



## **Mid-term Evaluation Report (April 2016-Dec 2018)**

### **UNDP-supported AF-financed Project**

**“Increased Resilience to Climate Change in Northern  
Ghana through the Management of Water Resources and  
Diversification of Livelihoods”**

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## List of Acronyms

<b>AAP</b>	Africa Adaptation Programme
<b>AF</b>	Adaptation Fund
<b>ALP</b>	Adaptation Learning Programme for Africa
<b>CBO</b>	Community Based Organizations
<b>CII</b>	Country Implementing Initiative
<b>DA</b>	District Assembly
<b>DFID</b>	UK Department for International Development
<b>EPA</b>	Environment Protection Agency
<b>FC</b>	Forest Commission
<b>GEF</b>	Global Environment Facility
<b>GEMP</b>	Ghana Environment Management Project
<b>GNA</b>	Ghana News Agency
<b>GoG</b>	Government of Ghana
<b>GPRS</b>	Growth and Poverty Reduction Strategy
<b>GSGDA</b>	Ghana Shared Growth and Development Agenda
<b>GWI</b>	Global Water Initiative
<b>IDA</b>	Irrigation Development Authority
<b>IDRC</b>	International Development Research Centre
<b>IFAD</b>	International Fund for Agricultural Development
<b>IP</b>	Implementing Partner
<b>IWRM</b>	Integrated Water Resource Management
<b>LPAC</b>	Local Project Appraisal Committee
<b>MDGs</b>	Millennium Development Goals
<b>MESTI</b>	Ministry of Environment, Science, Technology and Innovation
<b>MOF</b>	Ministry of Finance
<b>MOFA</b>	Ministry of Food and Agriculture
<b>MTE</b>	Mid-Term Evaluation
<b>NADMO</b>	National Disaster Management Organization
<b>NCCAS</b>	National Climate Change Adaptation Strategy
<b>NCCC</b>	National Climate Change Committee
<b>NDPC</b>	National Development Planning Commission
<b>NEP</b>	National Environmental Policy
<b>NEPAD</b>	New Partnership for African Development
<b>NSC</b>	National Steering Committee
<b>NTFP</b>	Non-Timber Forest Products
<b>PIM</b>	Project Implementation Mechanism
<b>PMU</b>	Project Management Unit
<b>PRODOC</b>	Project Document
<b>REDD</b>	Reducing Emissions from Deforestation and Forest Degradation
<b>RP</b>	Responsible Partner
<b>SADA</b>	Savannah Accelerated Development Authority
<b>SCCF</b>	Special Climate Change Fund
<b>SEA</b>	Strategic Environment Assessment
<b>SWOT</b>	Strengths, Weaknesses, Opportunities and Threats
<b>TORs</b>	Terms of References
<b>UNDP</b>	United Nations Development Program
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VCA</b>	Vulnerability and Capacity Assessments
<b>WACDEP</b>	Water Climate and Development Program
<b>WFP</b>	World Food Programme

**WRC**      Water Resources Commission  
**WRI**      Water Research Institute  
**WUA**      Water Users Association

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We also thank the EPA, WRC, WRI, MESTI, MoFA.

Finally, we are grateful to everyone we consulted and who contributed to the report.

## Summary of the MTE

### Project Description

1. The Government of Ghana (GoG), with funding from the Adaptation Fund Board Secretariat is implementing a four-year project entitled “Increased resilience to climate change in northern Ghana through the management of water resources and diversification of livelihoods”. The project aims to address climate change-induced decreases in water resource availability and increasing unpredictability. This goes along with the associated negative impacts of these trends on the livelihoods of rural communities. It is expected to enhance the resilience and adaptive capacity of rural livelihoods to climate impacts and risks on water resources in Northern Ghana.

2. The **objective** of the project should be achieved through key results centred on the improvement of water access and increased institutional capacity. More specifically, this includes the coordination for integrated water management to support other uses of water resources, and hence the diversification of rural communities’ livelihoods. The project is expected to directly benefit 60,000 people from the targeted project regions and indirectly benefit over 8 million Ghanaians living along the Volta River Basin. It is also expected to increase water access, diversification of livelihood activities and increase income generation by 30% of households in targeted project communities.

3. The Project is being implemented in three (3) District Assemblies in the Northern region, four (4) District Assemblies in the Upper East Region and three (3) District Assemblies in the Upper West Region. A total of 50 communities made up of five communities from each of the ten (10) District Assemblies are directly benefitting from the project intervention.

Figure 1: Location of the three northern regions of Ghana where the project is carried out

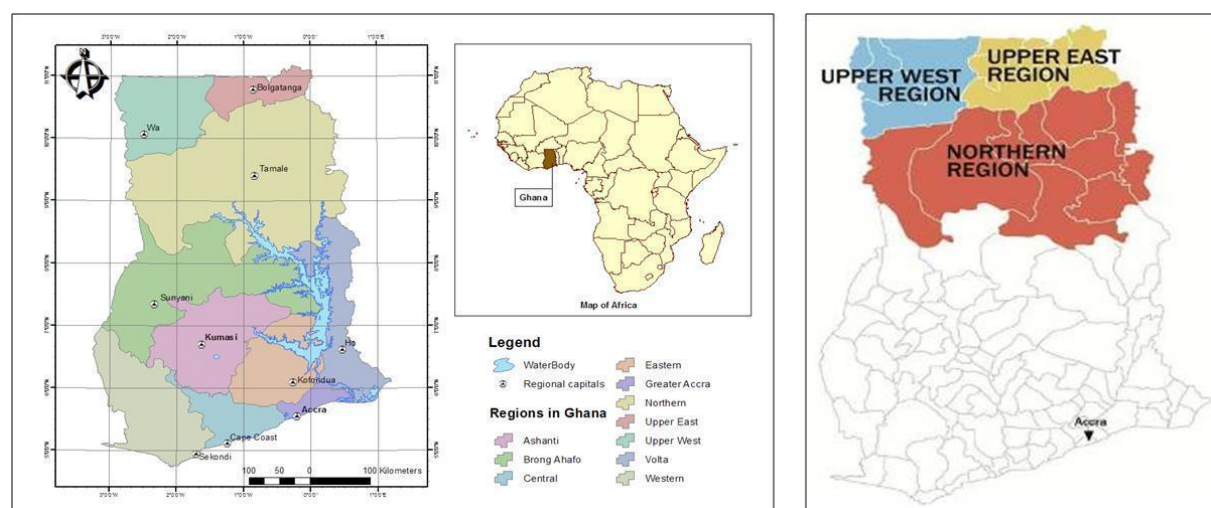


Table 1: Basic Project and Finance Data

Project title	Increased resilience to climate change in Northern Ghana through the management of water resources and diversification of livelihoods		
ID PNUD (PIMS#)	4952	LPAC Date	June 26, 2015
Endorsement on behalf of the Government	1 <sup>st</sup> October 2012	PRODOC signature date	26 <sup>th</sup> February 2013
ATLAS Award ID	00089037		
ATLAS project ID	00095434		
Country	Ghana	Region	Northern, Upper East,

			Upper west
Start date	April 2016	Workshop Launching Date	23 <sup>rd</sup> May 2016
Project completion	April 2020	Coordinator recruitment date	16 <sup>th</sup> May 2016
Management arrangement	Multilateral implementing Entity	Executive agency	MESTI
Implementing entity	UNDP		
Mid-term review date	Nov-Dec 2018		
Other partners			
<b>Project funding</b>	<b>Approval budget (US\$)</b>	<b>Expenses at Mid-term (US\$)</b>	
Adaptation Fund	8,293,972	2,786,607	
<b>Total cost of project</b>	<b>8,293,972</b>	<b>2,786,607</b>	

### Context and objectives of the mid-term evaluation

4. The main objective of the evaluation is to analyse the project's progress in order to obtain the outcomes described in the Project Document. This current evaluation intends to suggest any adjusted action needed for the project to achieve its assigned goals, based on its actual performance.

5. The methodology of the evaluation was designed through 5 steps: (1) Preliminary review of the documents, (2) Mission preparation, (3) Stakeholders' interviews both on-site and in Accra, (4) Complete description of information regarding the evaluation criteria (5) Writing of draft mid-term and final reports.

### Main conclusions

#### Project relevance

6. The project's relevance is rated to be **highly satisfactory (HS)** as it improves national adaptation and mitigation actions taken to face climate change. The project was designed by Ghana to launch the implementation of three (3) key national priorities for climate change adaptation, as outlined in the 2011 National Adaptation Strategy for Climate Change (NCCAS) as well as those highlighted in the Second National Communication. Out of the ten priorities listed in the National Climate Change Adaptation Strategy, the GoG, with the support of the Adaptation Fund resources, will directly operate on priorities 2 and 6, and contribute to priority 3:

- Priority 2: Alternative livelihoods: minimizing impacts of climate change for poor and vulnerable local populations;
- Priority 3: Enhancing national capacity to adapt to climate change through improved land use management;
- Priority 6: Managing water resources as climate change adaptation to enhance productivity and livelihoods.

The main direct beneficiaries of the project are the target project communities and the different structures involved in the implementation.

#### Project management

7. The achievement of outputs is rated as **satisfactory (S)** given the level of implementation. A lot has been achieved across the three components. The analysis of the annual reports and interviews with stakeholders indicates that during the first year of implementation, all activities planned in relation to component 1 "Water Resource Management and Planning under Climate Change" had been



completed and activities to improve livelihood had been launched (with a delay because of the release of funds).

8. For further improvement, note that the project management has been carried out with the above-mentioned challenge of delays on the delivery of funds at the local level. Many NGOs complain that they did not receive the fund early enough and said that the first instalment could not allow them to achieve the activities they planned. They also said that during the first fund instalment, the process was complicated but after training, the fund flow has been improved. The project team also mentioned some delay in receiving the funds from AF.

9. In terms of monitoring and evaluation, project activities are monitored and evaluated at four different levels: community, district, region and national level. This is implemented through technical and financial reports of activities that are transmitted to the higher levels of the implementation hierarchy. Several reports were produced during these first two years of implementation and allowed the project performance monitoring by measuring project results compared to objectives as well as evaluating its impact regarding planned activities.

### **Finance / Efficiency**

10. The financial execution of the project is rated as **satisfactory (S)** as the planned budget has been respected in general. However, there is an excess expenditure of 102,942 USD in component 1. The budget planning and expenditure from project start to 31 December 2018 is presented in *Table 14*.

11. To be prepared for the expected increase in expenditures from January 2019 to May 2020 (66% project overall budget to be spent in less than 2 years), we highly encourage project team to develop mechanism to accelerate project delivery. It could be a presentation that will drill down the planning of the year 3 and 4 and a good risk management plan. We also encourage AF to be reactive on fund transfers to the project and the project to the local level.

