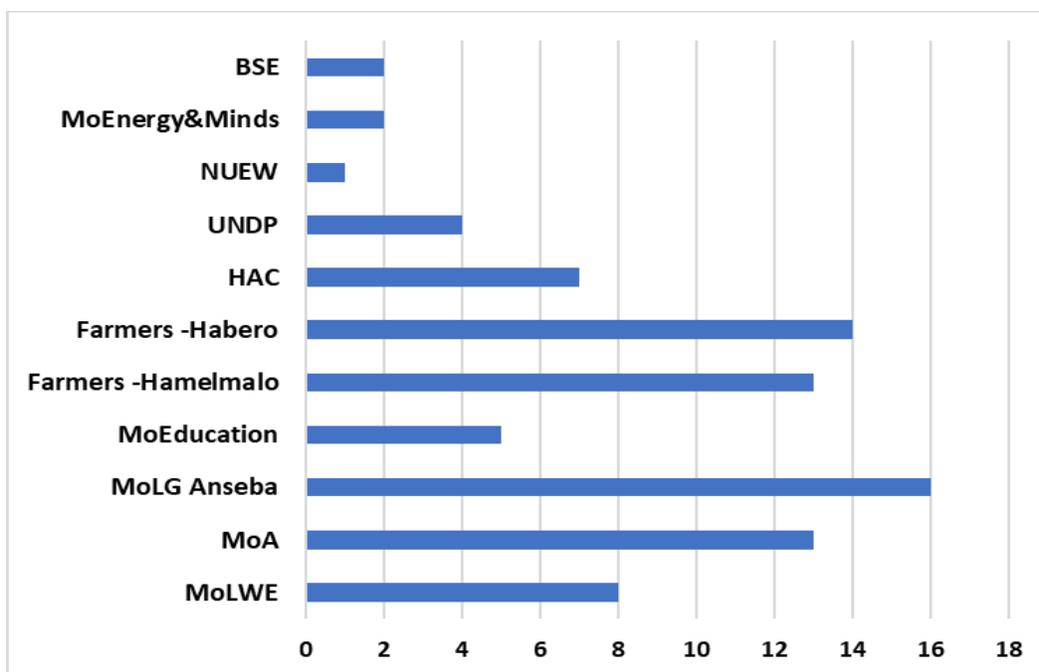


Figure 1. Stakeholders consulted during the TE

The analysis of the information gathered is conducted using mainly qualitative techniques to provide an understanding of the context in which the programme operated on the ground. Qualitative analysis also makes it possible for the identification of challenges, opportunities, best practices, lessons and recommendations related to the programme. Quantitative analysis is used where relevant and possible to interpret the result and identify trends using simple descriptive charts.

### *Close-out Phase*

During this phase, the Team prepared a complete TE Report in English – containing five sections as outlined in the table of content. The final TE report was subjected to the quality control and approval of UNDP and the AF. Key findings in the TE are included in the Executive Summary with recommendations and lessons learned. Upon approval the Final TE report was submitted to UNDP and the MoLWE Department of Environment.

## **2. PROGRAMME DESCRIPTION AND DEVELOPMENT CONTEXT**

### **2.1. Programme Start and Duration**

In 2011, the Government of the State of Eritrea (GOSE) and UNDP signed and agreed to jointly implement the Climate Change Adaptation Programme in Water and Agriculture in Anseba Region, Eritrea. The actual programme implementation on the ground started in 2013 and ended in 2018.

### **2.2. Problems that the Programme Sought to Address**

The programme sought to reduce the vulnerability of the population caused by the following problems:

- Recurrent drought affecting crop and livestock production systems and livelihoods in general;
- Flooding caused by erratic and heavy rains and negatively affecting farming and pastoralism;
- Soil erosion, land and rangeland degradation;

- No early warning systems to help farmers and pastoralists reduce climate risks;
- Lack of information on climate change risks in relations to farmer and pastoralist practices.

### 2.3. Immediate and Development Objectives of the Programme

The overall goal of the programme is to promote increased food security in Eritrea through ecologically sustainable and climate-resilient improvements in agricultural production. The objective of the programme is to increase community resilience and adaptive capacity to climate change through an integrated water management and agricultural development approach in the sub-zobas of Hamelmalo and Habero, Anseba Region, Eritrea.

The programme is expected to deliver on its goal and objective by achieving the following outcomes:

- **Outcome 1:** - Increased water availability and erosion control through floodwater harvesting and irrigation technologies.
- **Outcome 2:** - Enhanced climate-resilient agricultural and livestock production.
- **Outcome 3:** - Improved climate risk information and climate monitoring used to raise awareness of and enhance community preparedness to climate change hazards.
- **Outcome 4:** - Lessons learned and shared, and policy influenced through knowledge management system.

### 2.4. Baseline Indicators and Expected Results

The programme stated its baseline indicators and expected results for each of the outcomes as follows (Table 1):

Table 1: Summary of the project logical framework

Outcomes	Baseline Indicators	Outcome Target / Expected Results
<b>Outcome 1</b>	Only about 1million cubic meters is put in use	By 2018, 5.3 million cubic meters of water resources used in programme area (an increase of 4.3 million m3)
<b>Outcome 2</b>	Livelihood survey and environmental impact assessment baseline report	By 2018, 70% of programme beneficiaries have sufficient food for at least an additional three months per year
<b>Outcome 3</b>	Zero – no improved climate risk information available	By 2018, 70% of programme beneficiaries make use of improved climate risk information
<b>Outcome 4</b>	Zero – no lessons learned captured or disseminated	By 2018 at least five lessons learned materials produced and disseminated.

Note: See Annex 1- ToR with the detail logical framework of the programme

### 2.5. Main Stakeholders

The programme is working with climate induced vulnerable groups mainly:

- Small-scale farmers,
- Agro-pastoralists,
- Pastoralists and
- Rural women

### 3. FINDINGS

#### 3.1. Programme design / Formulation

The design and formulation of the programme's goal, objectives and components were very clear, practicable and feasible within the proposed time frame. This sub-section provides further analysis and discussion on the different aspects of the programme design and formulation.

##### 3.1.1. Analysis of Logical Framework / Results Framework

The programme design is focusing on addressing climate risk/impacts: droughts, floods, erratic rains. The objective of the programme in mitigating the problem is to increase community resilience and adaptive capacity to climate change through an integrated water management and agricultural development approach. To achieve the objective, the programme is focusing on 4 outcomes.

The Logical Framework Analysis (LFA) shows that the programme indicators are mostly SMART (Specific, Measurable, Achievable, Relevant, Time-bound) but some are not, partly because several results will bear fruit long after the programme is closed; therefore, some indicators are not achievable within the programme timeframe and should be considered more as impact indicators.

**Specific** (outcomes must use change language, describing a specific future condition): All the 4 Outcomes of the programme used change language such as increased, enhanced and established. Each outcome contains a number of intended outputs and output indicators for all of the programme activities.

**Measurable** (Results, whether quantitative or qualitative, must have measurable indicators, making it possible to assess whether they were achieved or not): The programme established very specific qualitative and quantitative indicators that are measurable. Almost all the indicators for the four outcomes were quantitative in nature and this made it clear enough for the evaluators to conduct analyses and assessment of the programme achievements. For example: 1.3.3: Amount of time spent in search of water and forage for livestock; and 4.2.1: Number of knowledge products developed for use in policy advocacy activities. One of the few were qualitative indicators included 3.2.2: Perceived change in decision making as a result of participation in awareness raising activities. Unfortunately, the programme did not do very much in this specific case to warrant a detailed assessment by the evaluators.

**Achievable** (Results must be within the capacity of the partners to achieve): During the programme formulation as well as its inception, all programme outcomes and their respective activities were discussed and consulted among key stakeholders. Financial and technical resources were assessed, and capacity of key programme partners evaluated. An institutional structure composed of a National Steering Committee, a Technical Committee and Programme Coordination Units were established to ensure the smooth implementation and achievement of the planned programme results. Capacity deficit of the local communities and other programme experts was addressed through the organisation of several trainings with a strong participation of women. The twenty-four-month delay in starting the programme is explained by the national developing planning process that was underway at the time and it was to be the reference frame for all cooperation programmes.

**Relevant** (Results must contribute to selected priorities of the national development framework): The programme design and formulation was to address one of the national priorities programmes identified in the National Adaptation Programmes of Action (NAPA) of Eritrea. All the programme activities are relevant to achieving the 4 stated outcomes and the overall goal and objective of the programme. Moreover, the programme remains very relevant in the effort by the Government of The State of Eritrea to fight the impacts

of climate change and transit to a low-carbon and climate-resilient development future as indicated in their Nationally Determined Contribution (NDC) document.

**Time-bound** (Results are never open-ended. There should be an expected date of accomplishment): The programme assigned each of the four outcomes with their respective outcome targets with a clear timeline of accomplishment. While all the outcome targets were time-bound, the output indicators were not. This is understandable because all the output activities and their indicators are guided by the time-bound outcome targets. The outcome targets all started with the word “By 2015.” - being the initial end date of the programme. An example of outcome 2 target: By 2015, 70% of programme beneficiaries have sufficient food for at least an additional three months per year. With a two-year delay, the start of the phrase should have automatically been shifted forward by two years. The accomplishment of each result area depended on a clearly assigned budget, yearly implementation plan and continuous monitoring and evaluation. The programme implementation however ended in 2018 instead of December 2017.

### Gender inclusion in the logical framework

Beyond the SMART indicators, the programme design specifically integrated gender in the logical framework indicators 2.1.1, 2.1.2, 3.1.4, and 3.2.1. The planning, implementation and results of some of the programme’s activities were therefore also measured in terms of gender considerations.

### 3.1.2. Assumptions and Risks

Assumptions and risks were clearly identified, and steps were taken to mitigate most of them during the implementation of the programme (see Table 2). Some of the assumptions and risks identified were however not successfully mitigated and the programme ended up not accomplishing activities related to those risks. An example is the hiring of an international expert to help develop capacity to design climate risk information systems for use by local communities. Steps were never taken in this regard and this part of the programme was consequently not accomplished.

Table 2: Risks identified by the programme and steps taken to mitigate them

Identified Risk	Steps Taken to Mitigate Risk	TE Team Comments
Severe drought or other extreme weather events	Interventions were made through other adaptation project and the current programme	Mitigation step was taken
Groundwater level dropping and salinisation of wells leading to potential scarcity and competition, possibly leading to conflict.	All necessary environmental assessment procedures were followed to ensure that the design of the investments follows best practice. An Environmental Impact Assessment (EIA) study was conducted.	Livelihood and EIA was conducted as baseline
Low human and institutional capacity for the implementation of climate interventions.	Hire international expertise to help develop capacity in GoE to design climate risk information systems for use by local communities	This mitigation step never happened
Delays in programme implementation, particularly for infrastructure.	Construction design and materials were delayed but the programme finally constructed the diversion scheme.	Mitigation step was taken
Shortage of feed, water and health of the dairy cows.	Water was made available by the diversions and micro-dams and livestock, forage, crop, vegetable and fruit production activities were undertaken	Mitigation step was taken

Failure of Regional administration to institutionalise early warning system and meteorological / climate observation components.	Hire international expertise to help develop capacity in GoE to design early warning system and a climate observatory	This mitigation step never happened
Migration of human and livestock population under conditions of extreme severity to localities with a better natural resource base.	Programme implementation reduced the risk by providing resilient livelihood opportunities to communities	Mitigation step was taken
Accessibility and communications in the programme	Purchase of motorbikes and mobile phones / radio communication	Partly accomplished (Motorbikes were never purchased)

### 3.1.3. Lessons Learned from other Programmes Incorporated into Programme Design

The programme generally capitalized on existing legal frameworks and on previous experiences in the implementation of other development and climate change projects such as the Anseba local development project (ALDP) and the sustainable land management (SLM) project. Table 3 provide concrete examples.

*Table 3: Incorporation of lessons learned into the implementation of the programme*

<b>Implementation and Adaptive Management</b>	<b>Response by the Programme</b>
What implementation issues/lessons, either positive or negative, affected progress?	The budget of the programme was released during the rainy season which was not convenient to implement the proposed action of diversion schemes. Infrastructure was built in 2014. Bill of quantity (BoQ) and design of the activities were prepared. 3000 quintals of cement was purchased for the construction of diversion structure. Continuous negotiation and consultation was done with Ministry of National Development and MoLWE. A series of letters were written to these Ministries to speed up the implementation process.
Were there any delays in implementation? If so, include any causes of delays. What measures have been taken to reduce delays?	Yes, there was budget delay of several months in implementation. Revising the proposed plan of action and a series of consultation with the stakeholder and community was done to mitigate the delay.
Describe any changes undertaken to improve results on the ground or any changes made to programme outputs (i.e. changes to programme design)	Due to the rainy season construction couldn't be executed as planned, to save time and expedite implementation after the rainy season cement for construction was procured. Construction of soil and water -conservation measures, and afforestation were implemented prior to the proposed schedule.

<p>How have gender considerations been taken into consideration during the reporting period? What have been the lessons learned as a consequence of inclusion of such considerations on programme performance or impacts?</p>	<p>The compliance of the programme with Equal Opportunity Act is mandatory as per Government legal framework. Focus on Gender has been fully integrated into programme activities through involvement of women in activities (Women's association have been actively involved in the adaption programme: plantation of selected trees and shrubs like sisal and acacia and women's participation in soil and water conservation activities was very high).</p>
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### 3.1.4. Planned Stakeholders' Participation

In the design of the programme, the core stakeholders of the programme who represent the programme's target group and beneficiaries are local communities, mainly: small-scale farmers, agro-pastoralists, pastoralists and rural women. Other key stakeholders who were identified in the beginning included:

- Ministry of Land, Water and Environment (MoLW),
- Ministry of Agriculture (MoA),
- Anseba Regional and Hamelmalo and Habero Sub-regional Administrations and Departments of Land and Agriculture.

In addition, the design document identified other roles for: village councils, other community members, MoND, Hamelmalo Agricultural College, Metrological Service Unit of the MoTC, NUEW and NUEYS.

### 3.1.5. Replication Approach

The programme design talked about replication under the section on learning and knowledge management. According to the project design (page 30), "the conditions for success, and failure factors, with regard to replication and scaling up" will be documented. Moreover, the programme's experience and lessons will be used to assist with the "required replications of the programme adaptation measures throughout Eritrea and elsewhere in the region".

Based on our analysis, the programme can be replicated using different approaches. Firstly, it can be repeated with almost all the exact programme components in a very similar socio-economic, biophysical and political and governance context within Eritrea. In this case, there is a need to build on lessons learned and best practices as well as all the challenges, shortcomings and recommendations to readjust the design and implementation aspects. Replication would have been less challenging if the current programme was able to accomplish all the results related to outcome 4 on knowledge management. Another aspect to consider would be to increase the financial portfolio of the programme. If for example the programme is to be replicated with funding from another source such as the Green Climate Fund (GCF) as a phase 2, the financial size and number of households to be positively impacted would increase by many folds.

Secondly, it is possible that only some of the programme interventions can be replicated in other locations. This will depend on the level of vulnerability, adaptive capacity, socio-cultural, economic and other needs and priorities of the expected beneficiaries and target groups. In this case, certain climate smart-innovations and adaptation measures would be a great aspect to consider for replication – especially those that have high potentials to increase the resilience of vulnerable communities and ecosystems. What comes to mind here are the climate-smart seed varieties preferred by farmers, the MIHAP as diversified livelihood option, SWC practices, construction of water storage and diversion structures, and the training of farmers and extension workers.

Thirdly, the same programme can be repeated elsewhere with a strong new component on markets and value chain. In a very successful situation, farmers will produce excess and marketing of their produce will become the main challenge. This approach would need to have the vision of not just taking farmers out of poverty and increasing their adaptive capacity but rather transforming their livelihood activities into small-size climate resilient businesses with a readily available market.

### **3.1.6. UNDP Comparative Advantage**

UNDP has the comparative advantage of being physically present in Eritrea and working on development issues as a whole and climate change in particular. A credible partner that has been implementing several programme over the past two decades in Eritrea with a strong focus on the Millennium Development Goals (MDGs) in the past and now on the Sustainable Development Goals (SDG). In 2013, UNDP signed the Strategic Partnership Cooperation Framework (SPCF 1) in 2013 with the GoSE to further the implementation of Eritrea's national development plan aimed at reducing poverty levels, expanding national capacity, increasing food security and supporting environmental sustainability. UNDP continues to collaborate with the government and plays a key role in supporting the government's implementation of international conventions related to Climate Change (UNFCCC), Biodiversity (UNCBD) and Desertification (UNCCD). Being an accredited entity of the GCF and an implementing agency of GEF and other conventions, UNDP is well respected globally and understands all the international processes, contracting and reporting procedures, and many more of the different multilateral and bilateral institutions. One of the main advantages of UNDP is therefore its capacity to mobilize financial resources on behalf of the GoSE, prepare, endorse and support the implementation of programme proposals for the GoSE. A case in point being this programme, which is also part of the SPCF 2.

UNDP is committed to building the capacity of the country in many areas including the mainstreaming of environmental considerations in the development processes at the national, regional and sub-regional levels. With its experts spread all over the world, UNDP can bring valuable expertise to contribute to addressing Eritrea's development challenges, – including directly through its country office and other offices out of Eritrea. This is most crucial as the GoSE staff capacity of this programme is limited and had to share their time between different interventions / activities. However, the GoSE's requests for any support have to be made explicitly by the GoSE.

The evaluators were of the opinion that UNDP Eritrea certainly has the comparative advantage to support the GoSE in implementing such kind of programmes, in particular in the programme identification, formulation, and appraisal; determination of execution modality and local capacity assessment of the national executing entity; briefing and de-briefing of programme staff; oversight and monitoring of AF funds, including participation in programme reviews; receipt, allocation and reporting to the AF Board of financial resources; thematic and technical capacity building and backstopping; support with knowledge transfer; policy advisory services; technical and quality assurance. While UNDP played an important role in the project in most of the above-mentioned roles, the contribution of UNDP in the capacity building of the project was however limited. Due to this some activities were not implemented properly.

### **3.1.7. Linkages between Programme and Interventions within the Sector**

The programme is a product of the National Adaptation Programmes of Action (NAPAs) of Eritrea. NAPA provides a process for Least Developed Countries (LDCs) like Eritrea to identify priority activities that respond to their immediate needs to adapt to climate change, ultimately leading to the implementation of programmes aimed at reducing the economic and social costs of climate change. The programme therefore represents one of the five priority adaptation actions in the agriculture, forestry and water sectors identified

in Eritrea's NAPA. While this programme is funded under the Adaptation Fund (AF), the other two are supposed to be funded by the Least Developed Country Fund (LDCF). The two programmes include:

- Integrating climate change risks into community-based livestock management in the Northwestern Lowlands of Eritrea. It was first submitted to the LDCF in 2007 and was to be implemented by the MoA and managed by UNDP as the GEF agency, but it never happened.
- Mainstreaming Climate Risk Considerations in Food Security and IWRM in Tsilima Plains and Upper Catchment Area. It was first submitted to the LDCF in 2014, was to be implemented by the MoLWE and managed by UNDP as GEF agency.

### **3.1.8. Management Arrangements**

This programme was executed by the Ministry of Land, Water and Environment (MoLWE) with the support of UNDP Eritrea. The programme was monitored by a management structure composed of a National Steering Committee (NSC), Programme Technical Committee (PTC), and the Anseba Regional Administration hosting the Programme Coordination Unit (PCU). The three bodies were interacting with each other and at different levels.

At the beginning of the project, the NSC guided and oversaw the programme and facilitated access to additional technical assistance when required. It was composed of representatives of the MoLWE (Central), the MoA (Central), the Department of Agriculture and Land and Infrastructure Departments of the Anseba Regional administration, as well as the Ministry of Finance, and UNDP. The NSC was supposed to meet at least twice a year, however, NCS was not operational during the actual implementation period.

The PTC met quarterly and their role was to guide the programme implementation. It was chaired by the National Programme Coordinator (NPC), and it included representatives of the Land, Water and Environment Divisions within the Infrastructure Services Department of the Anseba Regional administration, the NUEW, NUEYS, Hamalmelo Agricultural College, NARI, and representatives from the Anseba Regional Agriculture department.