### **Performance / Efficiency**

12. **The rating of the progress towards results is as follow: Satisfactory (S) for outcome 1; moderately satisfactory (MS) for outcome 2 and Satisfactory (S) for outcome 3.**

13. One of the bold commitments of the project is providing access to safe drinking water through newly constructed boreholes. As of the midterm, **about 50 boreholes were in place, and 50 were under construction**. One borehole has the capacity to provide safe drinking for 300 people. For the communities, water provided by the project is a key resource. To progress further and sustain investments, the mission suggests some improvements in terms of awareness on how to maintain (for example at Sabare I, one of the boreholes was break down at the time of the mission) and on how to preserve from poor hygiene practices.

14. The project has also strengthened the diversification of livelihoods in communities in northern Ghana with the support of 46 local NGOs that were selected and funded as per the design of the project. The project is financing 198 projects within 68 communities (a breakdown of the 198 projects is provided in *Appendix 4*); 30% of the projects target season gardening, 24% bee keeping, 22% agro processing (shea, baobab fruits, groundnut, soya) and 9% target tree nursery and/or tree planting. The implementation of irrigation systems will enable people to develop market gardening activities that will provide them with income. Populations' capacities have been strengthened in the fields of agricultural transformation, aquaculture, gardening, integration of cultural values, beekeeping, and production of plants. The project tackles barriers to climate change adaptation by developing diverse capacities, documenting and disseminating best practices and by creating knowledge hubs at the community and regional levels, with a focus on climate change adaptation.

### **Sustainability**

15. The sustainability is rated as **likely (L)**. The communities and the local authorities embraced the work and now want to proceed faster. We collected many testimonies on how the project's progress to improve the standard of living (through diversification of sources of incomes, dry season gardening, agri-processing, etc.). They have understood the sense of the adaptation activities developed in year 1 and 2 and got the taste of the possible increase in livelihoods if these activities are well developed.

### Project rating

16. The mid-term review team provides the following scoring by theme.

Table 2: MTR Ratings & Achievement Summary Table for the project

Criterion	Rating	Summary of assessment
<b>Project Strategy</b>	N/A	
<b>Progress Towards Results</b>	Objective Achievement  Rating: MS	<ul style="list-style-type: none"> <li>As stated in the project document, "The main indicator of vulnerability reduction will be changes in access to water and diversification of livelihood activities and income generation will increase by 30% in at least 50% of households in the communities".</li> <li>Based on the achievements at mid-term, we can say that the project is on course to fulfil its commitments of providing access to water to climate change risk communities. The first 50 boreholes are benefiting 15,000 people. The project has commenced drilling of the second batch of the 50 boreholes. However, it is more difficult to assess the increase in income because the NGO projects are just starting.</li> </ul>
	Outcome 1 Achievement  Rating: S	<ul style="list-style-type: none"> <li>A lot of work has been done in the component 1 with a very methodical approach: (1) a general analysis of the trends in climate, (2) the design of long term management plan of the river basins, (3) confirming the relevancy of adaptation activities for the communities and (4) community entry to prepare the activities.</li> <li>The activities allowed to expand the existing regional committees of Ghana Environmental Management Project to include more relevant institutions, to identify existing / established district-level adaptation monitoring committees and to organize a formal launching workshop to inform about the project.</li> <li>The activities on component 1 allowed the stakeholders to adopt a vision for a 20-year planning horizon for sustainable water resources infrastructure and effective governance system.</li> </ul>
	Outcome 2 Achievement  Rating: S	<ul style="list-style-type: none"> <li>The adaptation fund project established 3 Regional, 10 District and 50 Community climate change adaptation Committees in the three northern regions. The establishment of these committees initially is to serve the programme objectives but with a wider view of supporting the implementation of the development of a National Climate Change Adaptation Strategy.</li> <li>50 boreholes are currently serving 15, 000 people mainly women and children in 30 communities in 5 districts. 50 other are under construction.</li> <li>15 Buffer zones have been created. Over 26, 600 tree seedlings have been planted in 30 communities (37.5 acre) designated for woodlots/ plantations in the second year of the project.</li> <li>In a nutshell, the project is dramatically changing the access to water rate and also developing a sustainable management of the buffer zones. However, there is a need of better assessment on how the woodlots/plantations will reduce the pressure on the buffer zones as the studies showed that the major buffer zone economic activities engaged in by households are farming, logging, mining and quarrying.</li> </ul>
	Outcome 3 Achievement Rating: S	<ul style="list-style-type: none"> <li>The project has also strengthened the diversification of livelihoods in communities in northern Ghana with the support of 46 local NGOs that were selected and funded. The project is financing 198 NGO executed projects among 68 communities; 30% of the projects are about dry season gardening, 24% on bee keeping, 22% on agro-processing (shea, baobab fruits,</li> </ul>

Criterion	Rating	Summary of assessment
		<p>groundnut, soya), 9% about tree nursery and/or tree planting.</p> <ul style="list-style-type: none"> <li>• To resume, some important results are already obtained showing the respect of the project implementation timeline despite the delay in starting the following activities.</li> <li>• However, there is a need to scientifically monitor the impacts of the NGO projects on livelihoods.</li> </ul>
<b>Project Implementation &amp; Management</b>	Rating: S	<ul style="list-style-type: none"> <li>• The project has set up important procedures for activity management, planning and follow-up as well as stakeholders' participation. Setting up a proper PMU for the project ensures an independent and more targeted project management. This arrangement is enhanced with this delegation that the project provides for specialized NGOs for operational aspect at the community level mainly those having intervened on sites for a significant time showing institutional sustainability.</li> <li>• The annual plans' quality is satisfactory as they are adequately good to allow detailed and precise planning of activities to undertake each execution year. They also estimate that annual activities determined within the annual plans are relevant to contribute to the Project's expected outcomes and outputs achievement. Plus, they are shared, discussed and validated in a participative way at regional level and national level. However, the engagement of the intermediate scale that is the district in project monitoring is lower than expected. They have expressed a need of more support to increase the frequency and / or duration of field visits by a representative of the district adaptation committee (fuel and food during the field visits by district committee members).</li> <li>• Some additional effort could be made on the communication side, especially at local level. For example during the field visits in the Upper East and Upper West regions the consultant have seen signboards only on the boreholes and only one signboard on community project sites(implemented by one of the implementing NGOs).</li> </ul>
<b>Sustainability</b>	Rating: L	<ul style="list-style-type: none"> <li>• The project has trained and strengthened capacities of local actors in the field of water resources conservation, adaptation to climate change, market gardening and plant production. These trained actors will be able to design and implement development projects adapted to local situations. The technical and multi-institutional partnership established between the various national and institutional structures may be exploited for the mobilization of financial resources through national and international tenders to continue activities in the different target regions of the project and to extend the actions to the other regions of Ghana.</li> <li>• An added value to the project can be the involvement of NGOs in the target communities of the project. The project has created a link between NGOs and these communities and will facilitate the appropriation of the different results obtained by the local populations. In some project there is a positive synergy due to the involvement of international NGOs like World Vision that is capable to bring additional funding.</li> <li>• In addition, the sustainability of this project lies in the reduction of the different risks identified during the project preparation and its implementation.</li> <li>• However, insecurity in the region weaken mobilization of some target groups due to a poor understanding of climate change issues and lack of capacity to meet financial commitments.</li> </ul>

## Recommendations

17. The following table covers recommendations that the evaluation team provide at the end of the mid-term review.

Table 3: Mid-term review recommendations synthesis

Rec #	Recommendation	Entity in charge of
R.1	<p><b>Give the district adaptation committees the means to move more often and monitor the activities at the district level.</b></p> <p>Indeed, the community-level activities implementation is follow up by the District Assemblies through the Community Water and Sanitation Department, District Agriculture Development Unit, and Forestry Services Division, depending on the nature of the activity. So, it is key to ensure that this intermediate scale is fully aware of what is going on (NGO projects, community projects). A better involvement of district can also help to mitigate any risk of conflicts or misunderstanding between beneficiaries and service providers and also mitigate any risk of delays (from NGO or service providers) by a stronger monitoring. For that purpose: to train again the district adaptation monitoring committees on the content of the project; to increase the rhythm of their field visits.</p>	EPA and PMU
R.2	<p><b>Develop a communication strategy at all levels; production and dissemination of several of the best practices and success stories from the implementation of the project and through several means of communication</b> (YouTube channel, website of the project, etc.).</p> <p>Indeed, there is a need to improve internal and external communication:</p> <ul style="list-style-type: none"> <li>• To increase the visibility of the project</li> <li>• To record as assets the best practices and training tools from NGOs and research centres.</li> <li>• To produce and disseminate the best practices and success stories from the implementation of the project and through several means of communication (website of the project, YouTube channel).</li> <li>• For that purpose, to provide equipment to the RAMC: GPS, mean of transport to facilitate the monitoring, dedicated project computer, camera, etc.</li> </ul>	PMU, NGOs
R.3	<p><b>Develop an econometric monitoring of a sample of households to demonstrate the reduction of vulnerability and increase of income.</b></p> <p>This will allow the PMU to measure the net positive impacts of the project at the household level: are the activities developed by NGOs lucrative enough to really be a game changer? The vulnerability study may help to build a M&amp;E framework based on the “household economic approach”. This methodology, developed by a consortium of NGOs and researchers allows the monitoring of vulnerability and resilience at the household level. Through fine-tuned surveys, it is possible to evaluate the response of several types of households of a given region to external shocks.</p>	M&E of PMU
R.4	<p><b>Develop a strategy and framework of total maintenance guarantee of the boreholes.</b></p> <p>Lessons from WASH projects in Western Africa suggest that the project should <b>anticipate the future of the boreholes and find a solution to regularly maintain this key equipment.</b> There are two complementary solutions which are:</p> <ul style="list-style-type: none"> <li>• To train a technician per village or group of neighbouring villages to not taking inspiration from some districts with significant involvement of MOFA extension officers).</li> <li>• To support the creation of a social business dedicated to</li> </ul>	PMU, WRC, WRI

Rec #	Recommendation	Entity in charge of
	providing a maintenance service. Given the amount of boreholes, a with a fine-tuned business plan it can be profitable. Such activity can be implemented by existing companies (agro-inputs providers for example).	
R.5	<p><b>Extend the duration of the NGO projects from 6 months to 1 year to allow a longer monitoring period and strengthen the foundations for sustainability.</b></p> <p>The duration of some NGO projects like fish farming or dry season gardening is too short to ensure sustainability. Also, some agro-processing centres are under construction, so there will not have the opportunity to monitor a significant amount of production cycles. As far as possible, the project should <b>continue these NGO projects for at least six months</b> (one year could be more secure).</p>	UNDP
R.6	<p><b>Develop a very detailed planning of year 3 and 4</b></p> <p>To be prepared for the expected increase in expenditures in part of year 3 and year 4 (80% of the overall budget), we highly encourage project team to develop mechanism to accelerate project delivery for the 3 and 4 years. It could be a presentation that will drill down the planning of the year 3 and 4 and a good risk management plan. We also encourage AF to be reactive on fund transfers to the project and the project to the local level.</p>	UNDP, PMU, AF
R.7	<p><b>Plan now for a reflection on the next generation of project that would strengthen the link between climate service and adaptation</b></p>	UNDP, PMU

# 1. Introduction

18. In accordance with its commitments, the GEF and UNDP “Increased Resilience to Climate Change in Northern Ghana through the Management of Water Resources and Diversification of Livelihoods” project is subject to a mid-term evaluation (MTE). The MTE commenced in mid-October 2018, with the main consultation phase ending at the end of November 2018. The inception report has been authorized by UNDP before effective launching of mission.

## 1.1. Evaluation Goals

19. The main objective of the evaluation of the project is to analyze the project’s progresses in order to fulfil the outputs described in the Project Document. This current evaluation intends to suggest any corrective action needed for the project to achieve its original goals, based on actual performances and progress as of today (December 2018).

20. In accordance with the UN-GEF mid-term review guidelines, the specific objectives of this mid-term evaluation are:

- To analyse project formulation and its relevance in views of the current situation (*Project design and Results framework*).
- To analyse project results and its progresses in order to fulfil project objectives (*Progress towards outcome analysis*).
- To analyse progresses in project implementation (*Management arrangements, Work planning, Finance and co-finance, Project-level Monitoring and Evaluation Systems, Stakeholder Engagement, Reporting, Communication*).
- To analyse project sustainability based on actual performances and identified trends (*Financial risks to sustainability, Socio-economic risks to sustainability, Institutional Framework and Governance risks to sustainability*).

21. Findings of evaluation are structured to be easily taken into account and integrated in management processes, in particular through a series of recommendations and learnt lessons formulated throughout this evaluation.

## 1.2. Approach to MTE

22. The methodology of the evaluation follows a standardized approach as presented in “Guidance for conducting midterm reviews of UNDP-Supported, GEF-financed projects”. The evaluation process is designed following an outline presented in . An inception report has been elaborated by the evaluation team and delivered to the UNDP on the 9<sup>th</sup> of November 2018 in which methodology was described along with the timeline of the mission. Evaluation logic covers the usual criteria: (1) Relevance, (2) Efficiency, (3) Effectiveness, (4) Impacts, (5) Sustainability. Evaluation questions are presented at the beginning of every section. They allow answer the different expectations expressed in TOR (Terms Of Reference).

23. The MTE adopted a participatory approach whereby key stakeholders were kept informed and consulted throughout the evaluation process in order to increase their (and other stakeholder) ownership of the evaluation findings. All contributions to the MTE from stakeholders (written and verbal) have been treated confidentiality.

24. The findings of the evaluation are based on the following: A review of the project’s Theory of Change (ToC), in close consultation with project partners; A desk review of key documentation including: Project document; Project annual progress reports, meeting minutes and relevant correspondence; Project outputs; Interviews (individual or in group); Field visits.

25. The preliminary results of the MTE were presented to the PMU in November 2018. This meeting provided a further opportunity to consult on some of the key points emerging from the MTE, ahead of consulting on the draft final report.

26. The MTE faced a number of limitations. The lead evaluator had a budget of 17 days for the MTE, and the national expert had 13 days, so the MTE was undertaken with very limited resources. The project counts 3 regions, 50 communities, 198 NGO projects. We used semi-structured questionnaires and also wanted to have quality time for field visit but finally we did not have enough time to deliver 100% on both sides. **With more time budget it would have been interesting to carry out some case studies and also to deploy field investigators for quantitative data collection.**

27. Also, the mission team could not meet the government ministries/institutions responsible for water, agriculture or fisheries in Accra (for instance Water Resources Commission (WRC), Water Research Institute (WRI), Ghana Irrigation Development Authority (GIDA), Community Water and Sanitation Agency (CWSA), Fisheries Commission, National Fire Service (NFS).

28. Mid-term evaluation was implemented using the following steps:

✓ **Preliminary review of literature**

29. The first step was to review project documentation required in launching report. This review allowed identifying evaluative question and indicators, which guided the evaluation process (bibliography annex).

✓ **Mission preparation**

30. For the mission preparation, the consultants interacted with a list of stakeholders including the project coordinator and the M&E Officer. The mission itinerary to conduct field conversations and site verification has been elaborate with their support. A final version of the program of the field visits has finally been discussed with the UNDP team to ensure the validity of the sampling.

31. The evaluation team developed a data-collecting tool. It includes an evaluation matrix, indicators and evaluation questions according to the type of stakeholders. It was shared with UNDP and to the project coordinator before the departure of the evaluation team to Ghana.

✓ **Interview meetings with stakeholder on the sites of the project and in Accra**

32. Face-to-face consultations with a wide range of stakeholders, using “semi-structured interviews” with a key set of questions in a conversational format (Photo 1). Triangulation of results, i.e. comparing information from different sources, such as documentation and interviews, or interviews on the same subject with different stakeholders, was used to corroborate or to check the reliability of evidence. We have included in the annexes the different question sheets of interview that were conducted with stakeholders, samplings and reasons why it is relevant to the MTE.



Photo 1: Meeting in Ligba 22/11/2018

The meetings have mobilized many peoples, proof of the active participation of the communities in the project. The table 4 in next page sums up the stakeholders consulted in this mid-term evaluation.

Table 4: List of district and communities visited during MTE process

Region / District / Communities	Regional or District adaptation monitoring committee	Community Chiefs, Land Chiefs, Queen mothers	Assembly men	“Community projects” visited	NGO Representative	# Attendees to the focus groups	
						F	M
<b>Northern Region</b>	8 members						
<b>Zabzugu District</b>							
Mognegu No. 1		1 person	1 person	YES	4 representatives	4	11
Mognegu No. 2			1 person	YES	4 representatives	13	11
Sabare No. 1			1 person	YES	1 representative	1	9
Sabare No 2			1 person	YES	1 representative	2	6
<b>Savelugu District</b>							
Zaazi	2 members		1 person	YES	4 representatives	20	15
Libga			1 person	YES	4 representatives	15	15
Tambaligu			1 person	YES	8 representatives	27	18
Tampion		1 person	1 person	YES	8 representatives	17	11
<b>Upper West Region</b>	8 members						
<b>Nadowli District</b>	10 members						
Goli				NO		11	17
<b>Nandom District</b>	10 members	1 person					
Ko				YES		6	11
<b>Sissala District</b>	11 members						
Bugubelle				NO		31	19
Tumu			1 person	YES		10	13
<b>Upper East Region</b>							
<b>Bongo District</b>	4 members						
Dua			1 person	NO		13	5
Yidongo			1 person	YES		10	6
<b>Bakwu West District</b>	4 members						
Farik		3 person	1 person	YES		11	11
Tilli Azupunpugu				YES		12	6



### ✓ In depth analysis of the information in view of evaluation criteria

33. Following field mission, information were compiled and analyzed to ensure an objective evaluation of the project given the UNDP/GEF follow-up & evaluation policy. Quantitative and qualitative data have been gathered on the basis of the results of several interviews, observations and documentary review.

### ✓ Writing draft reports

34. A first version of the midterm review final document was submitted the 12/12/2018 to the project coordinator at the MESTI and to the UNDP team. The UNDP team has made their feedback on

### ✓ Writing final report

35. The final document has been submitted the 22/02/2019, taking into account the feedbacks from the stakeholders in order to meet the expectations.

## 1.3. Evaluation report structure

36. After a short presentation of the objective and the methodology of this mid-term evaluation (section 1), this report starts with by presenting the evaluation context along with a brief description of the project context (section 2). Then, the report presents findings of the evaluation team (section 3), structured around 4 areas: (1) project strategy, (2) project results, (3) project implementation and (4) project sustainability. Finally, the report compiles several conclusions in a specific section, introducing recommendations formulated on these particular conclusions.

## 2. The project

### 2.1. Ghanaian Context

37. Located in Western Africa, Ghana is bordering the Gulf of Guinea, between Ivory Coast in the West, Togo in the East and by Burkina Faso in the North. The total land area is 239,460 km<sup>2</sup> and 8,520 km<sup>2</sup> of water. Ghana has extensive water bodies including the Lakes Volta and Bosomtwe with a surface area of 3,275m<sup>2</sup>. There are other seasonally flooded lakes occupying over 23,350km<sup>2</sup>. The terrain of Ghana is made up of mostly low plains with dissected plateau in the south-central areas. The elevation ranges between 0m from the Atlantic Ocean to Mount Afadjato (880m) as the highest point. The country is divided into five distinct geographical regions. There are the Coastal plains stretching across the southern portion of the country and featuring low sandy beaches interspersed with saltwater lagoons. There is a forested plateau region consisting of the Ashanti uplands and the Kwahu Plateau located inland in the southwest and south-central Ghana. The remaining evergreen rainforest is located in the southwestern part of the country. The hilly Akwapim-Togo Ranges run north to south along the country's eastern border. The Volta Basin takes up most of central Ghana. Finally, the high plains characterize the northern third of the country.

38. Surface water covers 5 % of the total area of the country. The three major river systems are the Volta River System, the South Western River System and the Coastal River System. The entire Volta River Basin of 174,886 km<sup>2</sup> covers 70 % of the country's land area and includes the whole interior savannah zone. Within Ghana the Volta River Basin comprise of the White and Red Volta Basin (hereafter referred to as the White Volta), the Black Volta Basin and the Oti Basin. The Volta River and Lake provide water for industrial and domestic use, irrigation as well as livelihoods for a number of people who are engaged in fishing along its banks and remain an important transportation link between southern and northern Ghana. The total annual runoff is estimated at 54 billion m<sup>3</sup> with 37 billion m<sup>3</sup> originating from within the country and 16.2 billion m<sup>3</sup> from outside.

39. Ghana has a population of about 24.6 million with a population growth rate of about 2.5 %. In 2000, the urban population was estimated at about 50.9 % and rural population at about 49.1%. The increase in population is resulting in an increase in the demand for more arable land, food and biomass

for energy as well as water resources for both livelihood and economic development. Current accessibility to water is limited. Agricultural production is mainly rain-fed, such that increases in output is largely linked to the lateral expansion of cultivated lands not on productivity over a unit area, thus, at the expense of other ecosystems such as wetland. Agriculture contributed about 35.3 % to Ghana's GDP between 2001-10. Both extensive cropping and increase in demand for biomass has contributed to some land and forest degradation.

40. In Ghana, like in other African countries, the life of the poorest communities is a life of vulnerability, which reflects the deeper problem of insecurity. The poor depend heavily on environmental goods and services. Their livelihoods are punctuated by dependence on agriculture, fisheries and forestry (which revolve on the use of land and water resources), and on the capacity of ecosystems to provide the services vital for environmental balance, without which food production and other productive activities cannot be carried out on a sustainable basis. This trend puts the poor at risk relative to the rich. In both rural and urban Ghana, the poor are indeed highly vulnerable to environmental disasters and environment-related conflicts and it is believed that the depth of vulnerability is correlated with the pace of environmental degradation exacerbating climate change impacts. Droughts, forest fires, and floods impact the poor in rural and urban areas more and show an increasing trend.