The five-person PCU was responsible for day-to-day management of the programme activities. It was headed by the NPC, and it included a Programme Analyst, Programme Finance and Administration Associate, Programme Assistant, and Programme Driver. Direct supervision of the PCU was provided by the Department of Agriculture and Land of the Regional administration, with the second level of supervision by the NSC.

## **3.2. Programme Implementation**

### **3.2.1. Adaptive Management**

The programme deployed a number of adaptive management measures. The most significant measures were:

- ***The establishment of six class A stations.*** The plan was to establish one class A and six class C metrological stations within the programme area. However, during the implementation period consultation with experts recommended to increase the number of class A stations to six and distribute them within the programme area and surrounding location with diverse agro-climatic characteristics for comparability and better data analysis.

- ***The construction of more dam.*** The plan was to construct one sub-surface dam on the Anseba river and two micro dams, however later it was observed this will serve only those on the riverbank or near to it. Therefore, the sub-surface dam was replaced by a number of small dams and check dams distributed in the tributaries of the Anseba river. On the other hand, a spillway was constructed to improve the capacity of an existing dam in Musha and improve the recharge capacity downstream of the dam.
- ***The introduction of MIHAP.*** The Minimum Integrated Household Agricultural Package (MIHAP) was a concept developed by the Ministry of Agriculture for improving household income and food security. The programme supported MIHAP by providing farmers in this program with dairy animals, improved forage, cereal and vegetable seed, fruit and wood tree seedlings, bee hives and chicks. This proved to be a very effective livelihood diversification adaptation measure.
- ***The introduction of household solar energy.*** Due to its high priority to the communities of both Habero and Hamelmalo, solar panels were installed in 748 households by transferring some money from other activities under outcome 4. In addition to its climate mitigation benefits this intervention supports the farmers in upgrading their household income by minimizing household expenditures on purchasing kerosene. Since three schools are also benefiting from the solar lighting, the intervention had contributed in improving education in the society by giving opportunities for night studies and using some electrical or electronic tools such as computers. Fifty of the total beneficiaries are from households who are also implementing the MIHAP.

Based on FGD, field observations and interviews with the government ministries, all the above-mentioned adaptive management measures were taken in view of giving the maximum benefit to as much local and vulnerable communities as possible. We therefore argue that these measures were necessary steps to meet the programme's overall objectives, which was to promote increased food security in Eritrea through ecologically sustainable and climate-resilient improvements in agricultural production and the wellbeing of the local population.

### **3.2.2. Partnership Arrangements**

The partnership in this programme was limited to stakeholders in the country at the national, regional, sub-regional and community levels and no evidence exists to show involvement of stakeholders from outside Eritrea. Initially, the involvement of the stakeholders in the programme started by a consultation process during the programme preparation period. The programme formulation team consulted and identified the MoLWE as executing body and MoLG, Anseba region as implementer. Individuals from the MoA, Department of Land, Department of Water, Department of Energy, Meteorological Service Unit were also approached. The organizational structure of the programme coupled with the field discussions and observations of the evaluators showed that various stakeholders participated in all levels within the National Steering Committee (NSC), Programme Technical Committee (PTC) and at the Programme Coordination Unit (PCU) at the sub-regional levels.

Table 4 presents the different categories of stakeholders who were planned to participate and actually participated in the programme. Overall, the programme beneficiaries were very receptive to the programme with active participation in the awareness raising / consultation and implementation phases of the programme. There has been a strong involvement/commitment of the Anseba Regional, Hamelmalo and Habero Sub-regional staff in the implementation of the programme activities. At the national level, the programme has been supported mainly by the MoLWE and MoA while UNDP was the GEF/AF implementation agency on the ground.

Table 4: Stakeholders' participation in the programme

Stakeholder	Outcome 1	Outcome 2	Outcome 3	Outcome 4
MoA. Incl. NARI	√	√	√	√
MoLWE	√	√	√	√
Anseba Regional Administration	√	√	√	√
MoND	√	√	√	√
Village Councils	√	√	√	
Community members	√	√	√	
Hamelmallo Agricultural College		√	√	√
Meteorological Service Unit of the MoTC			√	
NUEW		√	√	
NUEYS		√	√	

### 3.2.3. Feedback from M&E Activities Used for Adaptive Management

Adaptive management measures were taken in some cases in response to the annual programme performance reports (PPR). Interviews and group discussions during the Midterm Review (MTR) indicated that all the approached stakeholders and farmers had positive response to the adapting of micro-dams in the place of subsurface dams. However, none of the programme documents, reports or minutes of meetings indicated a feedback on all the adaptive management activities of the programme related to MIHAP, solar lighting, and six class A meteorological stations.

Overall, there were no significant changes to the programme as a result of the 17 recommendations from the MTR report. This situation can be explained by one or more the following reasons: (i) the MTR was finalised about one year to the end of the programme so the remaining time to address some of the recommendations was too short. (ii) the unwillingness of the programme management to take deliberate steps to address the recommendations and / or (iii) the lack of programme funds to address some of the recommendations.

The weakest performance of the programme was in outcomes 3 and 4 and recommendations to improve these outcomes seemed not to have been taken up as part of the adaptive management measures. These recommendations include among others: “the need to recruit a climate change expert at the regional level and undertaking regional study tours as proposed in the work plan” (MTR page 36).

### 3.2.4. Programme Finance

The total programme cost was US\$ 6,010,000 and US\$ 5,423,000 was for programme implementation (Table 5). It is also important to note the strong co-financing contribution of US\$ 510,850 of the government of Eritrea and the community through the programme cycle management fee. Co-financing is one of the strong sides of the government of Eritrea during project implementation which reveals their commitment and ownership of the project.

Due to long procedures there was some delay in the timely release of funds to the programme. This was mitigated by borrowing the required amount of money from other sources from the Anseba Region administration and refunding it as soon as the programme funds were available. Although the largest portion of the implementation budget was for outcome 1, during the implementation period due to adaptive management practices more money was added to outcomes 2 and 3. (Tables 6). However, the reviewed audit reports for the years 2015, 2016 and 2017 showed the expenses were in conformity with approved

programme budgets, in compliance with the relevant UNDP regulations, rules, procedures and policies; and supported by confirmation from beneficiaries. In addition to that the observations made were at the category of low risk. Budget disbursed and expended in 2018 had not yet been audited by the time of this terminal evaluation.

*Table 5: Requested and approved budget for the programme*

<b>Component</b>	<b>Outputs</b>	<b>Cost (US\$)</b>
<b>OUTCOME 1:</b> Increased water availability and erosion control through groundwater recharge, rainwater harvesting, irrigation and SWC measures	Four outputs focused on construction of sub-surface, micro and check dams, diversion canals, SWC infrastructure and irrigation facilities.	3,056,400
<b>OUTCOME 2:</b> Climate-resilient agricultural and Livestock production enhanced	Two outputs focused on developing climate resilient agricultural technologies and methods and transferring them to farmers and utilization of seasonal forecasts to enhance adaptive capacity and climate-proof production systems	1,250,000
<b>OUTCOME 3:</b> Improved climate risk information and climate monitoring used to raise awareness of and enhance community preparedness to climate change hazards	Three outputs focused on generation of improved climate risk information, developing capacity for climate monitoring and analysis, raising awareness at different levels on climate change risks and enhancing community preparedness.	750,000
<b>OUTCOME 4:</b> Lessons learned and shared, and policy influenced through knowledge management system	Two outputs focused on establishment of knowledge management system and policy advocacy activities.	366,600
<b>Total Programme Implementation Costs</b>		<b>5,423,000</b>
Programme Execution cost		587,000
<b>Total Programme Cost</b>		<b>6,010,000</b>
Programme Cycle Management Fee charged by the Implementing Entity (8.5%)		510,850
<b>Amount of Financing Requested in US\$</b>		<b>6,520,850</b>

*Table 6: Total programme expenditure from 2013 to 2018 by outcome*

<b>Outcome</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016/2017</b>	<b>2018</b>	<b>Total \$US</b>
Outcome 1	527,967.45	1,180,874.38	619,763.24	982705.65	352,007.82	3,663,318.54
Outcome 2	0	118,982.79	129,125.60	81,835.00	22,610.75	352,554.14
Outcome 3	80,000	164,056.26	35,979.40	12,000.00		292,036.00
Outcome 4	0	41,205.95	35,568.15	8,000.00		84,774.10
<b>Sub-total</b>	<b>607,967.45</b>	<b>1,505,119.38</b>	<b>820,436.39</b>	<b>1,084,540.65</b>	<b>374,618.57</b>	<b>4,392,682.44</b>
Execution cost	<b>23,782.21</b>	<b>36,456.36</b>	<b>41,188.36</b>	<b>17,366.65</b>		<b>118,793.58</b>

### **3.2.5. Monitoring and Evaluation (M&E) (\*)**

Monitoring and Evaluation during design and implementation is satisfactory because it comprised of different activities that included the inception workshop, quarter and annual reports, field visits, back to

office reports, mid-term evaluation, terminal evaluation and annual financial auditing. The normal procedure for delivering reports was as follows: The programme coordinator prepared the reports and sent them to the MoWLE who approved and submitted them to the Ministry of National Development (MND) who finally sent them to UNDP after approval. Since the programme is under the Anseba Region's supervision and the MoA is the executor, this means the reports were also reviewed by the major stakeholders.

While roles and responsibilities were well articulated for the M&E process, there was no dedicated person hired to act as the M&E expert. The project coordinator had to fill in this gap and sufficient budget was not dedicated for M&E. The M&E reports especially the programme performance reports (PPR) were not always submitted on time but were generally well done. The PPR used the templates of the Adaptation Fund and consisted of the following sections: an overview, financial data, risk assessment, programme performance rating, project indicators, lessons learned, result tracker and units for indicators. Our analysis shows that the ratings of the PPR are consistent with the findings of both the MTR and this terminal evaluation.

### **3.2.6. UNDP and Implementing Partner, Coordination, and Operational Issues (\*)**

UNDP as International Implementing Agency (IA) and MoLWE as the Executing Entities (EE) exercised prudent and quality management actions to ensure achievement of programme outcomes and objective in a timely manner. UNDP as the IA, as stipulated in the Management Arrangements, provided support to and worked cooperatively with the MoA, MoLWE, MoND and Ministry of Finance and other members of the National Steering Committee during the programme implementation and contributed in undertaking some of the adaptive management measures to ensure achievement of the programme results and objective.

Despite some delays in the disbursement of funds, and the operational completion of the programme, for all their individual and collective efforts and strong support exercised throughout programme implementation to successfully achieve the programme results and ensure sustainability, the evaluators rate the IA and EE coordination and cooperation as Satisfactory.

## **3.3. Programme Results**

### **3.3.1. Overall Results (Attainment of Objectives) (\*)**

The overall goal of the programme to promote increased food security in Eritrea through ecologically sustainable and climate-resilient improvements in agricultural production is satisfactory.

The objective of the programme to increase community resilience and adaptive capacity to climate change through an integrated water management and agricultural development approach in the sub-regions of Hamelmalo and Habero, Anseba Region is satisfactory.

- OUTCOME 1 to increase water availability and erosion control through floodwater harvesting and irrigation technologies is satisfactory.
- OUTCOME 2 to enhance climate-resilient agricultural and livestock production is highly satisfactory.
- OUTCOME 3 to improve climate risk information and climate monitoring used to raise awareness of and enhance community preparedness to climate change hazards is marginally satisfactory.
- OUTCOME 4 on lessons learned and shared and policy influenced through knowledge management system is marginally satisfactory.

The programme has successfully increased crop and livestock productivity and hence food security. Farmers can now produce more than double or triple the amount of food they need for household consumption.

Similarly, milk production has increased from 2L per cow per day to about 5-8 L per cow per day and the excesses are taken to the markets for sales to generate household income.

The objective of this programme has been successfully met due to a number of factors. Worth mentioning are the adaptation practices related to: soil and water conservation practices, livelihood diversification strategy especially through the MIHAP and other programme activities, the use of climate-smart technologies and varieties of crop and livestock, the change of lifestyle from pastoralist to agro-pastoralists, and the deliberate integration of gender consideration in the implementation of the programme. Moreover, the programme established 6 meteorological stations to generate climate data and information while some knowledge management products in the form of documents were produced.

The assessment of the overall attainment of the results is strongly influenced by the satisfactory and highly satisfactory performances of outcomes 1 and 2 respectively. While outcomes 3 and 4 performances were marginally satisfactory, almost all the farmers' interest, focus and priorities were on outcomes 1 and 2 – making water available and accessible and increasing agricultural productivity.

The programme benefitted more than the intended 6,141 households (HH) stated in the project document. The beneficiaries composed mainly of vulnerable groups including small-scale farmers, agro-pastoralists, pastoralists and rural women. While many households were involved in more than one activity, Table 7 provides an idea of the number of households who benefitted from specific programme implementation activities. Some of the households benefitted from just one activity while others benefitted from more than one activity.

*Table 7: Household who benefitted from the programme activities*

<b>Selected Programme Activities</b>	<b>Number of HH who benefitted</b>
Trainings on climate information, adaptation measures etc.	367
Soil and water conservation activities	850
Farm land terracing	2370
Improved adapted sorghum and pearl millet seeds	5528
Bee keeping	50
Energy efficient stove distribution	400
Solar panels distribution	748
Minimum integrated household agricultural package (MIHAP)	655
<b>Total</b>	<b>10,968</b>

### **3.3.2. Relevance (\*)**

The programme remains relevant to local, regional and national priorities as well as to the UNDP strategic priorities as explained in detail below.

#### **Relevance to Adaptation Fund Strategic Priorities**

The relevance of the programme to the AF mandate and strategic priorities is significant. The programme is strongly aligned with the mandate of the AF, which is to finance concrete adaptation projects and programmes. The programme is equally strongly aligned with the strategic priorities of the AF that are related to: supporting adaptation priorities determined by developing countries; consistency with relevant national development, poverty reduction and climate change strategies; taking into account existing political guidance; and paying special attention to the particular needs of the most vulnerable communities. Moreover, the programme contributes directly to four of the AF priority project sectors - agriculture, water management, food security and rural development.

### **Relevant to UNDP Strategic Priorities**

The programme is significantly relevant to the strategic priorities of the UN in general and UNDP Eritrea in particular. Key areas of alignment are the UN sustainable development goals number 1 (no poverty), 2 (zero hunger), 5 (gender equality), 13 (climate action) and 15 (life on land). Specifically, the programme aligns with two of the three development settings of UNDP's Strategic Plan, 2018-2021 - Eradicate poverty in all its forms and dimensions and build resilience to shocks and crises.

### **Relevance to National Priorities**

The relevance of the programme is significant as it originated from the National Adaptation Programme of Action (NAPA) and was aimed at addressing the immediate and most pressing climate risks in Eritrea especially recurrent droughts and erratic rains. The programme is completely aligned with the priorities set out by the Government of The State of Eritrea in its Nationally Determine Contribution-NDC (even though the NDC document was prepared in September 2015 after the project had begun), NAPA, Interim Poverty Reduction Strategy Paper (I-PRSP), which provide the government's commitment to poverty reduction, food security, fight impacts of climate change, and transit to low carbon and climate resilient economy. The programme equally aligns with the 2009 Ten Year Long-Term Indicative Perspective Development Plan (TYIPDP), 2006 Agriculture Sector Policy, 2007 Water Policy, 2009 Integrated Water Resource Management Action Plan, 2015 National Biodiversity Strategy and Action Plan (NBSAP) and the first and second national communications to the UNFCCC in 2001 and 2012 respectively.

### **Relevance to Regional and Local Priorities**

The relevance of the programme at the Anseba regional and sub-regional levels of Hamelmalo and Habero is significant. The implementation of the activities of Outcome 1 of the programme was planned and implemented with the strong participation of farmers whose needs were central to the programme justification. Farmers were in dire need of water availability and access to carry out their farming and livestock activities. Recurrent droughts, floods and changing rainfall patterns were disrupting their activities and negatively affecting crop and livestock productivity.

By making water available through the construction of micro dams and water diversion structures, outcome 2 of the programme provided farmers with the climate-resilient agricultural technologies and improved and adapted seed and livestock varieties. Several farmers were trained on animal production and health, fodder cultivation, horticulture and irrigation, establishment of the dairy farms, cultivation of fruits, animal feeds and vegetables. The distribution of cross-bred cows, seeds and seedlings of animal fodder, fruits and vegetables helped farmers improve the nutrition security at household level and supply markets in the villages and towns with milk, animal feed and vegetables at reasonable prices. Because of the programme, many farmers were able to plant crops twice a year both in the rainy and dry seasons.

The programme under outcome 3 installed meteorological stations to generate climate data and climate risk information to provide climate change forecast to farmers. With this information, farmers can prepare or predict the future of their farming activities and take the necessary steps to reduce negative impacts of climate change on their agricultural production system.

### **3.3.3. Effectiveness (\*)**

The overall effectiveness of the programme is rated as Satisfactory (S). Despite the less impressive performances of activities under outcomes 3 and 4, the results of outcome 1 and 2 are much better and focus on the core aspects of improving the resilience and adaptive capacities of the programme beneficiaries.

#### ***Outcome 1: Increased Water Availability and Erosion Control through Groundwater Recharge, Rainwater Harvesting, Irrigation and Soil and Water Conservation Measures***

The effectiveness of outcome 1 is satisfactory due to the successful implementation and achievement of almost all of the planned activities. These include the construction of diversion structures and associated irrigation technologies, dams, micro-dams and SWC activities. Some changes were made relating to the

construction of subsurface dams while over-sowing of grasses was not carried out as planned. The programme was able to increase the availability of water by about 1 to 2 million m<sup>3</sup> but fell short of the 4.3 million m<sup>3</sup> target. A possible explanation is the setting of a very ambitious and unrealistic programme baseline and target.

***Output 1.1: Groundwater Recharged and Irrigation Technologies Implemented for Crop and Forage Production by Developing a Sub-Surface Dam within the Anseba River***

This output experienced a drastic change made to the planned activity. After consultations and based on an agreement between the programme coordinator, experts of the MoA and local administration, the programme replaced the planned construction of a subsurface dam in the Hamelmalo sub region with the construction of a 0.5 million m<sup>3</sup> capacity dam at Shlilak (Basheri). According to the Director General, Agriculture and Land Department, Anseba Region, the programme coordinator, administrator of Hamelmalo sub-region and FGD, the benefits from a sub- surface dam would serve only a limited number of farmers who already have wells and pumps. The construction of a micro-dam would rather serve a greater number of farmers downstream of the dam who have no opportunity of obtaining water to irrigate their vegetables, forages and cereals.

***Output 1.2. Floodwater Harvested to Enable Irrigation of Rain-fed Cereal Production and Rangelands.***

This output is assessed to be highly satisfactory for several reasons. First, water diversion structures consisting of weir, gates and respectively 170 m and 136 m long canals were constructed at two sites in Fiza and Lemayt/Simit Heday to supply water to 120 ha of agricultural land in Habero. Three hundred and sixty-eight people participated during the construction out of which 8% were women. Second, an irrigation system consisting of a 314 m<sup>3</sup> reservoir and a solar pump has been constructed to irrigate farms farther away from the diversion weirs and saving farmers the cost of fuel. Two solar pumps, protected by a 144 m<sup>2</sup> of mesh wire fence, and having a capacity of 7.5 kw each and 48 modules of 180-watt capacity with all accessories have been installed and fixed to generate power to pump about 50 m<sup>3</sup> of water to the reservoir for about 6 and ½ hours a day. Third, another well was drilled by this programme and equipped with a water pump in Lemayt with a full set of underground pipes installed. Land was distributed to farmers who used it to produce forages and vegetables and supplement their cereal crops during the rainy season.

***Output 1.3. Two Micro Dams Constructed to Retain and Store Rainfall Run-off and to Enable Higher Cereal and Forage Production Levels as well as Supply of Water for Livestock***

Output 1.3 is rated as satisfactory. Several dams have been constructed to provide water to livestock and humans. Two micro-dams in Wazentet and Gebisi with a total capacity of about 864,000 m<sup>3</sup> including water obtained through ground water recharge, and an earthen dam in Gebisi. Another micro dam was expected to be constructed in Shlilak (Basheri) to replace the construction of the subsurface dam (as explained under output 1.1 above) but this never happened.