41. The country experienced severe droughts in 1983. Since the late 1990s, floods have been increasingly frequent in the northern regions. Floods affected more than 300,000 people in 1999, 630,000 in 2007/08 and 140,000 in 2010, causing deaths, damaging farmlands, and destroying livelihoods. This resulted in severe hunger, which affected the poor and reduced gross domestic product for that year. The most severe flood occurred in 2007 during which 630,000 people were affected, through losses of life and displacement, and extensive infrastructural damage and loss of crops. This phenomenon demonstrates the potential impact of climate change on Ghana's development.

42. Under a changing climate, poor farmers are finding it difficult to predict the timing of rainy seasons. Consequently, it is becoming difficult to manage climate risks for crop production. Failure in crop production is one of the key factors undermining food security. The World Food Programme's (WFP) Comprehensive Food Security and Vulnerability Analysis (2009) found that 5 % of the population or 1.2 million people are food insecure. The bulk of the food insecure population is located in the northern regions: 34% in Upper West, 15% in Upper East, and 10 % in Northern region.

## **2.2. Problems that the project strived to address**

43. Water availability is the most important production and livelihood factor in the northern regions. Thus, there is a clearly articulated need to counteract the negative impacts of climate change on water resources-reliant development and livelihoods. It is also necessary to look at the efficiency of water use. Likewise the ability to cope with floods and droughts is necessary in order to protect people, livelihoods and development.

44. The northern regions are expected to witness the widest range of temperature variability. One of the greatest influences of climate change on the environment has been desertification. According to the Environment Protection Agency of Ghana (EPA 2003), out of the 35% (~83,489 km<sup>2</sup>) of Ghana's total land area prone to desertification, 33% (~78,718km<sup>2</sup>) is in the northern regions, which tends to be increasing following recent assessments that show diminishing precipitation (World Bank 2009).

45. Climate change is expected to have an impact on agricultural production by increasing pressure on water resources. Agriculture in the three northern regions is predominantly rain-fed with only 4 per cent of irrigation potential developed nationally. About 90 per cent of the rainfall is received between June and September and soil moisture surplus is only found during these months. Both the onset and the cessation of the rains are irregular and the temporal and spatial variability is high. Even within the humid months of June to September, 10 to 14 days of dry spells are common. Potential evaporation is in the range of 2000 mm per year. Most of the soils have low water holding capacity due to their light textured nature and low organic matter content. High surface runoff rates during the

rainy months’ result in silting up of water storage facilities, such as small dams and community dugouts. High evaporation rates in the dry and hot season, and siltation driven by erosion and land clearing contributes to reduced water holding capacity, and rapid drying up of these dugouts. The GoG, using support from the AF will assist existing efforts supporting communities to rehabilitate and de-silt small dams and dugouts infrastructure, to improve availability of water for agricultural and domestic use. Re-afforestation programmes will also be supported to reduce siltation in small dugouts and dams by reducing erosion.

### 2.3. Project’s objectives and strategy

46. The main objective of the programme is to enhance the resilience and adaptive capacity of rural livelihoods to climate impacts and risks on water resources in the 3 northern regions of Ghana. The objective will be achieved through key results centred on the improvement of water access, increased institutional capacity and coordination for integrated water management to support other uses of water resources especially for the diversification of livelihoods by rural communities.

47. There are three components, each with the following outcomes that will be delivered by the programme:

- 1. **COMPONENT 1: WATER RESOURCE MANAGEMENT AND PLANNING UNDER CLIMATE CHANGE.**  
Outcome 1: Improved basin level management and planning of water resources taking into account climate change impacts on surface and groundwater sources
- 2. **COMPONENT 2: COMMUNITY LEVEL IMPLEMENTATION OF CLIMATE RESILIENT WATER RESOURCE MANAGEMENT ACTIVITIES.**  
Outcome 2: Climate resilient management of water resources by at least 30 communities in Northern Ghana.
- 3. **COMPONENT 3: DIVERSIFICATION OF LIVELIHOODS OF RURAL COMMUNITIES UNDER CLIMATE CHANGE.**  
Outcome 3: Enhanced diversification of livelihoods of 50 communities in northern Ghana.

48. To achieve the three expected outcomes, 14 outputs were established within the Project Document logical framework (Table 5).

Table 5: Presentation of the expected outputs through implementation of the project

Outcome 1: Improved basin level management and planning of water resources taking into account climate change impacts on surface and groundwater sources
Output 1.1: Climate change historical data and future projections generated for the White Volta, Black Volta and Oti basins
Output 1.2: White Volta management and investment plans comprehensively reviewed to take into account climate change impacts
Output 1.3: Climate smart water management plans designed for the Black Volta and the Oti River basins
Output 1.4: National, Regional, District and Community based Climate Change Adaptation Monitoring Committee established/adopted and strengthened (as envisioned by the National Climate Change Adaptation Strategy) in the three target regions
Outcome 2: Climate resilient management of water resources by 50 communities in northern Ghana.
Output 2.1: Climate responsive community water supply and management plans designed for 10 districts in northern Ghana
Output 2.2: Climate smart community based on water supply systems provided for multiple uses and users in 30 communities in northern Ghana
Output 2.3: Small scale irrigation systems installed in 30 communities and water users associations managing irrigation systems established and/or strengthened to improve efficiency and effectiveness of water usage under condi-

tions of climate-induced water pressures
Output 2.4: Measures for water conservation under climate impacts implemented in 25 communities
Output 2.5: Learning platforms on systems to integrate climate change-related risks into community management of water resources and livelihood activities in northern Ghana institutionalized in 10 districts
<b>Outcome 3: Enhanced diversification of livelihoods by 50 communities in northern Ghana</b>
Output 3.1: Improved infrastructure for water distribution for CCA and agricultural use installed in 10 districts
Output 3.2: Livelihoods diversification to improve adaptation to climate change in 50 communities
Output 3.3: Community tree nurseries and wood lots established for climate risk management in 40 communities
Output 3.4: Fish farms are established and supported in 20 communities
Output 3.5: Best practices for adaptation, lessons learned from the implemented actions and related policy processes are recorded and disseminated to all 38 districts in northern Ghana through appropriate mechanisms

49. The main indicator of vulnerability reduction will be changes in access to water, diversification of livelihood activities and income increase by 30% in at least 50% of households in the communities.

50. In addition, the following indicators were established during the project's formulation (Table 6):

Table 6: Indicators established during the project's formulation

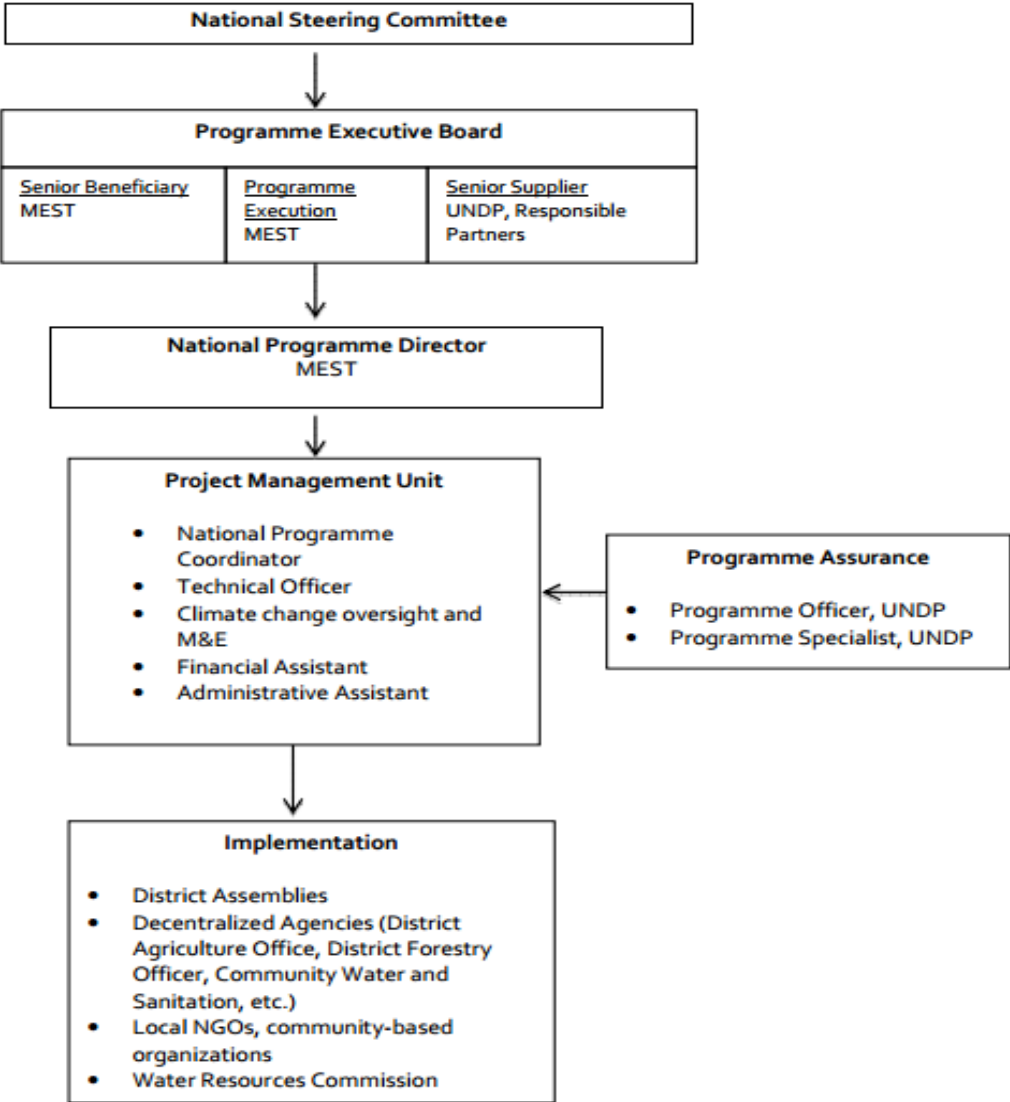
Indicator	Baseline	Target	Achievement
<b>Outcome 1: Improved basin level management and planning of water resources taking into account climate change impacts on surface and groundwater sources</b>			
Existence of historical and downscaled climate projections	No downscaled climate projections are in place	Downscaled and historical climate projections available for the White Volta, Black Volta and Oti Basins	Programme progress and technical reports
Revised White Volta management plan	Current plan does not address climate change impacts nor link clearly to community level	Revised White Volta Plan completed and adopted at inter-ministerial level	Programme progress and technical reports
Management plans in the Black Volta and five sub-basins in the White Volta and the Oti basins at ministerial level	No plans are in place	Black Volta and 5 sub-basin plans in the White Volta and the Oti Basins adopted at inter-ministerial level	Programme progress and technical reports
Three regional Climate Change Adaptation Monitoring Committees	There is no committee in place	Regional Climate Change Adaptation Monitoring Committees established in the three target regions	Programme progress and technical reports
<b>Outcome 2: Climate resilient management of water resources by 50 communities in northern Ghana</b>			
Number of communities in which management plans have been developed and are being implemented	Management plans are not in place. Lack of coherent and planned water management activities in communities.	50 community water management plans implemented by community institutions with at least 50% representation by women in place by end of programme year 2.	Programme progress and technical reports

Indicator	Baseline	Target	Achievement
Number of operational boreholes, dugouts/dams and rainwater harvesting systems	Communities have limited infrastructure in place for supply and storage of water	100 operational boreholes, benefitting at least 30,000 people (50% of whom should be women) Rainwater harvesting systems in place, providing water supplies to 50 community facilities	Programme progress and technical reports
Number of operational community scale irrigation systems installed	Very few communities have effective irrigation systems in place	50 operational irrigation systems, benefitting at least 2,500 farmers	Programme progress and technical reports
<b>Outcome 3: Enhanced diversification of livelihoods by 50 communities in northern Ghana</b>			
Number of operational community fish farms established	Few communities benefit from community fish farms	20 community fish farms established, benefitting at least 10,000 people(50% of whom should be women)	Programme progress and technical reports
Number of tree nurseries/wood lots established	Few communities benefit from community managed tree nurseries and wood lots, nor from bee keeping activities	40 community tree nurseries and wood lots, incorporating bee keeping, established	Programme progress and technical reports
Number of dry season gardening schemes for women established	Few communities benefit from effective dry season gardening	50 dry season gardening schemes for women established, directly benefitting at least 1,000 women	Programme progress and technical reports
Number of women led agricultural product processing schemes established	Few communities benefit from agricultural product processing	40 community level women led agricultural product (shea butter or honey) processing schemes established, directly benefitting at least 1,200 women	Programme progress and technical reports
Household income	More than 50% of the households in the target communities have income levels below the poverty line	At least 50% of the households in the target communities increase their income by 30% by the end of the project	Monitoring reports

## 2.4. Institutional project implementation set-up

51. The chart of the program as stated in the Adaptation Fund project manual is presented below (Figure 2).

Figure 2: Chart of the project



Source: Project document

### 2.5. Project start and duration

52. The project preparation phase was held in 2011-2012 and resulted in the project document validation in June 2013 (submitted in February 2013). The national coordinator was recruited on 16<sup>th</sup> May 2016. The project was indeed started with a launching workshop on 23<sup>rd</sup> May 2016 in Tamale and will end by April 2020.

53. The project is coordinated by a Programme Steering Committee (PSC) and consists of high-level representatives from UNDP, MESTI, EPA, and key stakeholders from government agencies (Water Resources Commission, Community Water and Sanitation Agency, and Ministry of Food and Agriculture, and others), civil society organizations, and other development partners. Two meetings Steering Committee has been organized (23<sup>rd</sup> May 2017 in Eastern Region and a 2<sup>nd</sup> meeting on 17<sup>th</sup> July, 2018).

## 3. Findings and analysis

### 3.1. Project strategy

54. In this next section, relevance of the project conception is analysed. The goal is to evaluate the following questions:

- What was the general quality and relevance of the project formulation process?
- What was the relevance of the project intervention logic and its indicators?
- Is the project still relevant considering the political context of Ghana?

#### 3.1.1. Relevance of project formulation

55. The project's formulation used a scientific approach, participative inquiries and a ranking of the most vulnerable communities to be supported. The project's strategy was therefore deemed relevant. The Ministry of Environment Science and Technology (MESTI) coordinated consultations with all major stakeholders during the Programme conceptualization and design phase:

- In July, August and September 2011, all the major government stakeholders were consulted during the development of the programme proposal and this has driven to a consensus with regards to the main components and the logical framework of the programme: MESTI, EPA, WRC, WFP.
- In November 2011, the draft proposal was presented at a national workshop in Accra to stakeholders at national, regional and district levels and from the government and civil society sectors: MESTI, EPA, Ghana's UNFCCC focal point, PMU of the Africa Adaptation Programme (AAP), CARE International, WFP, WRC, CIDA, CSIR-WRI, GIDA, Friends of the Earth Ghana, Africa 2000 Network and the GEF Small Grants Programme.
- In December 2011, a mission was carried out in the Northern Region to establish the baseline of communities' vulnerability and to know more about communities' priorities for adaptation.
- In March 2012, MESTI and the EPA have consulted community representatives from the three northern regions (2 community representatives each from a total of 15 districts). The community representatives were given the opportunity to comment on the proposed programme, and to provide detailed feedback. More specifically, they dealt with the range of water management and livelihood diversification activities that should be supported using the AF resources.

56. The key steps associated with the project formulation process are presented in the following table (Table 7):

Table 7: Key steps for the project formulation

Step	Date
Launching of the preparation phase	2011
Submission of Full Project Proposal to AF	February 2013
PRODOC approval by the AF Board	June 2013
Signature of the Project document (PRODOC)	26 <sup>th</sup> February 2013
LPAC Date	26 <sup>th</sup> June 2015
Recruitment of the National Coordinator/Secondment	16 <sup>th</sup> May 2016
Start-up workshop	23 <sup>rd</sup> May 2016

### 3.1.2. Relevance and quality of the project's logical framework, indicators and activities

57. The majority of entities encountered during the MTE as well as consultants consider that the PRODOC is of an excellent quality, with an appropriate description of the context and challenges in Northern Ghana in terms of adaptation to climate change, resilience and development. The activities are well described enough.

#### **Intervention logic: theory of change analysis**

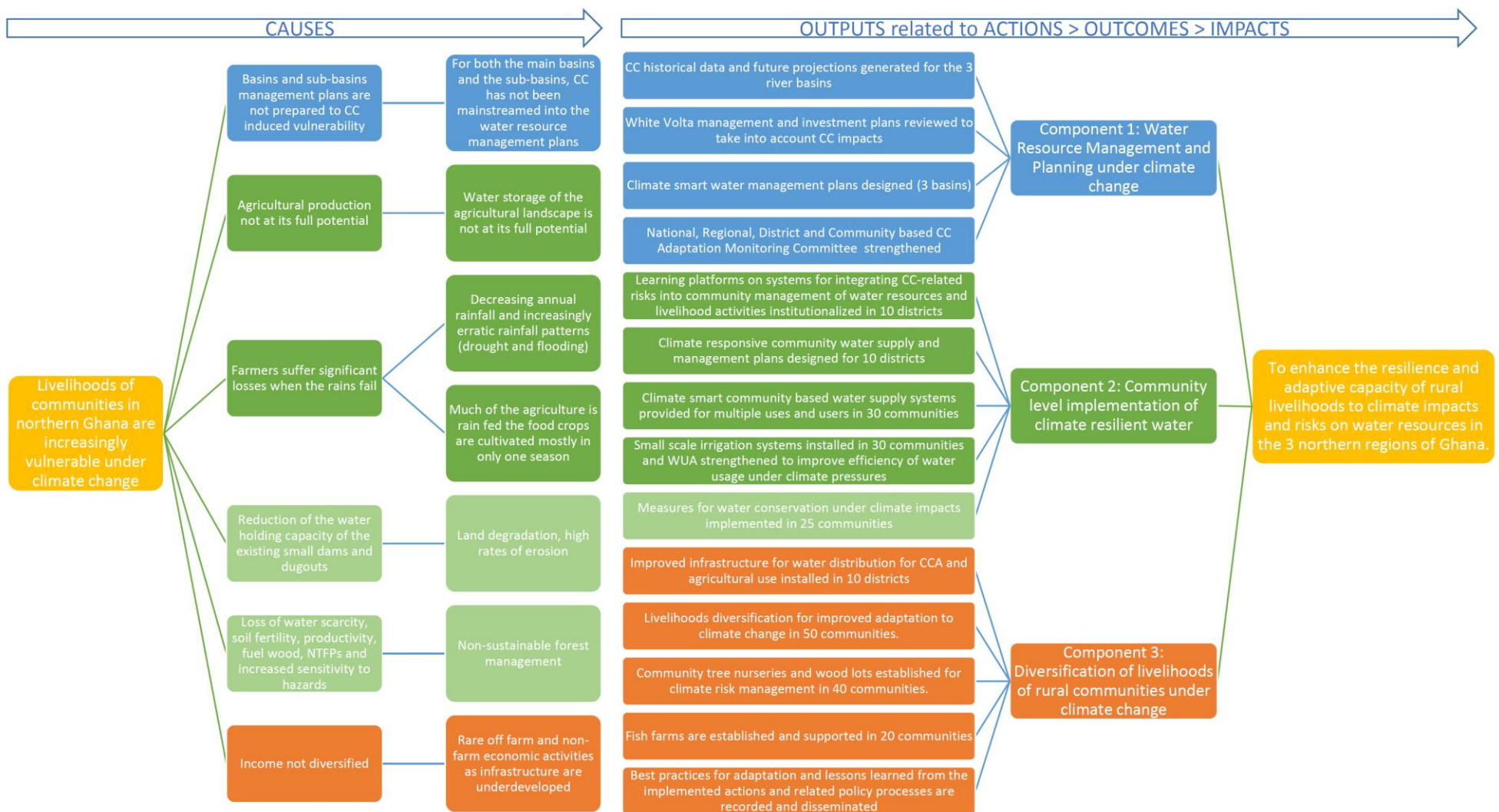
58. The logical framework is organized around the following general hypothesis:  
*It will be possible to enhance the resilience and adaptive capacity of rural livelihoods facing climate impacts and risks on water resources in the 3 northern regions of Ghana if...*

- 1) *The management and planning of water resources at basin level are improved and if they take into account climate change impacts on surface and groundwater sources*
- 2) *The management of water resources is climate resilient in Northern Ghana*
- 3) *The livelihoods of the communities in northern Ghana are enhanced through diversification.*

59. After analysing the project document (sections entitled “Problem Statement: The Climate Change-induced Problem”, “Programme Target Area” and “Barriers to achieving preferred solutions” then “Project objectives”), the MTE team found a clear link between the problem analysis and the proposed solutions (see next page).

60. The MTE team analysed the theory of change of the project and has seen that the activities are relevant enough to contribute to the objective of the project. Particularly, there is a “funnel approach” between component 1, 2 and 3 with a very methodical and iterative approach: (1) a general analysis of the trends in climate, (2) the design of long term management plan of the river basins, (3) confirming the relevancy of adaptation activities for the communities and (4) community entry to prepare the activities. The indicators are considered as SMART enough but there is a need to rapidly develop a tool to monitor the improvements in livelihoods (recommendation 3).





## The monitoring and evaluation system quality

61. The project document describes a rigorous M&E plan (page 78) in accordance to UNDP procedures. This included the definition of SMART indicators within a logical framework and the recruitment of an M&E officer within a whole data collection programme. For each indicator relative to each activity, baseline values, targets and sources of verification were correctly described. Globally, M&E plan budget and timetable and relevant actors were precisely detailed for each M&E activity. For these reasons, the M&E system quality as described in the Project Implementation Mechanism (PIM) is considered very high. The MTE team suggests that the M&E system should have mentioned the districts adaptation monitoring committees in the monitoring system because they are supposed to do regular monitoring to keep the District informed about the ongoing projects at district and community level (as it is stated in the “Role and Responsibilities” table of the PRODOC).