There is a visible increase in downstream recharge from some of the dams and farmers have access to water at shallow depths. While water was available throughout the years due to the construction of the dams, it was not accessible to some communities in Hamelmalo who lacked irrigation pumps and equipment. Generally, access to water has led to increase in yields of cereal production from 4 to 7q/ha in some areas while forage production has led to increased sales of alfalfa and elephant grass that has resulted in increased milk production of the cross-bred cows. The farmers of Musha Shebah are now producing vegetable. They reported a daily average production of 8 litres of milk and they keep about 2 litres for home consumption and sell the remaining six litres at 28 nakfa per litre. In Aretay, milk increased from 2L to 5L, while fruits and vegetables are producing enough. Similarly, in Fiza, milk increased from 2L to about 7L, cereals increased from 0.3 to 0.7 ton per production season and fruits and vegetables are being produced at increasing quantities for household consumption and sales.

***Output 1.4. Soil and Water Conservation Measures Implemented to Improve Runoff Management and Infiltration for Improved Rangeland Management and Enhanced Cereal Production.***

Output 1.4. is assessed to be satisfactory. To improve soil and water conservation in the sub-regions of Habero and Hamelmalo, the programme engaged in hillside terraces, check dams construction, water catchment protection and rehabilitation, creation of enclosure areas that produce grasses and help regeneration of trees, and the planting of sisal and *Acacia senegal* seedlings for soil stabilization as indicated in the table below. Output 1.4. fell short of realizing the set target to establish a nursery of 0.5 million seedling capacity. However, a total of 850 households across Ferhien, Genfelom, Kush, Filfle, Gelet, Qar'obel, Habero Tsa'eda and Aretay communities benefitted from the SWC activities and crop production is reported to have increased by 15-20%. Farmers equally took the lead in SWC activities and during dam construction, over 35% of the participants were females.

*Table 8: SWC activities in sub-zoba*

<b>Activity</b>	<b>Habero</b>	<b>Hamelmalo</b>
Hillside terracing	96,326 km	175.02 km
Check dam	1229.4 m <sup>2</sup>	3061.9 m <sup>3</sup>
Seedling hole digging	60,000	19,740
Sisal & <i>Acacia senegal</i> seeding transplanted	60,000	26,204
Enclosure established	25 ha	25 ha

*Source: MoA 2016*

***Outcome 2: Climate-Resilient Agricultural and Livestock Production Enhanced***

The effectiveness of outcome 2 is assessed as highly satisfactory. Climate-resilient agricultural technologies, methods and trainings were provided to farmers. The minimum integrated household agricultural package (MIHAP) coupled with traditional improved fuel-efficient stoves and solar panels provided diverse livelihood options and opportunities to many farming households. The initial results are appreciated by many of the farmers. Their adaptive capacity and that of their production systems are increasing as they experience increasing crop and livestock productivity and sales.

***Output 2.1. A Range of Climate-Resilient Agricultural Technologies and Methods Developed and Transferred to Farmers***

This output is rated as highly satisfactory due to the several accomplishments that meet and exceed the expectations of the programme. First, the programme developed the capacity of 232 programme beneficiaries on how to implement specific agricultural and livestock adaptation measures, of which 30% were females (see Table 9).

Table 9: Training of programme beneficiaries

Topic	Date	No. of Participants	
		Male	Female
Animal Production	06-08/01/2016	15	10
Crop Production	09-11/01/2016	15	10
Horticulture	12-16/01/2016	15	10
Plant Protection	17-25/01/2016	17	8
Animal Production	06-08/06/2016	30	10
Crop Production	09-11/06/2016	30	10
Horticulture	12-16/06/2016	30	10
GIS and Mapping	22-30/10/2016	10	2

Source: MoA 2016

Second, the programme rolled out climate-resilient agricultural production technologies and methods through a range of improved varieties. About 339.32 quintals of improved, drought-resistant, heat-tolerant and early-matured pearl millet and sorghum seeds were purchased and distributed to 3729 farmers in Hamelmalo and Habero sub-regions and were planted over 3729 ha of land. Another improved, early-maturing, drought and striga-resistant Hariray and Se'are varieties of sorghum and Kona and Hagaz varieties of pearl millet were distributed to 5528 farmers, of which 18% were females.

Third, the minimum integrated household agricultural package (MIHAP) provides diversified livelihood options to improving the resilience and adaptive capacity of farmers. Through MIHAP, 225 farmers with women representing 37%, received 450 of fruit tree seedlings and 17.5 kg vegetable seed (Table 10) as well as trainings on their production and management. The production and sales of these fruits is boosting the income of farmers. For example, about 40 kg of mango fruits/tree and 50-60 kg of fruit tree were produced and sold in 2016. MIHAP also provided 430 farming households, of which about 89 % are female-led, with 1 improved cross-breed of dairy cow/HH, 6 shoats/HH, 25 chicken/HH, 100 bee hives, 20 trees/HH (10 fruit trees, and 5 leguminous trees) and ½ ha land for crop production (Table 11). According to farmers, their milk production has increased from 2 liter per cow per day to an average of 5-8 liter /cow/day and the mortality rate is low – about 2% while the rate of egg production is estimated at 50% and many households are selling their mature surplus cocks between 180 to 230 nakfa each.

Table 10: Fruit seedling and vegetable seed distribution to farmers

Sub-Zoba	Seedling/seed	Quantity	Unit	Beneficiary	
				Male	Female
Habero	Mango	75	Number	15	10
	Guava	75	Number	15	10
	Lemon	75	Number	15	10
	Okra	5	Kg.	15	10
	Tomato	10	Kg.	15	10
	Leafy vegetable	2.5	Kg.	15	10
Hamelmallo	Mango	75	Number	17	8
	Guava	75	Number	17	8
	Lemon	75	Number	17	8

Table 11: Cross-breed in calf and poultry distributed to farmers

Location	Year	Animal	Beneficiary	
			Male	Female
Habero	2015	Heifer (Cow)	15	10
Hamelmallo	2015	Heifer (Cow)	17	8
Habero	2016	Chicks	15	175
Hamelmallo	2016	Chicks		190

Fourth, the programme installed a total of 400 energy efficient improved stoves (mogogos) coupled with training of seven women who in turn trained 67 trainees. The daily usefulness of these stoves remain questionable due to its un-adapted design that was made to fit charcoal rather than the locally preferred twigs and wood.

Fifth, about 750 households were provided with solar panels accompanied by trainings to generate clean electricity that will improve their health and lighting for reading and other uses. The daily access to electricity for households and students is a life changing experience that facilitates studies and daily household and community activities linked to electricity such as the charging of their mobile phones and radios to get connected and ease communication, which is very useful during the prevention, management and response to climate and other crisis.

### **Output 2.2. Seasonal Forecasts Used in a Farmer-led Collaborative Action Learning Process to Enhance Adaptive Capacity and Climate-proof Production Systems**

The performance of this output was moderately satisfactory. Discussions were held with farmers about traditional knowledge and indicators of seasonal forecasts related to erratic and changing rainfall patterns, increasing temperatures, meanings of the direction of windstorms. Many other activities were implemented but they were not informed by seasonal forecast. Some of them include: Two farmers' field days held in Hamelmallo Agricultural College and Elabered aimed at showing farmers how to practice seed priming in which seeds are soaked in water for eight hours and then dried and planted within 24 hours as well as the

transplanting of seedling crops. Sorghum improved variety Se'are was also demonstrated to farmers and its advantages explained to farmers. In a separate training in HAC on vegetable cultivation, agronomic practices, and how to control pests and diseases of vegetables, 32 farmers participated.

While the programme has constructed six meteorological stations, data generation is ongoing and not yet used to perform seasonal forecasting for farmers. One potential reason is the shortage of meteorological experts and inadequate management arrangement of the stations to provide relevant, tested, validated and credible climate information needed by farmers and extension workers.

### ***Outcome 3. Improved Climate Risk Information and Climate Monitoring Used to Raise Awareness of and Enhance Community Preparedness to Climate Hazards***

The effectiveness of outcome 3 is assessed to be moderately unsatisfactory. While the creation of 6 meteorological stations was a major progress to generate climate data and information in the medium and long term beyond the programme's lifetime, the programme failed to capitalize on existing traditional climate forecasting knowledge to enhance the development of community-based early warning systems in the short term and within the lifetime of the programme. The programme equally failed to integrate in its design the time-consuming process of installing meteorological stations, train the staff, generate and analyze climate data, test and validate the generation results before preparing credible, scientifically valid climate information for dissemination to and uptake by farmers and extension workers.

### ***Output 3.1. Improved Climate Risk Information Generated, and Capacity Developed for Climate Monitoring and Analysis***

The programme did a good job in constructing and installing 6 meteorological stations to generate climate data - two of which are manual and found in HAC and Agro-Technical School while the remaining 4 are automatic and located in Keren, Aretay, Adi Tekelezan and Geleb. It however, falls short of actually producing the necessary climate risk information for climate monitoring and analysis during the programme lifetime. This can be explained by the long process required to collect and analyse climate data over many seasons and years, trains local experts on how to do it and test and validate the analysis and generate reliable and credible climate risk information to be disseminated to farmers for uptake. This long process of climate data generation to climate information dissemination and usage by farmers was poorly understood and taken into consideration in the design of the programme. Our analysis shows that the installation of these meteorological stations was the very first necessary step in the right direction. If fully functional and properly managed by the assigned institutions beyond the programme lifetime, the stations will provide a platform for improving climate risk information generation and capacity development for climate monitoring and analysis.

### ***Output 3.2. Awareness Raised at Different Levels on Climate Change Risks facing the Anseba Region***

The programme conducted a series of climate change awareness raising events in Habero, Geleb, and Hamelmalo. About 135 farmers were present out of which 20% were females. Oral and video presentations and discussions centered around farm field terracing for sustainable land management practices, effects of climate change and environmental degradation, water pollution and sanitation, reforestation and afforestation using a tree seedling transplanting, as well as the construction of micro and check dams.

### ***Output 3.3. Community Preparedness Enhanced through Development of a Community-based Early Warning System in Sub-zobas Hamelmalo and Habero***

Our findings show that the activities of Output 3.3 were not carried out. Farmers however revealed in group discussions that even without the intervention of the programme, they relied on their traditional climate forecasting knowledge for autonomous adaptation. For example, they have their interpretation of the weather conditions based on high or low temperature, wind direction, rainfall situation, water table situation of ponds

and streams, human health condition, livestock body condition, feed availability, etc. Considering the fact that a traditional knowledge base already existed, the programme could have capitalized on these early warning systems by documenting, enhancing and spreading the local knowledge to others who were not familiar with it and creating an awareness raising and communication channel within and between communities as well as with the extension agents of the MoA for better preparedness of the entire region or sub-region.

#### ***Outcome 4. Knowledge Management System Established, and Knowledge Management Activities Implemented***

Outcome 4 is assessed to be marginally satisfactory. It represents the least performed component of the programme due to the absence of a functioning and established knowledge management system. Knowledge management activities were very negligible with a few studies and a video in the making and total absence of lessons learned documents, policy and information briefs for policy advocacy. Without lessons learned documents, it might be less easy to successfully upscale similar programme activities in different locations.

#### ***Output 4.1. Knowledge Management System Established, and Knowledge Management Activities Implemented***

The programme failed to establish and implement a functional and well-planned knowledge management system and activities. With the exception of a few documents related to the social and environmental baselines and impact assessment of the programme; the incorporation of climate resilient crop varieties into the research of NARI and HAC; the establishment of a seed committee comprising HAC, MoA/NARI, agronomists, and representatives of regional administration to undertake the assessment of seed quality, it was difficult to find the programme documents specifically focusing on lessons learned, let alone their dissemination.

Even though the midterm review (MTR) recommended the preparation of some documents on lessons learned, no deliberate action was taken to this effect by the programme implementers. Because the lessons were not documented, it was not logically possible to disseminate them through relevant networks or communities as expected by the programme.

#### ***Output 4.2. Policy Advocacy Activities Implemented***

A few activities were implemented related to extensive local media coverage about the programme and the development of a video about the programme to be used for advocacy. The programme did not prepare other advocacy tools such as policy and information briefs or other vital information being used for policy advocacy activities. We therefore conclude that the programme's activities that were implemented under output 4.2. were inadequate. So far, the programme has failed to capitalize on its achievements, experiences, challenges, lessons and best practices to inform decision making and government planning at the sub-regional, regional, national and international levels. However, there is still a window of opportunity for the MoA, MoLWE, UNDP, farmers and other programme actors to use the programme results and video as a policy advocacy and development planning tool moving forward. UNDP is encouraged to prepare some information briefs about the achievements of the programme.

#### **3.3.4. Efficiency (\*)**

Overall, the efficient use of human and financial resources in line with international and national norms and standards was satisfactory. The programme has been able to implement almost all its activities with the AF resource allocated, while additional activities not originally included in the programme such as the MIHAP and solar panel installations were supported by funds that were diverted from other programme activities deemed to be of less priority to local vulnerable communities. Efficiency can also be demonstrated by the day-to-day programme management functions directly assumed by the assigned personnel in MoA, MoLWE,

MLG and UNDP and the close involvement and effective participation of local communities who are the main beneficiaries. These two actions have enhanced the implementation capacity and facilitated the successful achievements of the programme's objective, outcomes and outputs.

### ***Efficiency of Financial Resource Management***

Regarding the rational use of financial resources, the audit reports for the years 2015, 2016 and 2017 were reviewed. Our analysis showed that the programme expenses were in conformity with the approved programme budgets and in compliance with the relevant UNDP regulations, rules, procedures and policies; and supported by confirmation from other implementation partners from the government. The Government priorities and focus was to reduce the level of vulnerability and enhance the adaptive capacities of enclaved local communities. Programme staff were mostly seconded government employees and there was no additional pay from their normal government salaries. Payments of programme experts were based on established financial norms and rates by the government for all employees.

In the implementation of the programme activities, the administration and communities were very flexible and willing to contribute in their own ways to ensure the continuous implementation of activities on the ground. In case of delays caused by lengthy procurement procedures and slow financial disbursements, the administration made funds temporarily available from other sources and the communities were willing to contribute their labour. As a result, the diversions, dams, micro dams and the SWC activities under outcome 1 were completed in most areas on time. For outcome 2, the delivery of inputs in the form of seeds, seedlings, livestock and several trainings were done in most cases at the right time with no cost to the farmers but at a reasonable cost to the programme. Similarly, activities under outcome 3 such as the construction of six Class 1 meteorological stations and the fencing and equipping of the stations was carried out in time and at a reasonable cost. Under outcome 4, the situation was different. Focused group discussions revealed that the programme funding dedicated to international travels for experience sharing was drastically reduced and diverted towards more community activities and interventions. Budget for the preparation of lessons learned documents and advocacy materials were also diverted to other uses.

The diverted funds were however put into good use. Solar panels were installed in about 748 households and to the Elementary and Junior School in Haboro Tsaeda. Households were now able to have access to clean electricity and the school teachers and students could now study with electricity both in the classrooms and in the library. A few computers were also provided to the school. The diverted budget also funded the MIHAP activities that benefited and completely changed the livelihoods of many households for the better. Milk, poultry, honey, vegetables and fruits production increased, and farmers were able to make more money to take care of their families.

### ***Efficiency of Human Resource Management***

Our evaluation of the rational use of human resources indicates that the programme administration and local communities actively contributed to the successful implementation of the programme activities. The programme had a management structure composed of a steering committee, technical committee and the programme coordination unit. The programme staff were mainly government employees who performed their responsibilities in the programme just like other normal government activities in the communities. Workplans were developed by the programme staff and then approved for implementation and monitoring. The programme committee provided oversights while the programme coordination prepared annual progress reports to take stock of planned versus achieved results. Local communities who were mainly farmers and represented the beneficiaries of the programme, were strongly involved in the implementation activities especially under outcome 1, and 2.

### **3.3.5. Country Ownership**

Thanks to the very strong involvement and leadership of the various government Ministries especially MoA, MoLG, and MoLWE, the programme was designed and implemented according to the priorities of and by the government of Eritrea. Local communities played a leading role in the realization of the programme activities and outcomes that also benefitted them directly. The programme directly implemented priorities expressed by The Government of The State of Eritrea in its 2007 National Adaptation Programme of Action (NAPA) and has used government procedures for its implementation. Moreover, the programme has acted consistently in partnership with Anseba Regional and Sub-regional authorities and aligned with the government's policies and strategies regarding integrated land and water resource management, agricultural productivity and food security and its strong commitment to environmental issues (climate change, biodiversity, desertification etc.).

### **3.3.6. Mainstreaming**

#### ***Poverty Alleviation***

The programme provided and secured water, food (crops and livestock), fodder, arable land, and clean solar energy for communities as well as the strengthening of community organization and development of skills through trainings. All these livelihood assets will go a long way to improve the well-being of the communities and programme beneficiaries and would eventually contribute towards poverty alleviation.

#### ***Gender Perspective***

The programme's gender approach was strengthened through the integration of gender into the programme design and logical framework. Implementation and presentation of results of some of the programme activities including trainings were therefore guided by a gender lens. Women, youth and the elderly played a crucial role in the implementation of the programme activities ranging from the construction of dams, conservation of soil and water, preparation and management of nurseries, management of solar facilities, crop cultivation, to poultry farming. Furthermore, with the opportunity of placing females as Sub-Regional Administrator in Hamelmalo, Head of crop production at the MoA in Anseba, Director in the Department of Environment-MoLWE and the Director of the Bureau of Standards and Evaluation (BSE), the programme also promoted administration and decision-making by females. While it was not the projects that placed the female directors at their positions, it rather demonstrated a broader practice beyond the programme by the government to place qualified females at high level managerial positions.

#### ***Recovery from Climate disasters***

The raison d'être of this programme was to reduce climate induced vulnerability, risk and disasters related to recurrent droughts, floods and erratic rains in the Anseba region. Outcomes 1, 2 and 3 of this programme will therefore go a long way in strengthening the coping mechanisms and adaptive capacity of vulnerable populations in drought-related humanitarian and economic crises within the Anseba region.

#### ***Improved Governance***

Improved governance is experienced through vertical and horizontal coordination of the programme activities. A strong programme institutional interaction from the national, regional, sub-regional to the local level has provided a platform for intersectoral coordination among ministries, sectors and between State and non-State actors to work towards a common goal aimed at reducing the vulnerability and improving the well-being of local communities. The Programme enhanced participation of poor vulnerable communities, youth and women by directly involving them in the planning and execution of the programme activities. For instance, the dams were constructed by all the community members including the youth and women.

### **3.3.7. Sustainability (\*)**

The overall likelihood of sustainability is rated as Moderately Likely (moderate risks), consistent with ratings given in the sub-categories below.

**Financial and Socio-economic risks:** The rating of financial and socio-economic risks to sustaining the long-term results of the programme is Moderately Likely (moderate risks). Farmers are already earning money from crop and livestock production, communities now see and understand the potentials of their agricultural production system and are more willing to continue after the programme. Moreover, farmers have gained considerable skills and knowledge through training and experience on dairy production, production of animal feeds, fruits, crops, vegetables etc. In addition to this, the transfer of six-month-old calves to new households, the houses built for animals, the fruit trees of mangoes, guavas, etc. that have started bearing fruit are indications of the sustainability of Outcome 2. The acquired skills and trainings will go a long way in enhancing agricultural productivity and income. Generated income is already being used to enroll kids to school, get medical attention, get solar panel electricity for studying, get better nutrition and communities are able to secure other livelihood needs and increase their resilience and adaptive capacity to future climate risks and shocks. As communities make more money, they are showing increasing willingness to pay for the maintenance of the infrastructure installed by the programme, especially solar equipment and dams. How communities contribute resources towards a fund for the operation and maintenance of their equipment depends on a community by community basis. Based on the above explanation and trend, there is an increasing likelihood of financial and economic resources becoming available after the Adaptation Fund grant ends.

**Institutional and Governance risks:** The rating of institutional and governance risks to sustaining the long-term results of the programme is Likely (negligible risks). At the national level, the development and implementation of the National Adaptation Plan (NAP) and Nationally Determined Contribution (NDC) under the Paris Climate agreement will provide opportunities for legal and institutional frameworks and processes that support the sustainability of the project results.

On the ground at the programme sites, there are already government assigned employees and experts that will provide farmers with technical backstopping and follow-up through the MoA, FWA, MoLWE and the sub-regional administration. The continued technical support will be part of their routine work. In addition, farmers have acquired trainings and skills on technical aspects of the management and maintenance of the diversion structures, micro dams, and SWC activities. As a good indication for the sustainability of Outcome 1, the farmers in Fiza have been diverting water into their fields for about a year even though the diversion was temporarily damaged. They put sacks of sand to raise the elevation and in this manner, they have kept it running for a year. In 2016 strong floods damaged their temporary embankments five times but every time, they repaired it to enable water to enter the canals from the weir. In Lemayt, farmers have dug a canal upstream of the damaged weir to lead water to their fields.

**Environmental risks:** The rating of Environmental risks to sustaining the long-term results of the programme is Moderately Likely (moderate risks). The government and the communities cannot be fully secured or in total control of future recurrent droughts, erratic rains and floods of high severe negative impact. We are rather certain that the measures taken by the programme this far will be able to withstand the observed climate risks of similar magnitude and trends experienced in the past and present. For example, the meteorological stations in HAC will play a big role in the sustainability of the program through the collection and analysis of data and provision of future climate information to farmers and extension workers.

### **3.3.8. Impact**

Our evaluation through field observations, FGDs and review of documents show that the immediate verifiable impact of the programme is minimal. We acknowledge that it might be a bit early to fully appreciate and demonstrate the contribution of the programme to reduce environmental stress or improve ecological status especially in the context of climate change vulnerability. However, it is worth mentioning that the programme is already yielding some very impressive positive changes in the lives of farmers and their immediate environment. Just to name a few cases that indicate enhanced resilience of farmers and their ecosystems:

- Dams, micro dams and water diversion facilities now capture river water, rainwater, flood water and runoffs and make them available and accessible to farmers for a longer period for crop cultivation and livestock production.
- Ground water recharge around the programme dam sites is evident. Farmers are already digging to fetch water for livestock and crops and other needs. Before the programme started, there was no sign of water recharge in many of the locations due to erosion, floods, runoff without any water conservation, storage and percolation.
- Communities in the programme sites are increasingly becoming food secured due to increased crop and milk production, translating into improved nutrition and dietary systems. Food, according to farmers, is now available for an additional 2 to 3 months per year in the programme sites.
- Attitude is changing: Pastoralist are now changing their lifestyle and they are now settling as sedentary farmers to be able to raise livestock and produce crops.
- Degraded and saline lands are being restored and cultivated as soil nutrients from siltation and flooding are trapped to improve soil fertility.
- A conducive environment is being created through terracing practices that favour the planting and growth of trees and revegetation around sloppy and hilly sites – hence stabilizing degraded landscapes.

## **4. CONCLUSIONS, RECOMMENDATIONS AND LESSONS**

### **4.1. Conclusions**

Overall, the programme achieved its objective. The most significant achievement can be summarized as follows:

- Increased water availability and accessibility to support agricultural production systems in the Anseba Region;
- Enhanced crop and livestock productivity of farmers, leading to increased and better nutrition for households and increased income through the sales of fruits, vegetables, forage, milk, etc.
- Rehabilitation and stabilization of degraded lands through soil and water conservation techniques as adaptation measure;
- Diversification of livelihoods to increase livelihood options and resilience to climate risks as an adaptation measure;
- Acquisition of skills through trainings on climate adaptation measures in the water, agriculture and forestry sectors.
- Installation of meteorological stations as a necessary foundation for generating future climate data and providing climate information to farmers.

### **4.2. Corrective Actions for the Design, Implementation, Monitoring and Evaluation of the programme**

The programme design and implementation was relevant to the priorities identified in the NAPA of Eritrea and the national development priorities and continues to be of relevance to the current national development and sectoral plans and strategies as well as the government's commitment to take actions to fight climate change. Adaptive management measures were taken during the programme implementation to:

- Increase the number of class A stations from one to six and distribute them within the programme area and surrounding location with diverse agro-climatic characteristics for comparability and better data analysis.
- Replace the construction of sub-surface dam by a number of small dams and check dams distributed in the tributaries of the Anseba river for the benefit of many more farmers and communities who have limited access to water.

- Divert budgets from one outcome area to another in order to provide more households with the minimum integrated household agricultural package (MIHAP) and household solar lighting with the aim of improving their livelihoods, wellbeing and ultimate resilience to climate risks and shocks.

### **4.3. Actions to Follow up or Reinforce Initial Benefits from the Programme**

- The preparation of knowledge products – technical and policy briefs and best practices to be disseminated and used to guide and facilitate future replication and upscaling in different communities. UNDP and the government can take the lead.
- Another area is the proper management, maintenance and productivity of the 6 meteorological stations in relation to climate data gathering, analysis and validation for use by extension workers, farmers and students/researchers. This will also entail the training and hiring of experts to fully utilize the facility. HAC and other institutions directly managing the stations should take the lead.
- Continuous maintenance of the solar panel facilities installed by the programme both at the communities' household level and at the level of the solar powered water storage facility for irrigation. The government extension agents and technicians in collaboration with local resource persons should take the lead.
- Maintenance of all the micro dams, check dams, diversion facilities and other irrigation facilities used in the programme. Community members in collaboration with extension agents and Local Government Administration should take the lead.

### **4.4. Proposals for Future Directions Underlining Main Objectives**

The government and its partners should consider a second phase of the programme. This means that the core objective will not be very different. A potential option is to upscale the programme activities to cover more regions and target more farming households. The challenges and shortcomings of the current programme should be incorporated into the phase two as additional aspects of the programme. Below are some specifics of the proposed phase 2.

- Potential title: Ecosystem-based Adaptation (EbA) of Anseba River catchment for integrated rural development
- Climate risks: recurrent drought, erratic rains, floods, increased temperature etc.
- Beneficiaries: 30,000 – 40,000 households of farmers, pastoralists, agro-pastoralist and women
- Funding source and size: Green Climate Fund (GCF) programme of small size of about 20 to 30 million USD composed of mainly grant with co-funding of about 5 million USD
- Potential accredited entity (AE) to submit the proposal to GCF: UNDP Eritrea
- Potential government implementing entity (IE): MoLWE other IE: MoA, MoEM, FWA
- Sectoral Interventions: forestry, agriculture, livestock, water, energy, construction etc.
- Enabling interventions: policy updates, information-communication-education (ICE), land allocation to farmers for cultivation, capacity building, gender mainstreaming, research & technology, extension services, knowledge management etc.
- Marketing interventions: entrepreneurship, value chain, roads & access to market, associations & cooperatives, microfinance & credit, etc.

Under the GCF process, a prefeasibility study and programme concept note will need to be prepared. The concept note will greatly benefit from the current programme document and experience.

#### 4.5. Best and Worst Practices in Addressing Issues Relating to Relevance, Performance and Success

The programme demonstrated a number of best practices which resulted in the successful implementation of the programme that may be adopted for the formulation of other projects and programmes. Some of the best practices are:

- A wide representation from government ministries and institutions in programme development, coordination and implementation is a contributing factor to successful achievement of the programme objective.
- A strong focus on the priorities of vulnerable communities and their strong participation in the implementation of the programme both as volunteers and part time employees created a strong local ownership feeling that boosted the morale and engagement of communities.
- Timely adaptive management measures in situations of late disbursement of programme activity funds such as the temporal provision of funds by the administration has avoided further implementation delay.

Some of the Worst practices to avoid are:

- The almost complete abandonment and diversion of the budget of outcome 4 and its related activities and outputs. Another example is the complete diversion of the budget that was allocated for study tours. All these changes undermine the very justification of including the said outcome and activities in the programme.
- The omission to conduct a baseline study in the very beginning of the programme to adjust or update as early as possible the baseline and targets to be evaluated and monitored throughout the programme lifetime.

#### 4.6. Lessons Learned

A summary of lessons learned is outlined below. Lessons learned are concluded based on the review of programme documents, interviews with key stakeholders, and analysis of data/information collected in the course of the terminal evaluation.

- **Diversion structures make water available to farmers continuously at no cost.** All the farmers where water from the canals is reaching their field have to do is to direct it to the right place using hoes and when their land has had enough water to let the water pass through the canals to the other fields downstream. This gives this system a tremendous advantage over where water is pumped from wells dug downstream of micro-dams. Another advantage is that the water is full of nutrients from the silt that help fertilize the fields.
- **Increasing availability of water is changing pastoral to agro-pastoral lifestyles in Habero.** A more sedentary way of life has been created with the programme because of the raising of dairy cows, cultivation of fruits, vegetables and cereal crop production. The programme has helped to bring about 120 ha of land to be cultivated under supplementary irrigation at Fisa and Lemayt diversions. The diversion has helped increase the yield of sorghum, pearl millet and forage production throughout the year.
- **Increasing productivity should be accompanied by enhancing marketing components.** The lack of a strong marketing of excess agriculture and livestock produce was a missing link of the programme design and implementation that would have created even better results in terms of increasing the income of farmers. The programme was not well prepared to help farmers market their produce that is ever increasing over time. During the FGD, farmers even mentioned problems with finding markets for their milk because they found it difficult to transport their milk on time daily to Keren. To help solve this problem, the programme provided farmers with churners to make butter from excess milk.

- **If not well planned, adaptive management might limit the achievement of initially planned results.** The Programme did more than expected under outcome 2 with the addition of MIHAP and Solar lighting, but in the process, lost focus on some programme targets (water access in Hamelmalo) and disproportionately laid more focus on sectoral (outcome 1 & 2) and less on enabling activities (outcome 3 & 4).
- **Adoption of new technologies and improved varieties by farmers vary from case to case.** Farmers are accepting newly introduced pearl millet varieties (Kona and Hagaz) over their old traditional varieties while they do not prefer the introduced sorghum varieties (Se'are and Hariray) over their traditional local sorghum varieties (Hele and Senadir). Farmers say that while the Kona and Hagaz crop residues are thin, small in amount and not suitable for thatching roofs, they are however better yield, palatable and good as human food, resistant to downy mildew (a major disease of pearl millet in the programme area), early-maturing and are drought-resistant.

#### 4.7. Recommendations

The main recommendations of the Terminal Evaluation can be summarized under the following categories based on the four outcomes of the programme.

**Outcome 1.** *Increased water availability and erosion control through groundwater recharge, rainwater harvesting, irrigation and soil and water conservation measures.*

**Recommendation 1.** Experience sharing and learning on SWC and livelihood diversification as adaptation strategies should be encouraged by the government (MoLWE, MoLG, MoA) and UNDP at all levels. Implementation of SWC measures should be enhanced in the catchment to reduce risk of siltation while planted trees should be properly protected and managed by communities.

**Recommendation 2.** Community organisations, local leaders and extension agents should ensure that a robust, systematic and community-based maintenance scheme should be in place to either reduce or timely respond to physical damages to the irrigation infrastructures including dams and diversion canals that are often hit by seasonal flash floods.

**Recommendation 3.** A ground water monitoring system should be introduced by Hamelmalo Agricultural College and other national research institutes with the support of technical and financial partners such as UNDP, in order to compare the recharge of underground water as a result of the dams constructed with a benchmark. This will provide a more reliable and scientific method to inform decision making and management around water sources in Eritrea.

**Outcome 2.** *Climate-resilient agricultural and livestock production enhanced*

**Recommendation 4.** The administration or UNDP should create a support system for very successful farmers who are able to transform their livelihoods (that has been supported by this programme's MIHAP activities) into a thriving small business model that can be replicated in other communities in Eritrea.

**Recommendation 5.** Manufacturers of energy efficient stoves need to design and adapt the stoves to local contexts. They should be accompanied by continuous technical support, monitoring and checkup by extension agents and locally trained technicians to address complaints and challenges. Researchers should conduct an integrated analysis to understand reasons for using and not using energy efficient stoves. Such a research might facilitate the adoption of the stoves by communities.

**Recommendation 6.** Extension agents, MoA and the MoLG should promote farmer-led conflict prevention, management and resolution in relation to water and land utilization for agriculture. The government authorities should allow farmers to decide on water utilization and management approaches that work for them – based on their previous or existing practices. The government administration is encouraged to rather focus on extension services and other technical support.

**Recommendation 7.** Local ownership should be encouraged by project proponents in project design and implementation: As seen in the programme, this entails strong involvement of farmers in the implementation; part time job creation for farmers and youths; training of community members to acquire new skills and reinforcing their sense of ownership of the programme

**Recommendation 8.** Farmers should be encouraged or trained by project proponents on how to transform by-products from their farms into compost as there is often a high demand for fertilizer for various crop production activities.

**Outcome 3.** *Improved climate risk information and climate monitoring used to raise awareness of and enhance community preparedness to climate change hazards*

**Recommendation 9.** The various institutions running the meteorological stations should make sure that the climate data being collected is analysed and disseminated to the end-users – especially the farmers and extension agents. The Government and UNDP should follow up and support the effective functioning and utilization of the stations.

**Outcome 4.** *Knowledge management system established, and knowledge management activities implemented*

**Recommendation 10.** The GoSE, UNDP and partners should make efforts to prepare a few key documents on best climate change adaptation practices in the different aspects of the programme related to SWC, MIHAP, Community-led micro dam construction and maintenance, irrigation systems etc.

## 5. ANNEXES

- Annex 1 Terms of Reference
- Annex 2 Persons Consulted
- Annex 3 Documents Consulted
- Annex 4 Field Mission Itinerary and Site Visited
- Annex 5 Evaluation Question Matrix
- Annex 6 Questionnaire used in the field
- Annex 8 Pictures of the Programme
- Annex 9 Audit Trail Table

### Annex 1 TERMS OF REFERENCE

#### INTRODUCTION

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the “*Climate Change Adaptation Programme in Water and Agriculture in Anseba Region*” (PIMS # 4540.)

The essentials of the project to be evaluated are as follows:

#### PROJECT SUMMARY TABLE

Project Title:	Climate Change Adaptation Programme in Water and Agriculture in Anseba Region			
GEF Project ID:	00078054		<i>at endorsement (Million US\$)</i>	<i>at completion (Million US\$)</i>
UNDP Project ID:	00061576	GEF financing:	6,010,000	6,010,000
Country:	Eritrea	IA/EA own:	-	-
Region:	Africa	Government:	-	-
Focal Area:	Climate Change	Other:	-	
FA Objectives, (OP/SP):		Total co-financing:	-	
Executing Agency:	UNDP	Total Project Cost:	6,010,000	6,010,000
Other Partners involved:	MoLWE, MoA, Zoba Anseba Local Government	Prodoc Signature (date project began):		05.09.2012
		(Operational) Closing Date:	Proposed: November,2018	Actual:

#### 1.OBJECTIVE AND SCOPE OF TE

The project is supported by GEF/AF and implemented by MoLWE, MoA, Zoba-Anseba Local Government and UNDP under the project title “Climate Change Adaptation in Water and Agriculture in sub-zobas Habero and Hamelmalo, Anseba Region, Eritrea”. The purpose of this terminal evaluation (TE) is to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming and provide advice and recommendations on future replication to further expand the benefits of the project.

The UN guidance on UNDAF processes recommends annual and terminal evaluation reviews of joint projects for relevance and progress towards its set of outcomes. In 2013, the GOE and UNDP signed and agreed to jointly implement “*climate change adaptation programme in water and agriculture in Anseba region, Eritrea*”, a project that is being implemented from the Adaptation Fund and is one of the projects prioritized in the NAPA through the agency of UNDP. Annual reviews and monitoring and evaluation were undertaken in the last five years of implementing the project. This TE aims to assess the projects’ outcomes, relevance, efficiency and sustainability and to come up with recommendations. The project is a five-year climate adaptation programme that integrates water and agriculture implemented at the Anseba regional level. The project is organized across four outcomes and 12 outputs with a budget of US\$6.45 million, benefitting 6141 households, 1350 of whom are female-headed directly and has a potential to benefit a total of 75,400 inhabitants of the two sub-zobas of Hamelmalo and Habero directly or indirectly.

## **2. BACKGROUND**

Eritrea is extremely vulnerable to the adverse effects of climate change mainly because of its geographical location in the arid and semi-arid region of the Sahelian Africa. Environmental issues, in the country, are among the top priorities since the war and recurrent droughts have caused immense damage to the environment. The rainfall intensity is very high with a lot of rainfall within a limited period resulting in soil erosion and run-off. The rainfall also shows great variation in space and time. Under normal conditions, the rainfall in the sub humid agro-ecological zone in the eastern escarpment may reach as high as 1000 mm while in the Southern Red Sea and the North Western parts of the country; it is less than 200 mm.

The causes of climate change in Eritrea could be anthropogenic factors, both occurring at the global and local levels. At the local level, the gas emissions from agricultural activities, manure management; emissions from forest activities, burning of savannah and methane emissions from domestic livestock enteric fermentation could contribute to climate change.

The impacts of climate change are manifested on desertification/land degradation. Climate change also causes temperature increase above the mean global value, increasing variability in rainfall, more frequent dry spells and more severe droughts. The effects of these impacts on water resources and agriculture exacerbate food insecurity, diminishing biological diversity. They also increased the incidence of weeds, insect pests and diseases and reduced grain yield and livestock production and worsened health conditions.

The mitigation mechanisms should mainly focus on food security and the effects of climate change on crop production, livestock, forestry and water resources.

Climate models suggest that Eritrea’s climate will generally become more variable, with high levels of uncertainty regarding climate projections in the Sahel zone. The main climate risks or hazards identified in the assessments carried out to develop the Eritrean National Adaptation Programme of Action (NAPA) are as follows:

- *Increased climatic variability:* Relative to baseline conditions, there have been observed changes in average, range, and variability of temperature and precipitation throughout the country;
- *Recurring drought:* The occurrence of dry spells, seasonal droughts and multi-year droughts are more frequent than in the past;
- *Flash flooding:* there has been a perceived increase in episodes of torrential rainfall with heavy runoff and flooding; and
- *Sea level rise:* Coastal areas and the hundreds of Eritrean islands in the Red Sea are susceptible to rising sea levels associated with climate change.

Current projections do not provide much information on increased frequency of extreme events, such as flooding, although this was identified by the NAPA as a key threat. However, in a country like Eritrea in which droughts have long been a significant and severe natural phenomenon, the high likelihood that climate change will increase incidence and severity of droughts is a cause for considerable concern.

The TE will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects and covers the entire programme.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

### **3. EVALUATION APPROACH AND METHOD**

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An overall approach and method<sup>1</sup> for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance, effectiveness, efficiency, sustainability, and impact**, as defined and explained in the UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects. A set of questions covering each of these criteria have been drafted and are included with this TOR (*fill in Annex C*). The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders. The evaluator is expected to conduct a field mission to Zoba Anseba (Sub Zoba Habero and Hamelmalo), including the following project sites (*Fiza, Mezeret, Habero Tseada, Ajerbeb, Musa Shebah, Basher, Hamelmalo Agricultural College, and Wazentet, Gebisi*). Interviews will be held with the following organizations and individuals at a minimum: MoLWE, MND, Zoba Anseba Local Administration, MoA, Zoba Anseba NUEW, agro-pastoral farming communities, local administrators, etc.

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual PPR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. A list of documents that the project team will provide to the evaluator for review is included in Annex B of this Terms of Reference.

### **4. PROJECT OBJECTIVES**

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The Programme Objective is to increase community resilience and adaptive capacity to climate change through an integrated water management and agricultural development approach in the sub-zobas of Hamelmalo and Habero, Zoba Anseba—Eritrea. The programme will adopt a participatory approach working with vulnerable groups in particularly drought-prone areas of Zoba Anseba, including small-scale farmers, agro-pastoralists and rural women.

Flood water will be harvested, water storage will be developed, and soil erosion control measures and irrigation will be introduced. Climate-smart technology will be implemented, including drought-resistant and early maturing crops, by means of enhanced extension services. Rangeland management systems will be enhanced. Improved information on climate change risks will be generated and integrated into farmer and pastoralist practices. The programme will improve knowledge and understanding of climate change impacts among stakeholders, develop a community-based early warning system to reduce climate risks, and an action research approach linking traditional and scientific knowledge through the use of seasonal forecasts.