## Activity description

62. The PRODOC suggests 14 expected results detailed into a range of activities. We present them in Appendix 1: List of activities and deliverables of the program the purpose per result. These activities are concrete and lead to the 14 expected outputs in a clear and logical way. Moreover, the outputs are effective as they are easily measurable: documents, measures, installations. Thus, it enables to monitor the evolution of the project and its activities. All activities and the reasons why they are implemented are precisely detailed. Finally, the budgets and the timetables of the activities are all described and give a good understanding of the project objectives and vision.

## Cost-effectiveness analysis

63. After analysing the cost of doing nothing and the benefits of increasing the access to water, livelihoods diversification, etc., the project document has made a demonstration of the cost effectiveness of the project which is good:

Table 8: Cost effectiveness of the measures proposed by the AF project (source: PRODOC)

Objective	Project Cost (US\$)	Number of Beneficiaries	Losses Averted/ Benefits Generated	Alternatives to Project Approach and Cost (US\$)
Water supply (Hand pump boreholes, mini dams and dug-outs, rainwater harvest)	2,698,241	Up to 30,000	100 boreholes Rainwater harvesting systems in place, providing water supplies to 50 community facilities. This investment will help to satisfy the water needs for 3,000 farms, 40 community tree nurseries and wood lots, 50 dry season gardening farms for 1000 women with an average land of 2.7 ha each. Total of 8,343ha; cost of \$280 /ha. If we integrate the fact that these investments will also allow the 30,000 beneficiaries to satisfy their domestic water needs estimating by the UN to 50 Liter /day / person, we can see that these investments are more cost effective than the considered alternatives.	The other alternatives considered for improving water access in the context of climate change are the external catchments using contour ridging (\$52 to \$202/ha), permeable rock dams,(\$250 to 325 /ha); flood harvesting using bunds (\$100/ha), rock and roof catchment systems (\$67 /m3)
Small scale irrigation systems	1,079,250	5,000	We consider that this investment will help to satisfy the irrigation needs for the exploitation of up to 3,000 farms, 40 community tree nurseries and wood lots, 50 dry season gardening farms for 1000 women with each an average land of 2.7 ha. This will represent a total of 6,750 ha for a cost of 8,343 ha \$142.8/ha.	The alternative of the small-scale system are the medium and large scale systems. Medium scale Irrigation schemes in the Northern region of Ghana cost between \$5,000 and \$14,000/ha. The average large scale irrigation scheme

Objective	Project Cost (US\$)	Number of Beneficiaries	Losses Averted/ Benefits Generated	Alternatives to Project Approach and Cost (US\$)
				in Africa ranges from \$1,000 to \$10,000. The small scale scheme option retained by the AF programme is more cost effective.
Alternative Livelihoods Interventions	2,251,456.25	12,000	An investment of US\$2,524,750 for the benefit of 12,000 people will lead to an investment of US\$210 per beneficiary. This will have the following benefits: - 20 community fish farms established, benefitting at least 10,000 people - 40 community tree nurseries and wood lots, incorporating bee keeping, established - 50 dry season gardening schemes for women established, directly benefitting at least 1,000 women - 40 community level women led agricultural product (shea butter or honey) processing schemes established, directly benefitting at least 1,200 women	The alternative to the proposed approach is to do nothing, in which case the 12,000 beneficiaries and their families will see their livelihoods deteriorated.

### Gender matters within the project

64. The project document clearly emphasises gender equity in all operational matters and expects that this will contribute to social sustainability. For example, the project documents highlight the decision to encourage gender equity for the beneficiaries. It demonstrated that in Ghana there is “a gender gap in access to extension services despite the predominance of women in agriculture”; “in the forest and savannah zones where some of the programme’s target districts are located, the World Bank study found out that none of the sampled female-headed households received agricultural extension visits”.

65. During the project design, there was a commitment to obtain an equitable sex ratio across the beneficiaries and also to explore and develop solutions for gender specific management of water resources, particularly in terms of water use. The project document states that the project proponents are supposed to adopt as part of the selection criteria the capacity of the community to address gender dimensions of adaptation interventions / community sensitivity to gender issues. This was supposed to be determined by the presence of women’s groups and/or women leaders in the community. In conclusion, even if the project budget has no clear amount for gender issues, we can say that:

- there is a specific activity named “3.2.3: Women in communities are supported in the establishment and management of dry season gardening schemes by GoG and programme staff”.
- a significant portion of the community and NGO projects is supposed to go to the women. In output 3.2.

66. The project document states that a multiple consultative approach will be adopted to select the communities and beneficiaries “with a particular emphasis placed on obtaining the views of women”. We will see in the next chapter that this commitment has been totally respected.

67. Also, in the job descriptions, one of the tasks of the project officers is to ensure that gender is effectively mainstreamed throughout the project activities, work plans, budgets, reports, researches and analyses.

### 3.1.3. Relevance of identified risks

68. The project's intervention logic, as described above, lays on many hypotheses. Six risks were identified while formulating the project, 2 of them with medium importance and 3 with a low one. The project had shown these six risks, but mitigation measures were suggested within the PRODOC. The following table details their risks, relevance and current level of analysis (Table 9).

Table 9: Identified risks analysis

Risks	Level indicated in the PRODOC	Mitigation Measures	Current level of risk and rationale
Insecurity in the area – terrorist attacks or regular banditry – may jeopardize the implementation and follow-up of the programme	Medium	The programme shall take this into account through various measures including cooperation with local communities and structures as well as a good cooperation with local organizations for the programme implementation using UN security alert system distance follow-up and reporting tool.	Medium (=)
A poor understanding of the objectives by the programme team	Low	A strong involvement of leaders, particularly in implementing agencies and key stakeholders is needed as well as support of national experts and adapted trainings	Medium (↗) <i>The involvement of leaders is high but there was a weakness in ownership of the project at the district level. There is a need of more training, especially where there is a turnover on the district adaptation committees</i>
Low mobilization of the target group caused by a poor understanding of climate change issues	Low	Collaboration with the target communities with a participatory approach and a sensitization to the outcomes of climate change needs to be increased.	Low (=) <i>A large majority of people interviewed said that the mobilization of the target groups is high. We had also the opportunity to confirm that during the focus groups with the beneficiaries.</i>
Lack of capacity to meet financial, and in particular resource commitments by partners in programme implementation	Medium	A continuous dialogue before and after the signing of the programme document will be established among programme partners. Sufficient allocation within the detailed proposal and implementation arrangements will be made to developing teams with sufficient capacity (both in terms of size and technical abilities), which are sufficiently embedded into implementing agencies as well as setting realistic targets for partner contributions in the first instance	Medium (=) <i>The first 2 years have proven that the implementing partners have a good financial capacity. However, to continue to manage the risk, there is a need to build standardized costs (given the 2 years' experience) to assess the quality of proposals from NGOs and ensure that they will deliver quality outputs</i>
Lack of sufficiently qualified partners	Low	Capacity-building Screening and evaluation of partners Collaboration with communities at a decentralized level	Low (=)

69. At mid-term of the project, we can say that the risk has been well identified and rated in the project document and that the mitigation measures were the right one. Our opinion is that the only increase in risks is the understanding of the programme activities in some districts where the members of district adaptation monitoring committees have been changed (retirement or change in duty station) and the new ones have not been updated on project activities. This was well identified in areas like Bakwu West, Bongo, Sissala<sup>1</sup>. In other cases, this gap is due to a lack of communication between the NGOs and the district. For example, in Mognegu I, the relationship between the district and the NGO is perfect according to them; the District Assembly members came for launching the activities of the NGO then the NGOs report to the District Assembly during the projects.

We suggest that the project team be qualified for a training tour to ensure that a maximum of adaptation committee members is aware of current activities and how to monitor that in the most efficient way. This will also allow the project team to learn and pick some good practices from where things go well.

### **3.1.4. Project relevance with national, regional and local policies and strategies and with UNDP intervention framework**

70. The project is perfectly aligned with different national, regional and local policies and orientations for development and adaptation, namely:

- National level:
  - 2011 National Adaptation Strategy for Climate Change (NCCAS)
  - The Growth and Poverty Reduction Strategy II (GPRS II) of Ghana
  - The Ghana Shared Growth and Development Agenda (GSGDA)
  - The National Water Policy of Ghana
- Regional level:
  - The Savannah Development Authority's Sustainable Development Initiative for the Northern Savannah (2010-2030).
- The project is designed to take into account the local structures and partners, the consolidation of institutional planning and water resources management. The project also aims to strengthen the organization and capacity of communities by implementing forest and water resources management activities to mitigate the effects of climate.

71. At the international level, Ghana ratified many international conventions related to adaptation concern, confirming the GoG's willingness to go forward in this domain, namely the United Nations Framework Convention on Climate Change;

72. The expected results expressed in the program fully comply with the Adaptation Fund intervention. The Adaptation fund (AF) strongly supports multi-sectorial projects with a holistic approach, and this one addresses different sectors in which the Adaptation Fund is active (in total 7 out of 9): Agriculture, Disaster risk reduction, Food security, Forests protection, Rural development and Water management. Also, the project contributes to four outcomes of the AF (N°2, 3, 4 & 6) and to three outputs (N°3, 4 & 6)<sup>2</sup>.

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<sup>1</sup> In Bongo, at least 3 members of the committee are new and according to them there was not a continuity of information. Note that in this area there is no EPA area officer so the District Director of Agriculture is the focal point of the project. The people met asked for quarterly meeting to mitigate the risk of miss link between the members. The same need has been expressed in Bakwu West to ensure that the committee will works as a team. For the Sissala committee members we met, they have not been consulted during project design and are not aware of what the NGOs are implementing in the field because of a mislink between them and the NGOs and also a lack of budget for field visits.

<sup>2</sup> Detailed in the table Annex 10 "Alignment of Programme Objectives with the AF Results Framework" of the project document.

73. Additionally, the program complies with the UNDAF Ghana. The UNDAF intends to follow the implementation of projects connected to the SDGs (sustainable development goals). In this project, the main SDGs included are: the 1st one: No Poverty, linked to the increase of basic incomes and supporting communities; the 5<sup>th</sup> one: Gender Equality, with gender oriented projects and improved representation of women; and the 6th Clean Water and Sanitation, linked to improved management of water resources. Other SDGs are also in the line of this project like SDGs 13 climate action. The UNDP Ghana focuses on: inclusive growth, sustainable development and democratic governance (and peace-building). Their vision is aligned with the project’s action as it includes action towards reducing poverty, improving gender equalities and representation, improving the efficiency of local administration and strengthening Ghana’s capacity to face environmental challenges.

74. The approach adopted by the project lays on a participative / community engagement approach on implementation, supported by capacity building actions, governance improvement actions (adaptation committees), and economy growth stimulation by giving priority to the most disadvantaged populations as key targets. The project, in its initial design, also seeks to give a particular importance to collaboration with regional and district bodies. This approach addresses the context in which Ghana is growing.