The programme will additionally have a strong learning and knowledge management component to capture and disseminate lessons learned. Every effort will be made to institutionalise this within the processes of the

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<sup>1</sup> For additional information on methods, see the [Handbook on Planning, Monitoring and Evaluating for Development Results](#), Chapter 7, pg. 163

Ministry of Agriculture at the Zoba Anseba level, the executing agency.

## **5. OBJECTIVES OF THE TERMINAL EVALUATION**

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This Terminal Evaluation will be coordinated by the MoLWE, Zoba Anseba Local Government and UNDP Eritrea Country Office. The TE will assess progress towards the achievement of the project objectives and outcomes as specified in the Project Document and assess early signs of project success or failure with the goal of identifying the necessary changes to be made in order to set the project on-track to achieve its intended results. The TE will also review the project's strategy, its risks to sustainability.

The Terminal Evaluation will also assess the achievement of project results/outcomes, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for future replication.

The Terminal Evaluation serves to document lessons learnt and plays a critical role in supporting accountability. Its main objectives are:

1. To monitor and, particularly, evaluate results, impacts and review all indicators
2. To promote accountability for resources use
3. To document, provide feedback on and disseminate lessons learned
4. To provide a basis for decision making on necessary amendments and improvements

## **6.SCOPE OF THE TERMINAL EVALUATION**

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The TE team will assess the following four categories of project progress. The Terminal Evaluation will cover the entire project funded by GEF/AF.

The following aspects will need to be addressed by the Consultant

### **i. Project Strategy**

#### Project design:

- Review the problem addressed by the project and the underlying assumptions. Review the effect of any incorrect assumptions or changes to the context to achieving the project results as outlined in the Project Document.
- Review the relevance of the project strategy and assess whether it provides the most effective route towards expected/intended results. Were lessons from other relevant projects properly incorporated into the project design?
- Review how the project addresses country priorities. Review country ownership. Was the project concept in line with the national sector development priorities and plans of the country (or of participating countries in the case of multi-country projects)?
- Review decision-making processes: 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, taken into account during project design processes?
- Review the extent to which relevant gender issues were raised in the project design. See Annex ---- of *Guidance for Conducting Terminal Evaluation of UNDP-Supported, GEF-Financed Projects* for further guidelines.
- If there are major areas of concern, recommend areas for improvement.

Results Framework/Log frame:

- Undertake a critical analysis of the project’s log frame indicators and targets, assess how “SMART” the end-of-project targets are (Specific, Measurable, Attainable, Relevant, Time-bound), and suggest specific amendments/revisions to the targets and indicators as necessary.
- Are the project’s objectives and outcomes or components clear, practical, and feasible within its time frame?
- Examine if progress so far has led to or could in the future catalyse beneficial development effects (i.e. income generation, gender equality and women’s empowerment, improved governance etc...) that should be included in the project results framework and monitored on an annual basis.
- Ensure broader development and gender aspects of the project are being monitored effectively. Develop and recommend SMART ‘development’ indicators, including sex-disaggregated indicators and indicators that capture development benefits.

**ii. Progress Towards Results**

Progress Towards Outcomes Analysis:

- Review the logframe indicators against progress made towards the end-of-project targets using the Progress Towards Results Matrix and following the *Guidance For Conducting Terminal Evaluation of UNDP-Supported, GEF-Financed Projects*; colour code progress in a “traffic light system” based on the level of progress achieved; assign a rating on progress for each outcome; make recommendations from the areas marked as “Not on target to be achieved” (red).

**Table. Progress Towards Results Matrix (Achievement of outcomes against End-of-project Targets)**

Project Strategy	Indicator <sup>2</sup>	Baseline Level <sup>3</sup>	Level in 1 <sup>st</sup> PPR (self-reported)	Midterm Target <sup>4</sup>	End-of-project Target	Midterm Level & Assessment <sup>5</sup>	Achievement Rating <sup>6</sup>	Justification for Rating
<b>Objective:</b>	Indicator (if applicable):							
<b>Outcome 1:</b>	Indicator 1:							
	Indicator 2:							
<b>Outcome 2:</b>	Indicator 3:							
	Indicator 4:							
	Etc.							
<b>Etc.</b>								

**Indicator Assessment Key**

Green= Achieved	Yellow= On target to be achieved	Red= Not on target to be achieved
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In addition to the progress towards outcomes analysis:

- Compare and analyse the GEF Tracking Tool at the Baseline with the one completed right before the Terminal Evaluation.
- Identify remaining barriers to achieving the project objective in the remainder of the project.
- By reviewing the aspects of the project that have already been successful, identify ways in which the project can further expand these benefits.

**iii. Project Implementation and Adaptive Management**

Management Arrangements:

<sup>2</sup> Populate with data from the Logframe and scorecards

<sup>3</sup> Populate with data from the Project Document

<sup>4</sup> If available

<sup>5</sup> Colour code this column only

<sup>6</sup> Use the 6-point Progress Towards Results Rating Scale: HS, S, MS, MU, U, HU

- Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.
- Review the quality of execution of the Executing Agency/Implementing Partner(s) and recommend areas for improvement.
- Review the quality of support provided by the GEF/AF Partner Agency (UNDP) and recommend areas for improvement.

#### Work Planning:

- Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.
- Are work-planning processes results-based? If not, suggest ways to re-orientate work planning to focus on results?
- Examine the use of the project's results framework/ log frame as a management tool and review any changes made to it since project start.

#### Finance and co-finance:

- Consider the financial management of the project, with specific reference to the cost-effectiveness of interventions.
- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.
- Does the project have the appropriate financial controls, including reporting and planning, that allow management to make informed decisions regarding the budget and allow for timely flow of funds?
- Informed by the co-financing monitoring table to be filled out, provide commentary on co-financing: is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans?

#### Project-level Monitoring and Evaluation Systems:

- Review the monitoring tools currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?
- Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?

#### Stakeholder Engagement:

- Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?
- Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?
- Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards the achievement of project objectives?

#### Reporting:

- Assess how adaptive management changes have been reported by the project management and shared with the Project Board.
- Assess how well the Project Team and partners undertake and fulfil GEF reporting requirements (i.e. how have they addressed poorly rated PPRs, if applicable?)
- Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.

#### Communications:

- Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?
- Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)
- For reporting purposes, write a half-page paragraph that summarizes the project's progress towards results in terms of contribution to sustainable development benefits, as well as global environmental benefits.

#### **iv. Sustainability**

- Validate whether the risks identified in the Project Document, Annual Project Review/PPRs and the ATLAS Risk Management Module are the most important and whether the risk ratings applied are appropriate and up to date. If not, explain why.
- In addition, assess the following risks to sustainability:

##### Financial risks to sustainability:

- What is the likelihood of financial and economic resources not being available once the GEF/AF assistance ends (consider potential resources can be from multiple sources, such as the public and private sectors, income generating activities, and other funding that will be adequate financial resources for sustaining project's outcomes)?

##### Socio-economic risks to sustainability:

- Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long-term objectives of the project? Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future?

##### Institutional Framework and Governance risks to sustainability:

- Do the legal frameworks, policies, governance structures and processes pose risks that may jeopardize sustenance of project benefits? While assessing this parameter, also consider if the required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place.

##### Environmental risks to sustainability:

- Are there any environmental risks that may jeopardize sustenance of project outcomes?

#### **Conclusions & Recommendations**

The TE team will include a section of the report setting out the TE's evidence-based conclusions, in light of the findings.<sup>7</sup>

Recommendations should be succinct suggestions for critical intervention that are specific, measurable, achievable, and relevant. A recommendation table should be put in the report's executive summary. See the *Guidance for Conducting Terminal Evaluation of UNDP-Supported, GEF-Financed Projects* for guidance on a recommendation table.

The TE team should make no more than 15 recommendations total.

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<sup>7</sup> Alternatively, TE conclusions may be integrated into the body of the report.

*Gender perspective:* Extent to which the project accounts for gender differences when developing and applying project interventions. How are gender considerations mainstreamed into project interventions? Suggest measures to strengthen the project’s gender approach.

## 7. EVALUATION CRITERIA & RATINGS

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework (see Annex A), which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance, effectiveness, efficiency, sustainability and impact**. Ratings must be provided on the following performance criteria. The completed table must be included in the evaluation executive summary. The obligatory rating scales are included in Annex D.

<b>Evaluation Ratings:</b>			
<b>1. Monitoring and Evaluation</b>	<i>rating</i>	<b>2. IA&amp; EA Execution</b>	<i>rating</i>
M&E design at entry		Quality of UNDP Implementation	
M&E Plan Implementation		Quality of Execution - Executing Agency	
Overall quality of M&E		Overall quality of Implementation / Execution	
<b>3. Assessment of Outcomes</b>	<i>rating</i>	<b>4. Sustainability</b>	<i>rating</i>
Relevance		Financial resources:	
Effectiveness		Socio-political:	
Efficiency		Institutional framework and governance:	
Overall Project Outcome Rating		Environmental:	
		Overall likelihood of sustainability:	

## 8. PROJECT FINANCE / COFINANCE

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the co-financing table below, which will be included in the terminal evaluation report.

Co-financing (type/source)	UNDP own financing (mill. US\$)		Government (mill. US\$)		Partner Agency (mill. US\$)		Total (mill. US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Actual	Actual
Grants								
Loans/Concessions								
• In-kind support								
• Other								
Totals								

## 9. MAINSTREAMING

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully

mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

## 10. IMPACT

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.<sup>8</sup>

## 11. CONCLUSIONS, RECOMMENDATIONS & LESSONS

The evaluation report must include a chapter providing a set of **conclusions, recommendations** and **lessons**.

## 12. IMPLEMENTATION ARRANGEMENTS

The principal responsibility for managing this evaluation resides with the UNDP CO and MoLWE in Eritrea. The UNDP CO will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the evaluation team. The Project Team will be responsible for liaising with the Evaluators team to set up stakeholder interviews, arrange field visits, coordinate with the Government etc.

Activity	Timing	Completion Date
<b>Preparation</b>	3 days	03-05/10/2018
<b>Evaluation Mission</b>	12 days	06-17/10/2018
<b>Draft Evaluation Report</b>	8 days	18-25/10/2018
<b>Final Report</b>	7days	01/11/2018

## 13. EVALUATION DELIVERABLES

The evaluation team is expected to deliver the following:

Deliverable	Content	Timing	Responsibilities
<b>Inception Report</b>	Evaluator provides clarifications on timing and method	No later than 1 week before the evaluation mission.	Evaluator submits to UNDP CO
<b>Presentation</b>	Initial Findings	End of evaluation mission	Project management Unit, UNDP CO, MoLWE and Zoba Administration
<b>Draft Final Report</b>	Full report, (per annexed template) with annexes	Within 3 weeks of the evaluation mission	Sent to CO, reviewed by RTA, PCU, GEF OFPs, project management unit, MoLWE
<b>Final Report*</b>	Revised report	Within 1 week of receiving UNDP comments on draft	Sent to CO for uploading to UNDP ERC.

\*When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

<sup>8</sup> A useful tool for gauging progress to impact is the Review of Outcomes to Impacts (ROtI) method developed by the GEF Evaluation Office: [ROTI Handbook 2009](#)

## 14. TE ARRANGEMENTS

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The principal responsibility for managing this TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is ISDU/UNDP Country Office

The commissioning unit will contract the consultants and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

## 15. TEAM COMPOSITION

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The evaluation team will be composed of (*1 international and 1 national evaluators*). The consultants shall have prior experience in evaluating similar projects. Experience with GEF financed projects is an advantage. (*If the team has more than 1 evaluator, one will be designated as the team leader and will be responsible for finalizing the report*). 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.

The selection of consultants will be aimed at maximizing the overall “team” qualities in the following areas:

- Recent experience with result-based management evaluation methodologies; (10%)
- Experience applying SMART targets and reconstructing or validating baseline scenarios; (10%)
- Competence in adaptive management, as applied to the project “Climate Change Adaptation Programme in Water and Agriculture in Anseba Region” (5%)
- Experience working with the GEF or GEF-evaluations; experience in gender sensitive evaluation and analysis is an added value; (5%)
- Experience working in Africa; (5%)
- Work experience in relevant technical areas for at least 10 years; (40%)
- Excellent communication skills; fluency in English (both oral and written) and the local language/*Tigreña* (for national consultant), is required (5 points)
- Demonstrable analytical skills;
- Project evaluation/review experiences within United Nations system will be considered an asset;
- A Master's degree or above in Climate Change, Environmental Sciences, Natural Resources Management, Agriculture, Land Management, or other closely related field (20%)

## 16. EVALUATOR ETHICS

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Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct (Annex E) upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the [UNEG 'Ethical Guidelines for Evaluations'](#)

## 17. REMUNERATION AND PAYMENT MODALITIES AND SPECIFICATIONS

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The financial proposal of costs must be expressed in **Lump Sum Amount** and “**all-inclusive**”<sup>9</sup>. Payments are based upon output, i.e. upon delivery of the services specified in the TOR. To assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump sum amount (including professional fees, travel—air tickets, and per diems/DSA). Transport facilities for fieldwork and workshops shall be supported and organized by UNDP/MoLWE.

The work will take approximately 30 working days spread between 01 October — 31 November 2018.

The payment schedule will be as follows:

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<sup>9</sup> The term “all inclusive” implies that all costs (professional fees, travel costs/air tickets, DSA/living allowances, communications, consumables, etc.) that could possibly be incurred by the Contractor are already factored into the final amounts submitted in the proposal.

%	Milestone
10%	Upon submission and approval of an inception report
40%	Following submission and approval of the 1 <sup>st</sup> draft terminal evaluation report
50%	Following submission and approval by UNDP-CO and UNDP RTA of the final terminal evaluation report

## **18. APPLICATION PROCESS**

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Applicants are requested to apply online by 17/09/2018. Individual consultants are invited to submit applications together with their CV for these positions. The application should contain a current and complete C.V. in English with indication of the e-mail and phone contact. Shortlisted candidates will be requested to submit a price offer indicating the total cost of the assignment (including daily fee, per diem and travel costs).

UNDP applies a fair and transparent selection process that will take into account the competencies/skills of the applicants as well as their financial proposals. Qualified women and members of social minorities are encouraged to apply.

## ANNEX A: PROJECT LOGICAL FRAMEWORK

Intended Outcome as stated in the Country Programme Results and Resource Framework:						
Applicable Key Result Area (from 2008-11 Strategic Plan): <b>Promote climate change adaptation.</b>						
Programme title and ATLAS IDS: <b>INCREASING COMMUNITY RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE CHANGE THROUGH AN INTEGRATED WATER MANAGEMENT AND AGRICULTURAL DEVELOPMENT APPROACH IN ANSEBA REGION, ERITREA</b>						
Outcomes	Outcome Targets	Outputs	Output Indicators	Means of Verification Outcome Level		Responsible Parties
				Method	Timing	
<p><b>Outcome 1</b></p> <p><b>Increased water availability and erosion control through groundwater recharge, rainwater harvesting, irrigation and soil and water conservation measures</b></p> <p><u>Indicators</u></p> <p>- Change in level of renewable water resources used in programme area</p> <p><u>Baseline</u></p> <p>Only about 1million cubic meters is put in use</p>	<p>By 2015, 5.3 million cubic meters of renewable water resources used in programme area (an increase of 4.3 million m<sup>3</sup>)</p>	<p><b>Output 1.1:</b> <i>Groundwater recharged, and irrigation technologies implemented for crop and forage production by developing a sub-surface dam within the Anseba River</i></p> <p><b>Output 1.2.:</b> <i>Floodwater harvested to enable irrigation of rain-fed cereal production and rangelands</i></p> <p><b>Output 1.3:</b> <i>Two micro dams constructed to retain and store rainfall run-off.</i></p> <p><b>Output 1.4:</b> <i>Soil and water conservation measures implemented to improve runoff management and infiltration</i></p>	<p>Indicator 1.1.1: Sub-surface dam with associated pumping and irrigation water distribution facilities completed</p> <p>Indicator 1.1.2: Number of households of agropastoralists using the water supply to increase their agricultural and rangeland productivity by twenty-fold</p> <p>Indicator 1.2.1: Number of hectares of rangeland that become fully under supplementary irrigation and have an increased productivity of 40%</p> <p>Indicator 1.2.2: Number of hectares of cereal production that are converted to be fully under supplementary irrigation</p> <p>Indicator 1.2.3: Number of hectares of the dominant cereal crops (sorghum and pearl millet) that have an increased production of from 0.36 (baseline) tons per hectare to 0.7 tons per hectare</p> <p>Indicator 1.3.1: Number of hectares of cereal production that is converted to be fully under supplementary irrigation and in which the production of the dominant cereal crops (sorghum and pearl millet) is increased from 0.36 tons per hectare (baseline) to 1.0 tons per hectare</p> <p>Indicator 1.3.2 Increase in forage production per ha of irrigated land.</p> <p>Indicator 1.3.3: Amount of time spent in search of water and forage for livestock. Indicator 1.4.1: Livestock carrying capacity of rangelands under this protection and rehabilitation programme</p> <p>Indicator 1.4.2: Agricultural production of farm lands under the on-farm soil and water conservation programme</p>	<p>- Annual survey</p> <p>- Project terminal evaluation</p>	<p>Annually and at the end of the programme</p>	<p><b>1.</b> Ministry of Agriculture; Ministry of Land, Water and Environment; Zoba Anseba Administration; Village Councils; community members</p>

			Indicator 1.4.3: Percentage of households migrating to other areas due to climatic shock			
<p><b>Outcome 2 Climate-resilient agricultural and livestock production enhanced</b></p> <p><u>Indicator</u> Change in food security in the programme area as a result of using climate-resilient agricultural and livestock production methods, measured as # of months per year additionally covered by local production</p> <p><u>Baseline</u> (Baseline to be established by programme through livelihoods survey<sup>10</sup>)</p> <p># of months per year covered by local farming and livestock production before &amp; after the project. List some concrete examples.</p>	By 2015, 70% of programme beneficiaries have sufficient food for at least an additional three months per year	<p><b>Output 2.1:</b> A range of climate-resilient agricultural technologies and methods developed and transferred to farmers e.g. drought- and disease-resistant varieties, integrated crop-livestock production systems, conservation agriculture, agroforestry, rangeland management; and traditional improved fuel-efficient stoves</p> <p><b>Output 2.2:</b> Seasonal forecasts used in a farmer-led collaborative action learning process to enhance adaptive capacity and climate-proof production systems</p>	<p>Indicator 2.1.1 Number of project beneficiaries involved in capacity development for implementation of specific agricultural and/or livestock adaptation measures, disaggregated according to gender</p> <p>Indicator 2.1.2: Number of professionals involved in capacity development to enable rolling out of climate-resilient agricultural production technologies and methods, disaggregated according to gender</p> <p>Indicator 2.1.3: Percent change in beneficiaries' capacities to make resource management decisions based on climate information</p> <p>Indicator 2.1.4: Increased agricultural and livestock production as a result of implementing climate-resilient technologies and methods</p> <p>Indicator 2.1.5: Number of improved traditional energy-efficient stoves distributed and in regular use</p> <p>Indicator 2.2.1: Number of farmers using seasonal forecasts to develop on-farm adaptive strategies</p> <p>Indicator 2.2.2: Increased production and farm income as a result of using seasonal forecasts to guide on-farm activities</p>	<ul style="list-style-type: none"> <li>- Annual livelihoods survey</li> <li>- National food security monitoring system</li> <li>- Project terminal evaluation</li> </ul>	<p>Annually, to the end of the programme.</p> <p>Annually, to the end of the programme.</p> <p>End of programme</p>	<p><b>2.</b></p> <p>Ministry of Agriculture; Ministry of Land, Water and Environment; Zoba Anseba Administration; Village Councils; community members; Hamelmalo Agricultural College; National Agricultural Research Institute, National Union of Eritrean Women; National Union of Eritrean Youth and Students</p>

<sup>10</sup> No baseline figures for food security exist for the project sub-zobas. However, the food security situation throughout zoba Anseba is extremely serious – for example, in 2002, a drought year, the estimated annual crop production for the zoba was 454.75 tons which accounted for only one percent of the total annual food requirement of the region.

<p><b>Outcome 3</b> <b>Improved climate risk information and climate monitoring used to raise awareness of and enhance community preparedness to climate change hazards</b></p> <p><u>Indicator</u> Percentage of programme beneficiaries making use of improved climate risk information and climate monitoring processes, disaggregated according to gender</p> <p><u>Baseline</u> Baseline is zero – no improved climate risk information yet available</p>	<p>By 2015, 70% of programme beneficiaries make use of improved climate risk information</p>	<p><b>Output 3.1.:</b> Improved climate risk information generated, and capacity developed for climate monitoring and analysis</p> <p><b>Output 3.2.:</b> Awareness raised at different levels on climate change risks facing Zoba Anseba</p> <p><b>Output 3.3:</b> Community preparedness enhanced through development of a community-based early warning system in sub-zobas Hamelmalo and Habero</p>	<p>Indicator 3.1.1: Downscaled climate change projections at the sub-national scale from multiple GCMs for Zoba Anseba</p> <p>Indicator 3.1.2: Number of gender-sensitive knowledge products developed and disseminated using improved climate risk information</p> <p>Indicator 3.1.3: Class 1 meteorological station installed in sub-zoba Habero and six Class 3 meteorological stations installed, three in each sub-zoba</p> <p>Indicator 3.1.4: Number of staff trained on meteorological observation and analysis, disaggregated according to gender</p> <p>Indicator 3.2.1: Number of stakeholders participating in awareness raising events, disaggregated according to gender and age where possible</p> <p>Indicator 3.2.2: Perceived change in decision making as a result of participation in awareness raising activities</p> <p>Indicator 3.3.1: Number of community members trained on EWS</p> <p>Indicator 3.3.2: Number of stakeholders served by community-based EWS</p> <p>Indicator 3.3.3: Losses resulting from climate-related disasters (e.g. mortality, injury, property or infrastructure lost or damaged) compared with recent historical experience or projected baseline, in the area served by the community-based EWS</p>	<p>Survey</p>	<p>Annually and on programme completion</p>	<p><b>3.</b> Ministry of Agriculture; Ministry of Land, Water and Environment; Zoba Anseba Administration; Village Councils; community members; Meteorological Services; Hamelmalo Agricultural College; National Agricultural Research Institute, National Union of Eritrean Women; National Union of Eritrean Youth and Students</p>
<p><b>Outcome 4</b> <b>Knowledge management system established, and knowledge management activities implemented</b></p> <p><u>Indicators</u></p>	<p>By 2015, at least five lessons learned codified and disseminated</p>	<p><b>Output 4.1:</b> Knowledge management system established, and knowledge management activities implemented</p> <p><b>Output 4.2:</b> Policy advocacy activities implemented</p>	<p>Indicator 4.1.1: Number of ‘lessons learned’ codified</p> <p>Indicator 4.1.2: Number of relevant networks or communities through which lessons learned are disseminated</p> <p>Indicator 4.2.1: Number of knowledge products developed for use in policy advocacy activities</p> <p>Indicator 4.2.2: Number of policies/plans/strategies/programmes revised</p>	<p>Project terminal evaluation</p>	<p>End of the programme</p>	<p><b>4.</b> Ministry of Agriculture; Zoba Anseba Administration; Hamelmalo Agricultural College</p>

<p>Number of 'lessons learned' about natural resource management in the context of climate change as a result of the programme</p> <p><u>Baseline</u> Baseline is zero – no relevant lessons learned are currently being captured or disseminated</p>			<p>or developed as a result of policy advocacy activities</p>			
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## ANNEX B: LIST OF DOCUMENTS TO BE REVIEWED BY THE EVALUATORS

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1. UNDP Initiation Plan
2. UNDP Project Document
3. Environmental Impact Assessment
4. Project Inception Report
5. All Project Implementation Reports (PPR's)
6. Quarterly progress reports and work plans of the various implementation task teams
7. Audit reports
8. Finalized GEF focal area Tracking Tools at CEO endorsement and midterm (*fill in specific TTs for this project's focal area*)
9. Oversight mission reports
10. All monitoring reports prepared by the project
11. Financial and Administration guidelines used by Project Team
12. MTR of the project
13. Project operational guidelines, manuals and systems
14. UNDP country/countries programme document(s)
15. Minutes of the (Climate Change Adaptation Programme) Board Meetings and other meetings (i.e. Project Appraisal Committee meetings)
16. Project site location maps

## ANNEX C: EVALUATION QUESTIONS

*This is a generic list, to be further detailed with more specific questions by CO and UNDP GEF Technical Adviser based on the particulars of the project.*

Evaluative Criteria Questions	Indicators	Sources	Methodology
<b>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 levels?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?</b>			
•	•	•	•
•	•	•	•
•		•	•
<b>Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?</b>			
•	•	•	•
•	•	•	•
•	•	•	•
<b>Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?</b>			
•	•	•	•
•	•	•	•

**ANNEX D: RATING SCALES**

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<p><b>Ratings for Outcomes, Effectiveness, Efficiency, M&amp;E, I&amp;E Execution</b></p> <p>6: Highly Satisfactory (HS): no shortcomings          5: Satisfactory (S): minor shortcomings          4: Moderately Satisfactory (MS)          3. Moderately Unsatisfactory (MU): significant shortcomings          2. Unsatisfactory (U): major problems          1. Highly Unsatisfactory (HU): severe problems</p>	<p><b>Sustainability ratings:</b></p> <p>4. Likely (L): negligible risks to sustainability          3. Moderately Likely (ML): moderate risks          2. Moderately Unlikely (MU): significant risks          1. Unlikely (U): severe risks</p>	<p><b>Relevance ratings</b></p> <p>2. Relevant (R)          1.. Not relevant (NR)</p> <p><b>Impact Ratings:</b></p> <p>3. Significant (S)          2. Minimal (M)          1. Negligible (N)</p>
<p><b>Additional ratings where relevant:</b>          Not Applicable (N/A)          Unable to Assess (U/A)</p>		

**ANNEX E: EVALUATION CONSULTANT CODE OF CONDUCT AND AGREEMENT FORM**

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**Evaluators:**

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.

**Evaluation Consultant Agreement Form<sup>11</sup>**

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

**Name of Consultant:** \_\_\_\_\_

**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 *place* on *date*

Signature: \_\_\_\_\_

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<sup>11</sup>[www.unevaluation.org/unegcodeofconduct](http://www.unevaluation.org/unegcodeofconduct)

## ANNEX F: EVALUATION REPORT OUTLINE<sup>12</sup>

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- i. Opening page:
  - Title of UNDP supported GEF financed project
  - UNDP and GEF project ID#s.
  - Evaluation time frame and date of evaluation report
  - Region and countries included in the project
  - GEF Operational Program/Strategic Program
  - Implementing Partner and other project partners
  - Evaluation team members
  - Acknowledgements
- ii. Executive Summary
  - Project Summary Table
  - Project Description (brief)
  - Evaluation Rating Table
  - Summary of conclusions, recommendations and lessons
- iii. Acronyms and Abbreviations  
(See: UNDP Editorial Manual<sup>13</sup>)
1. Introduction
  - Purpose of the evaluation
  - Scope & Methodology
  - Structure of the evaluation report
2. Project description and development context
  - Project start and duration
  - Problems that the project sought to address
  - Immediate and development objectives of the project
  - Baseline Indicators established
  - Main stakeholders
  - Expected Results
3. Findings  
(In addition to a descriptive assessment, all criteria marked with (\*) must be rated<sup>14</sup>)
- 3.1 Project Design / Formulation
  - Analysis of LFA/Results Framework (Project logic /strategy; Indicators)
  - Assumptions and Risks
  - Lessons from other relevant projects (e.g., same focal area) incorporated into project design
  - Planned stakeholder participation
  - Replication approach
  - UNDP comparative advantage
  - Linkages between project and other interventions within the sector
  - Management arrangements

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<sup>12</sup>The Report length should not exceed 40 pages in total (not including annexes).

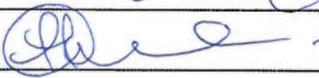
<sup>13</sup> UNDP Style Manual, Office of Communications, Partnerships Bureau, updated November 2008

<sup>14</sup> Using a six-point rating scale: 6: Highly Satisfactory, 5: Satisfactory, 4: Marginally Satisfactory, 3: Marginally Unsatisfactory, 2: Unsatisfactory and 1: Highly Unsatisfactory, see section 3.5, page 37 for ratings explanations.

- UNDP and Implementing Partner implementation / execution (\*) coordination, and operational issues
- 3.3 Project Results
- Overall results (attainment of objectives) (\*)
  - Relevance (\*)
  - Effectiveness & Efficiency (\*)
  - Country ownership
  - Mainstreaming
  - Sustainability (\*)
  - Impact
4. Conclusions, Recommendations & Lessons
- Corrective actions for the design, implementation, monitoring and evaluation of the project
  - Actions to follow up or reinforce initial benefits from the project
  - Proposals for future directions underlining main objectives
  - Best and worst practices in addressing issues relating to relevance, performance and success
5. Annexes
- ToR
  - Itinerary
  - List of persons interviewed
  - Summary of field visits
  - List of documents reviewed
  - Evaluation Question Matrix
  - Questionnaire used and summary of results
  - Evaluation Consultant Agreement Form

**ANNEX G: EVALUATION REPORT CLEARANCE FORM**

*(to be completed by CO and UNDP GEF Technical Adviser based in the region and included in the final document)*

Evaluation Report Reviewed and Cleared by	
UNDP Country Office	
Name: <u>Adam Habteab (Programme Specialist)</u>	
Signature: <u></u>	Date: <u>14 June 2019</u>
AF RTA	
Name: <u>MUYEYE CHAMBERA</u>	
Signature: <u></u>	Date: <u>18.07.19</u>

## **Annex 2 PERSONS CONSULTED**

### **Ministry of Land, Water and Environment (MoLWE)**

- Mogos Woldeyohannes, Director General, Department of Environment
- Aster Redaezghi, Head of Division, Department of Environment
- Estitanos Bein, Technical Advisor, Department of Environment
- Efuan Kimowan, Biodiversity Expert, Department of Environment
- Kibrom Asmerom, Expert
- Tedros Kibrom, Expert
- Fanus Aregay, Finance Officer
- Aman Saleh, GEF Coordination Unit, Department of Environment

### **Ministry of Agriculture (MoA)**

- Zeray Nor, Director of Soil and Water Conservation and Irrigation Development
- Kebra Gimeskel, Director
- Dr. Timasiam Himichael, Director
- Kebra Gebremeskel, Director of Crop Production
- Dr. Teclेमariam Hatemariam, Director of Animal Production
- Tsegazeab Embaye, Head of Meat and Milk Development Unit
- Andemariam Solomon, Coordinator of Sub-region Hamelmalo
- Adem Mohammed, Head of Agriculture of the sub-zoba
- Andebrhan Solomon, Sub-Zoba MoA Coordinator
- Mubarek Mohammed Idris, Solar Maintenance Expert
- Ghebremeske Tewolde, SAF Project Coordinator
- Bahta Tedros, Director General, Agriculture and Lands

### **Ministry of Local Government (MoLG)**

- Ali Mahmoud, Region Administrator (Governor)
- Tekeste Asgodon, Director General
- Fitwi Gebrmeskel, Sub Zoba Lead
- Andemichael Solomon, Director General, Department of Agriculture and Land
- Asha Ali Nur, Senior Director General
- Gebremeskel Tewelde, Project Coordinator and Director of Agricultural Infrastructure
- Dawit Kibreab, Director of Environment Department
- Zere Weldetinsae, Director of Water Resources Department
- Jaber Ibrahim, Soil and Water Conservation Expert Sub-region Hamelmalo, Anseba Region
- Adem Mussa, Site Engineer Sub-region Hamelmalo, Anseba Region
- Gezae Alazar, Crop Production Expert, Sub-region Hamelmalo, Anseba Region
- Yacob Mohammed, Personnel Kebabi Haboro Tsaeda administration, Anseba Region
- Asha Alinur Mohammed, Sub-Zoba Administrator Sub-zoba Hamelmalo
- Fitwi Ghebremeskel, Sub-zoba Administrator, Sub-zoba Haboro
- Habtab Teklom, Head of Economic Development Sub-zoba Haboro
- Gherenation Kesete, Head of Finance, Sub-zoba haboro
- Ebrahim Ahmed Kelifa, Administrator of Kebabi Aretay, Sub-zoba Haboro

### **Ministry of Education (MoE)**

- Yacob Idris Adem, School Director Haboro Tsaeda Elementary and Junior School
- Idris Hamid, Teacher, Haboro Tsaeda Elementary and Junior School
- Ibrahim Mohamed Idris, Vice School Director, Haboro Tsaeda Elementary and Junior School
- Adam Mohamed Abdala, Parent Teacher Association member, Haboro Tsaeda Elementary and Junior School
- Idris Hamid, School Guard, Haboro Tsaeda Elementary and Junior School

### **Bureau of Standards and Evaluation (BSE)**

- Mebrahtu Zemole, Consultancy Head
- Bisirat Gebru, Director

### **Hamelmallo Agricultural College (HAC)**

- Woldeamlak Araia (Prof), Dean and Agronomist
- Waldeselassie Ogbazghi, Associate Dean, Academic Affairs
- Eyob Haile, Assistant Professor
- Tesfalem Weldelessie, Lecturer and in charge of Meteorological station
- Amara Alamin, Meteorological data collector
- Dr. Goitom Asghedom, Head of Department of Animal Science

### **United Nations Development Programme (UNDP)**

- Alemseged Moges National Coordinator, SGP, UNDP Eritrea
- Adam Habteab, Programme Specialist, UNDP Eritrea
- Fremeiri Megash, Programme Assistant, UNDP Eritrea
- Muyeye Chambwera, TA Sustainable Development, UNDP Ethiopia

### **National Union of Eritrean Women (NUEW)**

- Zahra Osman Ibrahim, Head of Sub-region Habero office, Anseba Region Branch

### **Hamelmallo Programme Site**

- Abdilahi Mohammed Osman, Farmer and Local leader
- Mohammed Ali Ibrahim, Farmer and Kebabi administrator
- Abdulaziz Mohamed-Ali, Farmer
- Omer Nur, Farmer and local leader
- Mohamed-Nur Okbies, Farmer
- Hussien Mohammed Seid, Farmer
- Haj Ali Feki, Farmer
- Mahmud Mohammed-Adem, Farmer
- Idris Adem Haj, Farmer and local leader
- Gebriel Beraki Tesfamariam, Farmer
- Seid Romadan, Farmer
- Hussien Abe, Farmer
- Abdilahi Mohammed Habib, Farmer

### **Haboro Programme Site**

- Mohammed Adem Mohammed, Farmer
- Idris Mohammed-Adem & Saedia Mohammed-Seid (wife), Farmer
- Idris Hummed & Fatma Mohammed-Adem (wife), Medical Doctor
- Ibrahim Mohamed Khelifa, Aretay town administrator

- Mohammed-Ali Saleh, Teacher
- Bekita Seid Hamid, Farmer
- Hawa Mohammed Mahmud, Farmer
- Fatma Mohammed-Ali, Farmer
- Mohammed-Idris Mohammed-Omer, Head of Farmers' Association
- Mohammed Hamid Mahmud, Farmer
- Mohammed-Afa Abdella Suleiman, Farmer
- Omer Mohammed Ali, Farmer
- Seid Mohammed-Ali, Farmer
- Mohammed Idris Ali Hamid, Farmer

### **Annex 3 DOCUMENTS CONSULTED**

- Adaptation Fund 2011. Climate change adaptation program in Water and Agriculture in Anseba Region - Eritrea. Adaptation Fund Project document. UNDP PIMS ID 4540.
- Haile, A., and Asghedom, G. 2017. Climate change adaptation program in Water and Agriculture in Anseba Region - Eritrea. Mid-Term Review Report. National Commission for Higher Education, Bureau of Standards and Evaluation, GoSE.
- Woldeamlak A., Woldelessie O., Mengheteab G., Simon M. And Semere A. 2015a. Final Report: Socio-Economic and Environmental Base Line Study (BLS) for Sub Zoba Hamelmalo and Habero in Anseba. (Volume 1). National Commission for Higher Education Bureau of Standards and Evaluation - GoSE.
- Woldeamlak A., Woldelessie O., Mengheteab G., Simon M. And Semere A. 2015b. Final Report: Environment Impact Assessment for Sub Zoba Hamelmalo and Habero in Anseba (Volume 2). National Commission for Higher Education Bureau of Standards and Evaluation - GoSE.
- Government of the State of Eritrea, 'Eritrea's Intended Nationally Determined Contributions (INDCs) report'. Asmara September 2015.
- Government of the State of Eritrea, 'National Adaptation Plan of Action, NAPA', Ministry of Land, Water and Environment, Department of Environment, April 2007.
- Government of the State of Eritrea, 'Eritrea's First National Communication' Ministry of Land, Water and Environment, United Nations Framework Convention on Climate Change, December 2001.
- Government of the State of Eritrea, 'Eritrea's Second National Communication' Ministry of Land, Water and Environment, United Nations Framework Convention on Climate Change, February 2012.
- UNDP Initiation Plan
- UNDP Project Document
- Environmental Impact Assessment
- Project Inception Report
- Adaptation Fund, 'Project Performance Reports', 2013, 2014, 2015, 2017. (PPR's)
- Quarterly progress reports and work plans of the various implementation task teams
- Audit reports
- Finalized GEF focal area Tracking Tools at CEO endorsement and midterm
- Oversight mission reports
- All monitoring reports prepared by the programme
- Financial and Administration guidelines used by Programme Team
- MTR of the programme
- Project operational guidelines, manuals and systems
- United Nations Development Programme, 'Draft Country Programme Document for Eritrea' 2007-2011.