**75. Conclusions**  
 To sum up, the Project is based on an excellent diagnosis and pursues relevant objectives. The project is relevant with regards to the country’s needs; it is consistent with UNDP’s intervention framework in Ghana and with the Adaptation Fund priorities.  
 Based on available information, **the project’s strategy was assessed to be highly satisfactory (HS)**.  
 There is also a true adequacy with beneficiary populations’ real needs: the project’s importance is obvious, given the threats that Northern Ghana is facing under climate change. Therefore, the project can help satisfy the country’s needs. The beneficiaries of the project intervention are rural populations living in water bodies’ peripherals and with very low living conditions and lack of economic opportunities in the dry season. These populations depend considerably on farming activities and natural resources. Thus, exploitation plays an important role in their subsistence generating income. In that way, the project’s actions prove to be appropriate with the populations’ real needs by making sure that the project would enhance populations’ livelihoods, taking benefits from the well managed water resources both for their food self-sufficiency and their source of income (diversification).

### 3.2. Results analysis

76. The following section presents the results of the efficiency analysis of the project conducted by the evaluation team. It intends to answer the following questions:

- What are the progresses made on expected objectives and outcomes of the project?
- Did the project follow guidelines and relevant processes during its implementation?

#### 3.2.1. Implementation of activities

77. The following table shows implemented activities and expected outputs achievement level as defined in the Project’s logical framework (Table 10). The data provided in this table were compiled from project annual datasheet reports, PIRs, conducted interviews and site visits.

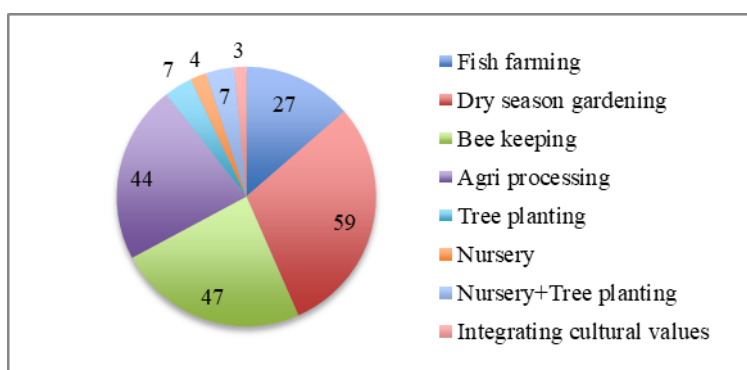
Table 10: Activity implementation level analysis outcomes

Expected outcome	Implemented activities and expected outputs achievement level at the mid-term review
Outcome 1:	<ul style="list-style-type: none"> <li>• For activities related to output 1.1 "Climate change and future projections for White Volta, Black Volta and Oti basins", three consultants were selected in the context of a call for tenders. Signing of the contract and the start-up workshop were carried out in 2016. The analysis of the annual report indicates that the <b>output 1.1</b></li> </ul>

Expected outcome	Implemented activities and expected outputs achievement level at the mid-term review
	<p><b>is achieved.</b></p> <ul style="list-style-type: none"> <li>• With regards to <b>activities related to output 1.2, they have already been carried out under the project Water</b>, Climate and Development Program (WACDEP).</li> <li>• Activities related to <b>Output 1.3 have also been completed.</b> These activities were entrusted to two consultants selected through calls for tender.</li> <li>• With regards to <b>output 1.4</b> "National, Regional, District and Community Climate Change Adaptation Monitoring Committees established in the three target regions": the validation of the plans has been done (activity 1.4.1) and as planned in the project document, <b>the other activities like capacity building of district and community adaptation monitoring committees are spread over 3 years (Y2, Y3).</b></li> </ul> <p>The MTE team did not meet the experts who carried out field studies but the annual reports indicate that during the first year, all activities planned had been completed with a delay because of the late release of funds. Historical climate trends and climate change projections for the White Volta, Black Volta and Oti river basins were generated and analyzed. With regards to the White Volta's management and investment plans, they were developed under the Water Development and Climate Program (WACDEP) project, implemented by the Commission on Water Resources and funded by DANIDA. A copy of the report is available and could be used for interventions. The communities identify six existing water resources. These are dams, ponds, rivers, streams and lakes. The dam is the most popular surface water resource (57 %). Communities reported that the main objectives of the dams were irrigation, livestock watering and domestic use. The most popular groundwater resource is drilling. The assessment also reveals that the white Volta and Oti are generally clean and do not exceed all their loading capacity. As part of the preparatory activities to build trust and encourage active participation of stakeholders, the Project Management Unit (PMU) in collaboration with the Regional/District Climate Change Adaptation Monitoring Committees organized community entry meetings in the 50 project beneficiary communities. Stakeholders who participated in the exercise included, the traditional authority, traditional landowner, family/clan land owners, Fulani Herdsmen, minority tribes, women, farmers along the proposed water resource, representatives of project district assembly officials and relevant regional institutions/departments. The community meetings created a unique opportunity for extensive deliberations on the project deliverables and expected roles of stakeholders. In each of the communities, a Community Climate Adaptation Monitoring Committee (CCAMC) was formed after the engagement sessions involving averagely ten (10) members with at least 3 being women. Overall about 3,000 community members were engaged in these sessions. With regard to disaster risk reduction actions and climate change impact awareness, the project has provided funding to the National Disaster Management Organization (NADMO) to strengthen the capacity of adaptation committees to climate change at the regional, local and district levels. Thus, it contributes to the achievement of national climate change goals, as articulated in Sendai. The capacity building program was therefore designed to address institutional capacity needs at subnational levels. A total of 60 committee members from the region, districts and communities in the Sissala East Municipality, Nandom, Nadoli and Wa, in the Far West region were trained. It is believed that these capabilities will be used to support community structures to build resilience to climate change. The mapping of existing water resources and livelihood gaps has been completed.</p>
Outcome 2:	<p>Some activities of component 2 planned for the second year were carried out.</p> <ul style="list-style-type: none"> <li>• <b>Output 2.1:</b> 3 regionals, 10 District and 50 community climate change adaptation Committees has been established in 2016 and trained. These committees will be supported and trained each year.</li> <li>• <b>Output 2.2:</b> 50 boreholes have been drilled in 25 communities of 5 districts (50% of the project objectives; 100% of the target at mid-term).</li> <li>• <b>Output 2.3:</b> As stated in the project document, the implementation of the irrigation system is preceded by several studies. To date, the PMU in collaboration with the</li> </ul>

Expected outcome	Implemented activities and expected outputs achievement level at the mid-term review
	<p>Regional and District Climate Change Adaptation Monitoring Committees and the GIDA conducted a field visit to map the exact geographical locations of each of the targeted 50 communities and the GIS mapping of all water resources facilities. The rehabilitation of 12 dams/dugout was planned for 2018 to serve more than 20 communities in their dry season gardening activities and other livelihood activities that depend on these dams.</p> <ul style="list-style-type: none"> <li>• <b>Output 2.4:</b> 15 Buffer zones have been created and over 26, 600 tree seedlings have been planted in 30 communities (37.5 acre) designated for woodlots/ plantations in the second year of the project. Fire belts have also been created in 15 communities targeted under year two of the project.</li> <li>• <b>Output 2.5:</b> planned for year 4. <b>Our opinion is that this activity must start earlier.</b></li> </ul> <p>In terms of stakeholder involvement during the first year of the project, the annual report indicates that a total of 428 stakeholders, consisting of 368 men and 60 women, have been actively involved in the implementation of various activities of the project during the reporting period.</p> <p>To sum up, important results are already obtained showing the respect of the planned project timeline despite the delay in starting the activities. These results are related to the formation of water management committees, construction of boreholes (50), mapping of the livelihoods and water management needs for each community, creation of buffer zones (15), reforestation (26,600 trees) and awareness-raising actions.</p>
Outcome 3:	<ul style="list-style-type: none"> <li>• <b>Output 3.1:</b> During the second year of implementation, a total of 3,043 stakeholders from the region, district and community were engaged. This population was made up of 40% women representing 1,217 and 60% men representing 1,826 men. Most of these women have been actively involved in the implementation of various project activities, including community entry commitments, representation on the community climate adaptation committee, and reforestation activities.</li> <li>• <b>Output 3.2:</b> After a competitive process of selection, 49 local NGOs/CSOs have been contracted to partner with the project to support communities to undertake livelihood activities. Overall, the project is directly benefitting 5407 people in the project communities. Out of this number, 3,244 representing sixty per cent (60%) were women. The project is financing 198 NGO executed projects among 68 communities (a breakdown is provided in Appendix 4); 30% of the projects are about dry season gardening, 24% on bee keeping, 22% on agro processing (shea, baobab fruits, groundnut, soya), 9% about tree nursery and/or tree planting (Figure 3).</li> <li>• <b>Output 3.3:</b> 3 local NGOs have been recruited to start implementing this livelihood activity by end of year 2.</li> <li>• <b>Output 3.4:</b> Fish farming at community level is on-going.</li> <li>• <b>Output 3.5:</b> The knowledge dissemination of adaptation practices has not been started yet.</li> </ul>

Figure 3: NGO projects financed in 2018 (source PMU)





78. Several hundreds of people were trained within the project framework. In general, the participants, including both men and women, and representing mainly the communities received training on:

- Fire reduction;
- Afforestation and buffer zones protection;
- Implementation of profit-making activities (dry season gardening, bee keeping, fish farming, agri processing, etc.);

79. *About gender.* After the MTE we can say that these commitments mentioned in section 3.1.2 of this evaluation report have been respected by the project:

The implementers, with respect to the UNDP guidelines and national policy, specifically underline the importance of gender issues, with consideration of women within their activities. Some examples:

- Existence of women associations involved in profit-making activities (shea, groundnut).
- The adaptation committees count women as members
- The groups of beneficiaries of NGO interventions have a significant amount of women
- Monitoring and Evaluation statistics are presented with the number of women.

The regional and district responsible for Gender department are members of the region or district adaptation committee. According to these persons:

- During the design of the project, the Gender department was involved and the project document takes into account the expectations of women in the three regions (confirming the paragraph 65).
- The project contributes to gender equity because both men and women are involved; the project also offers specific livelihoods options to the women, for example shea processing, groundnut processing versus fuel wood collection. The training they receive will also strengthen their ability to create new businesses.
- Given what have been done on the field, and as the assessment was gender sensitive, the indicators of the project should be gender sensitive. Indeed, the monitoring plan of the project have at least 2 gender sensitive indicators (in component 3, “Number of dry season gardening schemes for women established” and “Number of women led agricultural product processing schemes established”).

Note also that of the 600 community members the MTE team met during the evaluation, 60% were women. This can give an idea of the involvement of women in the project.