- United Nations Development Programme, 'Draft Country Programme Document for Eritrea 2013-2016.
- United Nations Development Programme, 'Country Programme Document for Eritrea' 2017-2021.
- Minutes of the (Climate Change Adaptation Programme) Board Meetings and other meetings
- Programme site location maps
- National Development Plan document
- Sectoral policy documents of the MoA and MoLWE
- UNDP Initiation Plan
- UNDP Programme Document
- Environmental Impact Assessment
- Programme Inception Report
- All Programme Implementation Reports (PPR's)
- Quarterly progress reports and work plans of the various implementation task teams
- Audit reports
- Finalized GEF focal area Tracking Tools at CEO endorsement and midterm
- Oversight mission reports
- All monitoring reports prepared by the project
- Financial and Administration guidelines used by Programme Team
- MTR of the programme
- Programme operational guidelines, manuals and systems
- UNDP country/countries programme document(s)
- Project site location maps
- National Development Plan document
- Sectoral policy documents of the MoA and MoLWE

## Annex 4 FIELD MISSION ITINERARY AND SITES VISITED

Date	Tasks / Activities Performed
Wednesday 5/12/2018	<ul style="list-style-type: none"> <li>- Arrival and establishment of international consultant</li> <li>- Preparatory work by the international consultant</li> </ul>
Thursday 6/12/2018	<ul style="list-style-type: none"> <li>- Initial UNDP mission briefing: Mr Adam Habteab</li> <li>- Working session by international &amp; national consultants at UNDP</li> <li>- Visit to Ministry of Lands, Water and Environment (MoLWE) -DoE, DoW, DoL</li> <li>- Initial contacts with Programme Coordinator in Keren</li> <li>- Inform the DG of Land and Agriculture about the mission (Mr Mogos)</li> </ul>
Friday 7/12/2018	<ul style="list-style-type: none"> <li>- Working session by 3 consultants</li> <li>- Finalisation of inception report</li> <li>- Finalisation of field mission preparation (checklist/questionnaire)</li> <li>- Visit to Ministry of Agriculture (MoA) – DoLRA</li> <li>- Forestry and Wildlife authority</li> <li>- Department of Water Resources</li> </ul>
Saturday 8/12/2018	<p><b>Visit to Sub Zoba Hamelmalo:</b> Discussions with</p> <ul style="list-style-type: none"> <li>- Sub Zoba Administrator</li> <li>- Community leaders</li> <li>- Agro-pastoral farmers (upstream and downstream) / Farmers' association</li> <li>- Women / women association members (NUEW)</li> <li>- Youth / Youth group members</li> <li>- Programme site manager</li> <li>- Head of Economic and Infrastructure development in the Sub Zoba</li> <li>- Head of Land Resources and Agriculture in the Sub Zoba</li> <li>- Head of Land and Water in the Sub Zoba</li> <li>- Other resource persons</li> <li>- Transect walk and site observation</li> <li>- Visit to Minimum Integrated Household Agriculture Package (MIHAP)</li> <li>- Visit to micro dam and downstream</li> <li>- Visit to beehive</li> <li>- Visit to soil and water conservation and water ponds</li> <li>- Improved energy sources</li> <li>- Home lighting observation</li> </ul>
Sunday 9/12/2018	<p><b>Visit to Sub Zoba Habero:</b> Discussions with</p> <ul style="list-style-type: none"> <li>- Sub Zoba Administrator</li> <li>- Community leaders</li> <li>- Agro-pastoral farmers (upstream and downstream) / Farmers association</li> <li>- Women / women association members (NUEW)</li> <li>- Youth / Youth group members</li> <li>- Programme site manager</li> <li>- Head of Economic and infrastructure development in the Sub Zoba</li> <li>- Head of Land Resources and Agriculture in the Sub Zoba</li> <li>- Head of Land and Water in the Sub Zoba</li> <li>- Other resource persons</li> <li>- Transect walk and site observation</li> <li>- Visit to Minimum Integrated Household Agriculture Package (MIHAP)</li> <li>- Visit to micro dam and downstream</li> </ul>

	<ul style="list-style-type: none"> <li>- Visit to beehive</li> <li>- Visit to soil and water conservation and water ponds</li> <li>- Improved energy sources</li> <li>- Home lighting observation</li> </ul>
Monday 10/12/2018	<p><b>Visit to Zoba Anseba Keren:</b> Discussions with</p> <ul style="list-style-type: none"> <li>- Local Government officials</li> <li>- Governor of Zoba Anseba</li> <li>- Programme Manager (Mr Gere)</li> <li>- DG for Environment, Water</li> <li>- DG for Department of Land and Agriculture (Mr Bahta) (8 Divisions: Land, Water, Agriculture, Environment, Forestry, etc)</li> </ul> <p><b>Visit to Hamelmalo</b></p> <ul style="list-style-type: none"> <li>- Hamelmalo Agricultural College (seed improvement)</li> <li>- Meteorological station</li> <li>- Other resource persons</li> <li>- Transect walk and site observation</li> </ul>
Tuesday 11/12/2018	<ul style="list-style-type: none"> <li>- Return to Asmara</li> <li>- Field data entry and management</li> <li>- Secondary data review and analysis</li> </ul>
Wednesday 12/12/2018	<ul style="list-style-type: none"> <li>- Secondary data review and analysis</li> <li>- Preliminary analysis of field data</li> <li>- Interviews with stakeholders</li> <li>- Visit to National Agricultural Research Institute (NARI) (gene bank)</li> </ul>
Thursday 13/12/2018	<ul style="list-style-type: none"> <li>- Preparation of methodological approach employed (PPP)</li> <li>- Preparation of initial findings (in word and PPP)</li> <li>- Interviews with stakeholders</li> </ul>
Friday 14/12/2018	<p>Initial findings &amp; Field mission debriefing meeting for feedback</p> <ul style="list-style-type: none"> <li>- MoLWE (DoL, DoE, WRD)</li> <li>- MoA</li> <li>- BS&amp;E</li> <li>- UNDP</li> <li>- Ministry of National Development</li> <li>- Anseba Region represented by the Programme Manager</li> <li>- Forestry and Wildlife Authority FWA</li> <li>- Department of Energy</li> <li>- NUEW</li> <li>- NARIS</li> </ul>
Saturday 15/12/2018	<ul style="list-style-type: none"> <li>- Field mission round-up meeting with programme coordinator and MoLWE</li> <li>- Return flight to Ottawa-Canada</li> </ul>

## Annex 5 EVALUATION QUESTIONS MATRIX

Evaluative Criteria	Questions	Indicators	Sources	Methodology
<b>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 levels?</b>				
<ul style="list-style-type: none"> <li>Are the project objectives conformed to agreed priorities in the UNDP Country Programme Document (CPD)?</li> </ul>	<ul style="list-style-type: none"> <li>How does the project support the environment and sustainable development objectives of the GoSE?</li> </ul>	<ul style="list-style-type: none"> <li>In line with the national priorities mentioned in the UNDP Country Programme Document</li> </ul>	<ul style="list-style-type: none"> <li>UNDP Country Programme Document</li> <li>Project document</li> </ul>	<ul style="list-style-type: none"> <li>Documents analyses</li> <li>Interviews with UNDP and project team</li> </ul>
<ul style="list-style-type: none"> <li>Is the project relevant to other international conventions objectives</li> </ul>	<ul style="list-style-type: none"> <li>Does the project support other international conventions, such as the Stockholm Convention?</li> </ul>	<ul style="list-style-type: none"> <li>Priorities and areas of work of other conventions incorporated in project design</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>National policies and strategies</li> <li>Relevant international conventions web sites</li> </ul>	<ul style="list-style-type: none"> <li>Documents analyses</li> <li>Interviews with project team, UNDP and other partners</li> </ul>
<ul style="list-style-type: none"> <li>Is the project relevant to the GEF Climate Change focal area?</li> </ul>	<ul style="list-style-type: none"> <li>How does the project support the GEF Climate Change focal area?</li> </ul>	<ul style="list-style-type: none"> <li>How does the project support the GEF Climate Change focal area?</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>GEF documents</li> </ul>	<ul style="list-style-type: none"> <li>Documents analyses</li> <li>GEF website</li> <li>Interviews</li> </ul>
<ul style="list-style-type: none"> <li>Is the project relevant to the GoSE environment and sustainable development objectives?</li> </ul>	<ul style="list-style-type: none"> <li>Is the project country-driven?</li> <li>What was the level of stakeholder participation and ownership?</li> <li>Does the project adequately take into account the national policy in its design and its implementation?</li> </ul>	<ul style="list-style-type: none"> <li>Project's supports to national environmental objectives</li> <li>Coherence between the project and nationals' priorities</li> <li>Adequacy of project design to national existing capacities</li> <li>Involvement of different actors in the project design process</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>National policies and strategies</li> <li>Key project partners</li> </ul>	<ul style="list-style-type: none"> <li>Documents analyses</li> <li>GEF website</li> <li>Interviews with UNDP and project team</li> </ul>

		<ul style="list-style-type: none"> <li>• Coherence between national stakeholders and UNDP/GEF criteria</li> </ul>		
<ul style="list-style-type: none"> <li>• Is the project internally coherent in its design?</li> </ul>	<ul style="list-style-type: none"> <li>• Are there logical linkages between log frame and the project design?</li> <li>• Is the length of the project sufficient to achieve Project outcomes?</li> <li>• Had gender issues been taken into account in project design and implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Level of coherence between project expected results and project design internal logic</li> <li>• Level of coherence between project design and project implementation approach</li> </ul>	<ul style="list-style-type: none"> <li>• Program and project documents</li> <li>• Key project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Key interviews</li> </ul>
<ul style="list-style-type: none"> <li>• Is the project addressing the needs of target beneficiaries at the local level?</li> </ul>	<ul style="list-style-type: none"> <li>• How does the project support the needs of relevant stakeholders?</li> <li>• Has the implementation of the project been inclusive of all relevant stakeholders?</li> <li>• Were local beneficiaries and stakeholders adequately involved in the project design and implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Strength of the link between expected results from the project and the needs of relevant stakeholders</li> <li>• Degree of involvement and inclusiveness of stakeholders in project design and implementation</li> </ul>	<ul style="list-style-type: none"> <li>• Project partners and stakeholders</li> <li>• Project documents</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews with relevant stakeholders</li> </ul>
<ul style="list-style-type: none"> <li>• How is the project relevant with respect to other donor-supported activities?</li> </ul>	<ul style="list-style-type: none"> <li>• Does the GEF funding support activities and objectives not addressed by other donors?</li> <li>• How do GEF-funds fill gaps that are not covered by other donors?</li> <li>• Is there coordination and complementarity between donors?</li> </ul>	<ul style="list-style-type: none"> <li>• Degree to which programme was coherent and complementary to other donor programming nationally and regionally</li> </ul>	<ul style="list-style-type: none"> <li>• Documents from other donor supported activities Other donor representatives</li> <li>• Project documents</li> </ul>	<ul style="list-style-type: none"> <li>• Documents analyses</li> <li>• Interviews with project partners and relevant stakeholders</li> </ul>
<b>Evaluative Criteria</b>	<b>Questions</b>	<b>Indicators</b>	<b>Sources</b>	<b>Methodology</b>

**Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?**

<ul style="list-style-type: none"> <li>• Has the project been effective in achieving the expected outcomes and objectives?</li> </ul>	<ul style="list-style-type: none"> <li>• Has the project been effective in achieving its four expected outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>• See indicators in project document results framework and log frame</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• Project team and relevant stakeholders</li> <li>• Data reported in project annual and quarterly reports</li> </ul>	<ul style="list-style-type: none"> <li>• Documents analysis</li> <li>• Interviews with project team</li> <li>• Interviews with relevant stakeholders</li> </ul>
<ul style="list-style-type: none"> <li>• How is risk and risk mitigation being managed?</li> </ul>	<ul style="list-style-type: none"> <li>• How well are risks, assumptions and impact drivers being managed?</li> <li>• What was the quality of risk mitigation strategies developed? Were these sufficient?</li> <li>• Are there clear strategies for risk mitigation related to long-term sustainability of the project?</li> </ul>	<ul style="list-style-type: none"> <li>• Completeness of risk identification and assumptions during project planning and design</li> <li>• Existing information in place to identify emerging risks/ issues</li> <li>• Risk mitigations strategies developed and followed</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• UNDP, project team, and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews</li> </ul>
<ul style="list-style-type: none"> <li>• What lessons can be drawn regarding effectiveness for similar projects in the future?</li> </ul>	<ul style="list-style-type: none"> <li>• What lessons have been learned from the project regarding achievement of outcomes?</li> <li>• What changes could have been made (if any) to the design of the project in order to improve the achievement of the project's expected results?</li> </ul>		<ul style="list-style-type: none"> <li>• Data collected throughout evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Data analysis</li> </ul>
<b>Evaluative Criteria</b>	<b>Questions</b>	<b>Indicators</b>	<b>Sources</b>	<b>Methodology</b>
<b>Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?</b>				
<ul style="list-style-type: none"> <li>• Was project support provided in an efficient way?</li> </ul>	<ul style="list-style-type: none"> <li>• Was adaptive management used or needed to ensure efficient resource use?</li> </ul>	<ul style="list-style-type: none"> <li>• Availability and quality of financial and progress reports</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents and evaluations</li> <li>• Project team</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Key interviews</li> </ul>

	<ul style="list-style-type: none"> <li>• Were the project logical framework and work plans and any changes made to them use as management tools during implementation?</li> <li>• Were the accounting and financial systems in place adequate for project management and producing accurate and timely financial information?</li> <li>• Were progress reports produced accurately, timely and did they respond to reporting requirements including adaptive management changes?</li> <li>• Was project implementation as cost effective as originally proposed (planned vs. actual)</li> <li>• Did the leveraging of funds (co financing) happen as planned?</li> <li>• Were financial resources utilized efficiently? Could financial resources have been used more efficiently?</li> <li>• Was procurement carried out in a manner making efficient use of project resources?</li> <li>• How was results-based management used during project implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Timeliness and adequacy of reporting provided</li> <li>• Level of discrepancy between planned and utilized financial expenditures</li> <li>• Planned vs. actual funds leveraged</li> <li>• Cost in view of results achieved compared to costs of similar projects from other organizations</li> <li>• Adequacy of project choices in view of existing context, infrastructure and cost</li> <li>• Quality of results-based management reporting (progress reporting, monitoring and evaluation)</li> <li>• Occurrence of change in project design/ implementation approach (i.e. restructuring) when needed to improve project efficiency</li> <li>• Cost associated with delivery mechanism and management structured compare to alternatives</li> </ul>		
<ul style="list-style-type: none"> <li>• How efficient were partnership</li> </ul>	<ul style="list-style-type: none"> <li>• To what extent partnerships/ linkages between institutions/</li> </ul>	<ul style="list-style-type: none"> <li>• Specific activities conducted to support the development</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents and evaluations</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews</li> </ul>

<p>arrangements for the project?</p>	<p>organizations were encouraged and supported?</p> <ul style="list-style-type: none"> <li>• Which partnerships/linkages were facilitated? Which ones can be considered sustainable?</li> <li>• What was the level of efficiency of cooperation and collaboration arrangements?</li> <li>• Which methods were successful or not and why?</li> </ul>	<p>of cooperative arrangements between partners,</p> <ul style="list-style-type: none"> <li>• Examples of supported partnerships</li> <li>• Evidence that particular partnerships/linkages will be sustained</li> <li>• Types/quality of partnership cooperation methods utilized</li> </ul>	<ul style="list-style-type: none"> <li>• Project partners and relevant stakeholders</li> </ul>	
<ul style="list-style-type: none"> <li>• Did the project efficiently utilize local capacity in implementation?</li> </ul>	<ul style="list-style-type: none"> <li>• Was an appropriate balance struck between utilization of international expertise as well as local capacity?</li> <li>• Did the project take into account local capacity in design and implementation of the project?</li> <li>• Was there an effective collaboration between institutions responsible for implementing the project?</li> </ul>	<ul style="list-style-type: none"> <li>• Proportion of expertise utilized from international experts compared to national experts</li> <li>• Number/quality of analyses done to assess local capacity potential and absorptive capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents and evaluations</li> <li>• UNDP</li> <li>• Beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews</li> </ul>
<ul style="list-style-type: none"> <li>• What lessons can be drawn regarding efficiency for other similar projects in the future?</li> </ul>	<ul style="list-style-type: none"> <li>• What lessons can be learnt from the project regarding efficiency?</li> <li>• How could the project more efficiently carry out implementation (in terms of management structures and procedures, partnerships arrangements etc.)?</li> <li>• What changes could have been made (if any) to the project in</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Data collected throughout evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Data analysis</li> </ul>

	order to improve its efficiency?			
Evaluative Criteria	Questions	Indicators	Sources	Methodology
<b>Sustainability: To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?</b>				
<ul style="list-style-type: none"> <li>Is the Project financially and socio-economically sustainable?</li> </ul>	<ul style="list-style-type: none"> <li>Are there financial and socio-economic risks that may jeopardize the sustainability of project outcomes?</li> <li>What is the likelihood of financial and economic resources not being available once GEF grant assistance ends?</li> </ul>	<ul style="list-style-type: none"> <li>The likely ability of an intervention to continue to deliver benefits for an extended period of time after completion.</li> </ul>	<ul style="list-style-type: none"> <li>UNDP, project team, and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>UNDP, project team, and relevant stakeholders</li> </ul>
<ul style="list-style-type: none"> <li>Is the Project environmentally sustainable?</li> </ul>	<ul style="list-style-type: none"> <li>Are there ongoing activities that may pose an environmental threat to the sustainability of project outcomes?</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>UNDP, project team, and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Document analysis</li> <li>Interviews</li> </ul>
<ul style="list-style-type: none"> <li>To what extent will the stakeholders sustain the project?</li> </ul>	<ul style="list-style-type: none"> <li>Are there social or political risks that may threaten the sustainability of project outcomes?</li> <li>What is the risk that the level of stakeholder ownership will be insufficient to allow for the project outcomes/benefits to be sustained?</li> <li>Do the various key stakeholders see that it is in their interest that project benefits continue to flow?</li> <li>Is there sufficient public/stakeholder awareness</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>UNDP, project team, and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Document analysis</li> <li>Interviews</li> </ul>

	in support of the project's long term objectives?			
Evaluative Criteria	Questions	Indicators	Sources	Methodology
<b>Impact: Are there indications that the project has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological status?</b>				
<ul style="list-style-type: none"> <li>Assess the likely permanence (long lasting nature) of the impacts</li> </ul>	<ul style="list-style-type: none"> <li>Clarify based on extent: <ul style="list-style-type: none"> <li>a) verifiable improvement in energy intensity; and/or</li> <li>b) through specified indicators that progress is being made towards achievement of project objectives</li> <li>c) regulatory and policy changes at regional, national and/or local levels</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>The positive and negative, foreseen and unforeseen changes to and effects produced by a development intervention</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>UNDP, project team, and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Document analysis</li> <li>Interviews</li> </ul>

## **Annex 6 QUESTIONNAIRE USED IN THE FIELD**

### **Relevance**

Evaluation criteria questions :

- Was the programme relevant or not relevant to solve your needs? If yes. In what ways? If no then why?
- What will be your rating of the relevance of the programme? 3= very relevant (significant), 2= Moderately relevant (minimal), 1=not very relevant (Negligible N)
- How does the programme relate to existing environment and development priorities and needs as reflected in the national development plan? (was it relevant or not? What will be your rating of the relevance of the programme? 3. Significant (S), 2. Minimal (M), 1. Negligible (N) (Note: This is for the Ministries and government officials)
- How does the programme relate to the main objectives of the GEF focal area? (was it relevant or not? What will be your rating of the relevance of the programme?

4. *Significant (S), 2. Minimal (M), 1. Negligible (N) (Note:*

### **Attainment of overall results / objective**

- How did the programme interventions contribute to the achievement of the objective which is to “increase community resilience and adaptive capacity to climate change through an integrated water management and agricultural development approach in the sub-zobas of Hamelmalo and Habero?”
- What are some of the challenges that hindered the full achievement of the programme objective?

### **Effectiveness**

#### **Outcome 1**

- How would you assess the contribution of the programme to “Increase water availability and erosion control through groundwater recharge, rainwater harvesting, irrigation and soil and water conservation measures” (6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory)? Explain

Check list report / information / observation on:

- How many dams have been constructed by the programme?
- What is their total capacity?
- What kind of water distribution facilities do you have for crop and fodder irrigation?

Note: Baseline is 1 million cubic meters. Programme target is 5.3 million cubic meters by 2015

#### **Outcome 2**

- How would you assess the contribution of the programme to “Climate-resilient agriculture practice and the enhancement of livestock production? ” (6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory), Explain

Check list Reports / information/ observation on:

- Increased agricultural and livestock production
- Distribution of drought and disease resistant seed varieties?
- Capacity development including gender
- Energy efficient stoves? Etc.

Note: Baseline is # of additional months per year covered by local farming and livestock production due to programme intervention (Target is 70% of beneficiaries’ food for 3 more months per year)

### **Outcome 3**

- How would you assess the contribution of the programme to “to use climate information to support community preparedness to climate change hazards-droughts, shortage of rainfall, high temperature etc.” (6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory)? Explain

Check list Reports / information/ observation on:

- User friendly knowledge products
- Downscaled programme from GCM
- Class1 meteorological stations (installation sites, data analysis and dissemination)
- Training and capacity building are on EWS & meteorological observation/analysis by gender

Note: Baseline/target is 70% of beneficiaries (6000 households) make use of climate information

### **Outcome 4**

- How would you assess the contribution of the programme to “establish knowledge management system and activities?” (6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory) Explain

Check list Reports / information/ observation on:

- Knowledge products developed for use in policy advocacy
- Revision of policy documents informed by knowledge product from the programme

Note: Baseline/target at least five lessons learned & report disseminated

### **Efficiency**

- How would you assess the implementation of the programme in terms of rational use of human resources given the results achieved? (6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory) Explain
- How would you assess the implementation of the programme in terms of rational use of financial resources given the results achieved? (6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory) Explain

### **Sustainability**

- To what extent are there financial risks to sustaining the long-term results of the programme?  
(4=Likely (L): negligible risks to sustainability; 3=Moderately Likely (ML): moderate risks  
2=Moderately Unlikely (MU): significant risks; 1=Unlikely (U): severe risks)
- To what extent are there institutional and management risks to sustaining the long-term results of the programme?  
(4=Likely (L): negligible risks to sustainability; 3=Moderately Likely (ML): moderate risks  
2=Moderately Unlikely (MU): significant risks; 1=Unlikely (U): severe risks)
- To what extent are there social-economic risks to sustaining the long-term results of the programme?  
(4=Likely (L): negligible risks to sustainability; 3=Moderately Likely (ML): moderate risks  
2=Moderately Unlikely (MU): significant risks; 1=Unlikely (U): severe risks)
- To what extent are there environmental risks to sustaining the long-term results of the programme?  
(4=Likely (L): negligible risks to sustainability; 3=Moderately Likely (ML): moderate risks)

2=Moderately Unlikely (MU): significant risks; 1=Unlikely (U): severe risks)

- To what extent can the results of the programme be scaled-up or replicated in other regions of the country?

(4=Likely (L): negligible risks to sustainability; 3=Moderately Likely (ML): moderate risks

2=Moderately Unlikely (MU): significant risks; 1=Unlikely (U): severe risks)

### **Impact**

- Are there indications that the programme has contributed to, or enabled progress toward, reduced environmental stress and/or improved ecological and livelihood status?

(Impact Ratings: 3=Significant (S); 2=Minimal (M); 1=Negligible (N)

### **Mainstreaming**

- How would you assess the involvement of women in the programme implementation?  
(6 = Highly Satisfactory, 5 = Satisfactory, 4 = Marginally Satisfactory, 3 = Marginally Unsatisfactory, 2 = Unsatisfactory, 1= Highly Unsatisfactory) Explain

### **Areas for further discussions with programme experts from MoLWE, MoA and UNDP**

- Country Ownership of the programme
- Mainstreaming
- Programme Design / Formulation
  - Analysis of LFA/Results Framework (Programme logic /strategy; Indicators)
  - Assumptions and Risks
  - Lessons from other relevant programme (e.g., same focal area) incorporated into programme design
  - Planned stakeholder participation
  - Replication approach
  - UNDP comparative advantage
  - Linkages between programme and other interventions within the sector
  - Management arrangements
- Programme Implementation
  - Adaptive management (changes to the programme design and programme outputs during implementation)
  - Partnership arrangements (with relevant stakeholders involved in the country/region)
  - Feedback from M&E activities used for adaptive management
  - Programme Finance:
  - Monitoring and evaluation: design at entry and implementation (\*)
  - UNDP and Implementing Partner implementation / execution (\*) coordination, and operational issues

## Annex 7 EVALUATION CONSULTANT AGREEMENT FORM

### Evaluation Consultant Agreement Form

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

Name of Consultant: ***Kalame Fobissie (Lead / International Consultant)***

Name of Consulting Organization (where relevant): ***FOKABS INC-Canada.***

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

Signed at ***Ottawa-Canada on*** 19 November 2018

Signature:



**Annex 8 PICTURES OF THE PROGRAMME**



Gebesi earth dam



Wazntet dam



Fiza diversion structure irrigation 120 ha



Sumute Hday diversion structure for irrigation



Ground water recharge in Hamelmalo



Solar powered irrigation reservoir



A full set of solar irrigation installed



Irrigation enable farmers plant twice a year



Focus Group Discussion on farmland and household interview with farmers





Farmers experienced drastic increase in their vegetables, cereals and fruits productivity



Milk production increased from 2L to about 5 to 8 litres / cow / day



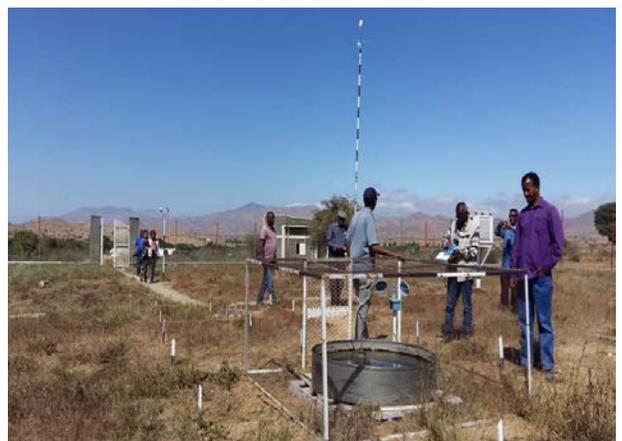
More than 700 households and 3 schools benefitted from solar lighting



Women were trained and about 400 energy efficient stoves were distributed



Farmers practiced Soil and Water Conservation techniques



Six Class A meteorological stations were installed to generate climate data and information

**Annex 9 AUDIT TRAIL TABLE**

## Annex 9 – Audit Trail Table

To the comments received on April 11, 2019 from AF Headquarter (AF HQ), April 11 2019 from GEF and on May 6 2019 received from AF Regional Office (AF RO).

Author	Page #	Section	Comments	Answers of the TE Consultants
AF HQ	Title page	Title page	Remove the GEF logo from the cover page	The logo of GEF has been removed as requested
AF HQ	Title page	Title page	After “Funded by”, remove “Global Environment Facility”	GEF has been removed as requested
AF HQ	iii	Project summary table	Change “GEF ID” to “AF Project ID” and replace “00078054” with the AF project ID.	GEF ID has been changed to AF Project ID (00061576) as requested
AF HQ	iii	Project summary table	The ID next to “UNDP Project ID” looks like an Atlas ID. Add the PIMS ID 4540 to this field.	PIMS ID 4540 has been added as requested
AF HQ	iii	Project description	Remove “GEF” in the first sentence.	GEF has been removed
AF HQ	3	1.4.2 Phases of the TE	At the top of page 3 there is a sentence that states, “A list of some of the guiding questions can be seen in Annex 7.” In this version of the report Annex 7, which currently does not have any content, is titled ‘Pictures of the Programme’. It seems that the above sentence should refer to Annex 5, which is the Evaluation Questions Matrix.	Annex 7 has been changed to Annex 5.
AF HQ	6	3. Programme Design/Formulation	In this section, discuss whether the project’s objectives and components were clear, practicable and feasible within its time frame.	A brief paragraph has been added under section 3.1. Programme design/ Formulation
AF HQ	6-7	3.1.1 Analysis of Logical Framework / Results Framework	Page 3 mentions that the logical framework shows that “...some of the indicators and information gathered were disaggregated by gender.”  It would be useful to discuss the inclusion of gender in the logical framework in this section of the report.	A paragraph on “Gender inclusion in the logical framework” has been included. P7.
AF HQ	8-9	3.1.3 Lessons Learned from other Programmes	Mention the specific projects and programmes from which these lessons were taken.	Two specific projects have been mentioned. 1. Anseba Local Development Project from 2002 to 2009, 2. Sustainable land management (SLM) project, which was implemented in the Central Highlands of Eritrea
AF HQ	9	3.1.4 Planned Stakeholders’ Participation	The information in this section is very useful for describing the actual participation of the stakeholders. However, since this section is about Project Design, could information be included here about the original plan for stakeholder participation? The ‘Project Implementation’ section of this TE report could then discuss how the actual participation of stakeholders differed from	Section 3.1.4 now focuses on Project design and the original plan for stakeholder participation while section P9. 3.2.2 on Partnership Arrangements now discusses the actual participation of stakeholders in the different

			what was planned in the design phase. (Or perhaps what was planned actually happened?)	outcomes/components of the programme. P13
AF HQ	9	3.1.5 Replication Approach	Include in this section if a replication approach was part of the project's design.	Addition has been made. See first paragraph section 3.1.5
AF HQ	13	3.2.2 Partnership Arrangements	Perhaps some of the text from Section 3.1.4 which describes the actual participation of stakeholders could be moved to this section, so that 3.1.4 will be more focused on the original plan of stakeholder participation.	Changes made accordingly. See table 4, P13.
AF HQ	13	3.2.3 Feedback from M&E Activities Used for Adaptive Management	Were there any significant changes to the project as a result from the MTR recommendations?  Were any adaptive management measures taken in response to the annual PIRs?	Overall, there were no significant changes to the programme as a result of the MTR recommendations. More explanation in section 3.2.3, P14.
AF HQ	14-15	3.2.5 Monitoring and Evaluation	This section provides an overview of M&E activities, but it could benefit from more detail. Consider the following: <ul style="list-style-type: none"> <li>• Were roles and responsibilities well-articulated in the M&amp;E plan?</li> <li>• Was the M&amp;E plan sufficiently budgeted?</li> <li>• Compliance with progress and financial reporting requirements, including quality and timeliness? (This section mentions M&amp;E activities but there is no information on whether they were done well or on time).</li> <li>• Were PIR ratings consistent with MTR and TE findings?</li> </ul>	Fully agree. The recommended additional considerations have been integrated into this section. P17.
AF HQ	17	3.2.6 UNDP and Implementing Partner	Could more detail be provided to support the Satisfactory ratings for UNDP, MoA/MoLWE? What evidence is there to back up that UNDP "provided strong support"? Who was responsible for the delays in the disbursement of funds and operational completion, and what measures were taken to fix these issues, and by whom?	This section has been revised according. The word "strong" is now removed. P17
AF HQ	19	3.3.2 Relevance	Include text on how the project is relevant to Adaptation Fund programming priorities.	A section on the project's relevance to the AF has been added. P19
AF HQ	27	3.3.4 Efficiency	Remove "GEF/AF" in the second sentence since this project was not financed by the GEF.	"GEF/AF" has been removed and replaced by "AF". P27.
AF HQ	30	3.3.7 Sustainability	Under 'Financial and Socio-economic risks' could the report comment on likelihood of financial and economic resources becoming available after the AF grant ends?  The 'Institutional and Governance risks' paragraph mentions government employees working with the farmers. What about any legal frameworks/policies/processes that could jeopardize (or support) sustainability of project results?	Further comments have been provided towards the end of this subsection ('Financial and Socio-economic risks'). P30. And at the beginning of the Institutional and Governance risks subsection. P30

AF HQ	Annexes	Annexes	<p>Include the following in the Annexes:</p> <ul style="list-style-type: none"> <li>• Evaluation Consultant Agreement Form</li> <li>• Signed Report Clearance Form</li> <li>• Annexed in a separate file: TE Audit Trail</li> </ul> <p>Be sure that the actual Audit Trail is not attached to the final TE report file. The TE report file will eventually be published in the Evaluation Resource Centre (erc.undp.org) which is public, and the Audit Trail should not be public.</p>	All the requested forms and table have been included into the report. The Audit Trail is provided in a separate document as recommended.
AF RO	All document	All document	The report is written in easy-to-understand language and is easy to follow. It really helped me to understand what the project has been doing on the ground.	Thank you
AF RO	All document	All document	Editorial clean-up for spellings, language etc. will be required in the next version.	The entire document including the annexes has been edited for spellings and English language. A separate draft with the English editing in track changes is available and has been submitted to UNDP Eritrea
AF RO	All document	All document	Ratings need to be realistic and consistent with the evidence that support them. There will always be challenges as to why certain outputs have not been realized, which is expected in this kind of project, but this is not the same as evidence supporting a rating.	We agree with your point. The ratings have been revisited and a few of them readjusted.
AF RO	All document	All document	Recommendations should indicate who the responsible party is, and should take into account that the project has come to an end and therefore recommendations need to be more strategic	The recommendations have been revised to be more strategic. Each of them now indicates who is responsible. P35-36
AF RO	v	Executive Summary	Need to check that these (MIHAP) were permissible in the project and are in line with the project objectives.	Statement revised accordingly. Details provided under section on adaptive management
AF RO	vi	Executive Summary	How do these contribute to the resilience of agricultural and livestock production? "MIHAP coupled with traditional improved fuel-efficient stoves and solar panels provided diverse livelihood options and opportunities to many farming households. The initial results are appreciated by many of the farmers. Their adaptive capacity and that of their production systems are increasing as they experience increasing crop and livestock productivity and sales"	Statement is adjusted accordingly
AF RO	vi	Executive Summary	"While the creation of 6 meteorological stations was a major progress to generate climate data and information...." Are these functional and serving purpose as per the outcome?	Yes, because we cannot generate and provide credible context specific climate information without having meteorological stations that are producing data for analysis
AF RO	viii	Executive Summary	Lesson learned: "Diversion structures contribute to farmers' resilience by making water available to farmers continuously at no cost". What is the significance of this Lesson	This lesson learned has been revised accordingly.

			in the context of the project goal and objectives?	
AF RO	viii	Executive Summary	Lesson learned: "Increasing productivity should be accompanied by enhancing marketing components". Does this mean there is no market for surplus produce or the project did not support marketing of surplus produce? Please modify text to make clear.	The explanation is has been made clearer - The programme did not support marketing of surplus produce.
AF RO	7-8	Table 2	It is suggested that the TE team add a third column to the table below and comment on whether or not the mitigation steps were taken.	A third column has been added on TE Team Comments
AF RO	9	Table 4	Please provide a brief comment on the gaps in participation especially in Outcome 4	It's not a gap but rather the stakeholders who were directly involved in this outcome related activities
AF RO	13	2.2.1 Adaptive Management	While the above provides good evidence of adaptive management, could the consultants please comment on how the project remained on track with respect to the original focus. We need to justify that this was necessary to meet the project's overall objectives.	A paragraph has been included to explain the links between the adaptive management measures and the project's objectives
AF RO	16	3.2.5 M&E	Need to present this in language that demonstrates that these were done in the course of the project, and that there is evidence to that effect.	This has been done as requested
AF RO	16-17	3.3.1 Overall Results	Evidence of outcome 4 is not provided in the narrative	The Evidence has been included in the narrative. P17
AF RO	17-26	3.3.3 Effectiveness	Output 2.2. The rating is not consistent with the evidence below, and consultants are advised to provide stronger evidence or revise rating.	The rating has been revised from satisfactory to moderately satisfactory. P24
AF RO	17-26	3.3.3 Effectiveness	Outcome 3. The rating is not consistent with the evidence below	The rating has been revised from satisfactory to moderately unsatisfactory
AF RO	28	3.3.5 Country Ownership	This text does not provide a review and the evidence that there was country ownership. It rather talks about the relevance of the project to the country, which is a different issue. This needs revision.	Text has been revised accordingly
AF RO	28-29	3.3.6 Mainstreaming	Text on improved governance. This text does not provide a review and the evidence that there was country ownership. It rather talks about the relevance of the project to the country, which is a different issue. This needs revision.	Text has been revised accordingly. P29
AF RO	29-30	3.3.7 Sustainability	Financial and socioeconomic risks: Issues related to the operation and maintenance costs of the installed weather equipment should be discussed. Who will pay for the maintenance after the project, who will pay for the collection, analysis and dissemination of data at the community level. The same question goes for the solar equipment. If the government departments have budgets for that, and if communities are contributing resources towards a fund for the	Text has been revised accordingly including issues related to O&M cost. P29

			maintenance of the equipment, please discuss such.	
AF RO	30	3.3.8 Impact	This discussion could be boosted by including among other things: 1.The number of farmers (total) that the project has reached out to and have adopted improved practices autonomously. 2.The uptake and promotion of the practices introduced by the project in policy discussions at national and local levels. 3.The extent to which farmers and decision makers are using improved weather information.	We completely agree with your point. It would make more sense. We tried but it was just not possible to get hard numbers from the project documents and team
AF RO	31-32	4. Conclusions, Recommendations and lessons	4.3. Actions to Follow up or Reinforce Initial Benefits from the Programme 4.4. Proposals for Future Directions Underlining Main Objectives  These two will make very good and actionable recommendations	Some of the actions under 4.3 have already been captured in the recommendation section. We have added a 11 <sup>th</sup> recommendation in the executive summary section on future directions underlining main objectives.
GEF	Title page	Title page	The executing entity has been the MoLWE, but the MoA and MoLG were implemented partners	Revised
GEF	iii	Executive Summary	The total amount in USD is 6,010,000	Revised
GEF	iv	Executive Summary	Evaluation Rating Table: In general terms, the evaluation rating made by the consultants is good, as these reflect the reality of the project implementation	Thank you
GEF	vi	Executive Summary	Outcome 1. The explanation given for not meeting the target is acceptable, but as implementer who have been engaged through the project implementation life, it would be good to see if there were other reasons behind for failing to meet the target (4.3 million m3 of water). For example, shortage of rainfall during the project life.	Additional explanation has been provided
GEF	xii	Acronyms and Abbreviations	Please arrange the Acronyms and Abbreviations according to alphabetical orders.	Done
GEF	3	Figure 1	Please correct the name as Ministry of Energy and Mines	The name has been revised and an updated figure provided
GEF	5	Table 1	Outcome 2. Baseline survey and Environmental impact assessment were conducted for the project area. area as part of the project implementation. Full text of the study was provided to you during the first meeting with DoE. Please refers the documents.	We have now made reference to the document.
GEF	6	3. Findings	Over all the evaluation, the strong co-financing contribution of the government and the community is not reflected well. Co-financing is one of the strong sides of Eritrea during project implementation which reveals the commitment and ownership of the project.	This point is now captured under section 3.2.4 on programme financing. We have also added this point in the executive summary section.

GEF	8-9	Table 3	Correct the sentence by: plantation of selected trees and shrubs like sisal and acacia and women's participation in soil and water conservation activities was very high.	The sentence has been corrected as requested
GEF	13	Table 4	The Meteorological Service unit of the Ministry of Transport and Communication and, the Ministry of National Development are missed.	It has been added in table 4
GEF	10	3.1.6 UNDP Comparative advantage	The project is also part of the SPCF 2 which don't mentioned in this part.  The contribution of UNDP in the capacity building of the project was limited. Due to these some activities was not implemented properly.	SPCF 1 and 2 are now included in the first paragraph.  The comment is now integrated at the end of this section
GEF	11-12	3.1.8. Management Arrangements	There was no operational NSC on the actual implementation period.  The name has been changed to Agriculture and land department, therefore, if the name of the department is changed to the current name (Department of Agriculture and Land). It would be good.  Our unit's branding does not use "UNDP/GEF Project" but rather "UNDP-supported GEF-financed project". I realize that this is very wordy.	The text has been revised accordingly.  The text has been revised to the new name.  The title has been changed as requested
GEF	12	3.2.1 Adaptive management	It isn't micro dam, it is better to rewrite to dam	The text has been revised as requested
GEF	16	3.2.6 UNDP and Implementing Partner	Ministry of National Development missed.	It has been added. Thank you.
GEF				
GEF	18	Table 7	Total number of the HH need to be mentioned.	The total number of households is now mentioned. It is important to note that many households benefitted from more than one activity.
GEF	18-19	3.3.2 Relevance	Relevance to national priorities: The NDC, very recent document and was not completed until the early 2018. It cannot be considered as if the project has originated from the NDC document itself.	The programme is completely aligned with the priorities set out by the Government in its NDC (even though the NDC was prepared in September 2015 after the project had begun). The INDC of Eritrea was submitted in September 2015. After Paris Agreement, INDC automatically became NDC for all countries and some countries are already revising and updating their NDCs
GEF	18-19	3.3.2 Relevance	Correct the sentence by: 2015 National Biodiversity Strategy and Action Plan (NBSAP) and the first and second national communications to the UNFCCC in 2001 and 2012 respectively.	The sentence is now corrected. Thank you.

GEF	19-26	3.3.3 Effectiveness	<p>Outcome 1. It is better to rewrite dam and micro-dams because it is not only chick dams but also dams are constructed.</p> <p>Table 8. Catchment is not an activity. If it is catchment treatment, however, the area should be in ha, and all the activities are implemented in that same area. Hence please avoid overlapping. Catchment should be omitted from the table because catchment is not SWC activity. It is an area in which all SWC activities implemented.</p> <p>Output 2.1. Kg is not a measurement of seedlings. Thus, seeds and seedlings need to be differentiated. Means, seedlings in number and the seeds in kg.</p> <p>Within the clarification given above it clarifies in 2016 some of the fruit trees banana and mango was able to give production 40 - 60kg/tree, but within the distribution listed there was no list of banana seedling distributed, and how was the production and their status within the last two years 2017-18?</p>	<p>The text has been revised accordingly. P20</p> <p>Thanks for the clarification and correction. Table 8 has been revised accordingly. We got the table from the project reports and presentations.</p> <p>The text has been revised accordingly. P22</p> <p>The text has been revised to take out banana since the project documents and report cannot provide us with justifications related to banana cultivation under the project. P22</p>
GEF	28	3.3.4 Efficiency	<p>Efficiency of financial resources: The Audit report also includes for the year 2014, so please include it.</p>	<p>No audit report for the year 2014 was provided to the team so we could not include 2014 among the reports that we reviewed.</p>
GEF	33	4.5 Best and worst practices	<p>To get a good lesson out of this TE study the outcome which is completed abandoned and the budget which is diverted like should mentioned for example the budget which is allocated for study tour.</p>	<p>This is captured already under lessons learned related to: "adaptive management might limit the achievement of initially planned results". P33</p>