### 3.2.2. Analysis of the project regarding outputs and objectives indicators

80. The following table presents an analysis of the progress towards objectives and outputs’ achievement; based on indicators suggested within the PRODOC. These indicators are assessed using the color code below:

Green= Achieved

Yellow= On proper way to be achieved

Red=not on way to be achieved

Table 11: Progress assessment matrix with regards to output indicators' achievement

Project Strategy	Indicator	Baseline Level	Level in 1st PIR (self-reported)	Midterm Target	End-of-project Target	Midterm Level & Assessment	Achievement Rating	Comments
<b>Objective:</b>	Indicator							
<b>Outcome 1:</b>	<i>Indicator 1: Existence of historical and downscaled climate projections</i>	No downscaled climate projections are in place	<ul style="list-style-type: none"> <li>• Trend/historical analysis of the impact of climate variability on the White, Black and Oti River basins completed</li> <li>• Climate change projections for the White and Black Volta and the Oti River basins generated</li> <li>• Vulnerability analysis of communities along the White and Black Volta as well as the Oti River Basins Conducted</li> </ul>	All studies in this category have been carried	Downscaled and historical climate projections available for the White Volta, Black Volta and Oti Basins	All studies in this category have been carried	Achieved	<p>All studies in this category have been carried and the climate projections are available.</p> <p>The analysis of the annual report generally indicates that all planned activities have been completed. For the realization of activities related to output 1.1 “Climate change and future projections for White Volta, Black Volta and Oti basins” three consultants were selected in the context of a call for tenders. Signing of the contract and the start-up workshop were carried out in 2016. The analysis of the annual report indicates the achievement of the expected results. With regards to activities related to output 1.2, they have already been carried out under the project Water, Climate and Development Program (WACDEP). Activities related to Output 1.3 have also been completed. These activities were entrusted to two consultants selected through calls for tender. With regard to output 1.4 “National, Regional, District and Community Climate Change Adaptation Monitoring Committees established in the three target regions”, part of the actions (capacity building of district and community adaptation monitor-</p>

Project Strategy	Indicator	Baseline Level	Level in 1st PIR (self-reported)	Midterm Target	End-of-project Target	Midterm Level & Assessment	Achievement Rating	Comments
								ing committees) has not been completed in the first year as it is spread over two years.
	<i>Indicator 2:</i> Revised White Volta management plan	Current plan does not address climate change impacts nor link clearly to community level	The plan has been prepared by another project. The AF project has received a copy of this management plan.	Revised White Volta Plan completed	Revised White Volta Plan completed and adopted at inter-ministerial level			The White Volta Management and Investment Plans have been developed under Water Climate Programme and Development Programme (WACDEP) project, which was implemented by the Water Resource Commission and funded by DANIDA. The project has obtained a copy of the report which will be used to inform other interventions
	<i>Indicator 3:</i> Management plans in the Black Volta and five sub-basins in the White Volta and the Oti basins at ministerial level	No plans are in place	National consultants recruited are currently developing these plans	Black Volta and Oti Basin-wide management plans prepared	Black Volta and Oti basin plans adopted at inter-ministerial level	Black Volta and Oti Basin-wide management plans have been prepared		
	<i>Indicator 4:</i> Three regional Climate Change Adaptation Monitoring Committees	There is no committee in place	Adaptation Committees has been established at all 3 levels: Regional, District and Community.	Regional Climate Change Adaptation Monitoring Committees established in the three target regions	Regional Climate Change Adaptation Monitoring Committees established in the three target regions	Regional Climate Change Adaptation Monitoring Committees have been established in the three target regions		The 10 Regional, 3 District and 50 Community based Climate Change Adaptation Monitoring Committees have been established. Three regional training meetings, 10 districts level meetings and 50 community level engagement were completed. These trainings are expected to be done yearly.
<b>Outcome 2:</b>	<i>Indicator 5:</i> Number of communities in which management plans have been developed and are	Management plans are not in place. Lack of coherent and planned water management	National consultant recruited is currently developing these plans	5 sub-basin plans in the White Volta and the Oti Basins	50 community water management plans implemented by community institutions with	This indicator was not achieved in time	On target to be achieved	This indicator was not achieved during the period under review as the main consultancy input to serve as foundational data (Management plans in the Black Volta and five sub-basins in the White Volta and

Project Strategy	Indicator	Baseline Level	Level in 1st PIR (self-reported)	Midterm Target	End-of-project Target	Midterm Level & Assessment	Achievement Rating	Comments
	being implemented	activities in communities.			at least 50% representation by women in place by end of programme year 2.			the Oti basins) was not fully ready for community level work to start. This activity will be carried out in the next year.
	<i>Indicator 6:</i> Number of operational boreholes, dugouts/dams and rainwater harvesting systems	Communities have limited infrastructure in place for supply and storage of water	50 Boreholes constructed. Recruitment for 50 more to be drilled underway. Recruitment for contractors for dams/dugouts underway	50 Boreholes 10 dams/dugouts	100 operational boreholes, benefitting at least 30,000 people (50% of whom should be women) Rainwater harvesting systems in place, providing water supplies to 50 community facilities	50 Boreholes constructed but annual reports do not mention the construction of dugouts.	On target to be achieved	In year 1, Ten (10) boreholes have been successfully drilled in five communities in Bawku Central. 40 operational boreholes have been drilled in the 2 <sup>nd</sup> year bringing to a total of 50 boreholes drilled. These 50 boreholes are currently serving 15, 000 people mainly women and children in 30 communities in 5 districts. Recruitment for contractors for dams/dugouts underway
	<i>Indicator 7:</i> Number of operational community scale irrigation systems installed	Very few communities have effective irrigation systems in place	Recruitment for contractors for Mechanised Irrigation schemes to commence in July, 2018	25 mechanised borehole systems for irrigations dams	50 operational irrigation systems, benefitting at least 2,500 farmers	Recruitment for contractors for Mechanised Irrigation schemes to commence in July, 2018	On target to be achieved	This indicator was partially achieved. GIDA has conducted reconnaissance and technical studies on 15 dams scheduled for year 2 to assess the severity of damage and to recommend repair works to be carried out. It is expected that these dams would be repaired by the end of quarter 2 of year 3. The midterm target is not achieved on time. According to the project team, of December 31 <sup>st</sup> the procurement for the dams had been completed for about 7 dams. On the mechanized boreholes it was rescheduled for the last year of the project. We suggest that given the absence of

Project Strategy	Indicator	Baseline Level	Level in 1st PIR (self-reported)	Midterm Target	End-of-project Target	Midterm Level & Assessment	Achievement Rating	Comments
								The revised planning of this outcome need to be analysed carefully because there is not evidence provided by the team that the quantitative targets (50 irrigation systems) will be achieved on time despite the delays.
<b>Outcome 3</b>	<i>Indicator 8:</i> Number of operational community fish farms established	Few communities benefit from community fish farms	NGOs to undertake this activity has been recruited for this activity in year 3	20 communities should have had fish farms activities started by mid-year.	20 community fish farms established, benefitting at least 10,000 people (50% of whom should be women)	There were some delays in the effective start of NGOs activities. However, NGOs have begun undertaking this activity in year 3.	On target to be achieved	Through national competitive tendering, 3 local NGOs have been recruited to start implementing this livelihood activity by end of year 2. Inception meeting with the NGOs has been done and funds have been released in two tranches (June, 2018 and November, 2018).
	<i>Indicator 9:</i> Number of tree nurseries/wood lots established	Few communities benefit from community managed tree nurseries and wood lots, or from bee keeping activities	NGOs to undertake this activity have been recruited for this activity in year 3	40 community tree nurseries and wood lots have nursery/woodlot activities starting by mid-year.	40 community tree nurseries and wood lots, incorporating bee keeping, established	Delays in the effective start of NGOs activities. The NGOs undertaking this activity have been recruited for this activity in year 3.		Through national competitive tendering, 3 local NGOs have been recruited to start implementing this livelihood activity by end of year 2. Inception meeting with the NGOs has been done and funds are expected to be released in second week of April upon successful submission of inception reports by the NGOs taking into consideration specific details of project beneficiaries, how they were selected, gender issues and sustainability measures of the project interventions.
	<i>Indicator 10:</i> Number of dry season gardening schemes for women established	Few communities benefit from effective dry season gardening	NGOs to undertake this activity have been recruited for this activity in year 3	18 Dry season gardening schemes for women established.	50 dry season gardening schemes for women established, directly benefitting at least 1,000 women	Delays in the effective start of NGOs activities. The NGOs undertaking this activity have been recruited for this activity		

Project Strategy	Indicator	Baseline Level	Level in 1st PIR (self-reported)	Midterm Target	End-of-project Target	Midterm Level & Assessment	Achievement Rating	Comments
						in year 3.		
	<i>Indicator 11:</i> Number of women led agricultural product processing schemes established	Few communities benefit from agricultural product processing	NGOs to undertake this activity have been recruited for this activity in year 3	12 community level women led agricultural product processing schemes established	40 community level women led agricultural product (shea butter or honey) processing schemes established, directly benefitting at least 1,200 women	Delays in the effective start of NGOs activities. The NGOs undertaking this activity have been recruited for this activity in year 3.		
	<i>Indicator 12:</i> Household income	More than 50% of the households in the target communities have income levels below the poverty line	NGOs to undertake livelihood activities have been recruited for this activity in year 3. The full extent of improved household living conditions and income increment.		At least 50% of the households in the target communities increase their income by 30% by the end of the project	This indicator has been postponed due to the delays on the effective launching of livelihood related activities		

### 3.2.3. Remaining barriers to achieving the project objective

81. To ensure that the project objective will be accomplished, there are technical and financial barriers:

- In component 1. Now that the prospective studies and the river basin management plans are completed, the challenge is to maintain a level of engagement of stakeholders that will lead to an operationalization of the plans.
- In component 2. It is to ensure that the maintenance of the boreholes will be sustainable. A hundred borehole drilled in 3 close regions may justify the creation of one to three (1 by region) social businesses dedicated to providing a maintenance service (see recommendation 4).
- In component 3. The technical aspect consists of the need for a mid-term and close follow-up by NGOs, probably with the support of the M&E officer in assessing the improvement of living conditions (we remind here that the indicator is to increase of 30% the income of at least 50% of people), see recommendation 3. For example, one thing is to implement the processing centres, the beehives, etc. but another thing is to perfectly manage the marketing of the products. Sometimes raising a building is faster than accompanying the marketing (to find the profitable and sustainable channel of distribution). At a financial level, the problem is that the grants received by the NGO is limited and will not allow a mid-term monitoring.

### 3.3. Project implementation and management

82. This section provides an analysis of implementation approaches used by the project, its management framework, the project's adaptation to changing conditions and responses to changing risks including safeguard issues (adaptive management), the performance of the implementation arrangements and partnerships, relevance of changes in project design, and overall performance of project management.

83. The MTE team has selected 6 categories of stakeholders with whom interviews were conducted: UNDP– GEF; Project management unit; Government organisations at national, regional and zone levels; Non-state actors and local authorities; NGO operators of subprojects; Experts and consultants.

MTE stakeholders interview: During the last week of November 2018, the MTE team conducted interviews in the 3 regions of Ghana where the project takes place. The purpose of this meeting was to have a direct feedback from the people involved in the project and to go beyond written reports that have been made so far. During this week the MTE team had fruitful meetings with 16 communities (390 participants in total, 51% of women), more than 13 NGOs and with 6 Adaptation Committees at National, Regional and District level. The feedbacks collected during this exercise are summarised in Appendix 2:  
Evaluation process

84. Appendix 3.

### 3.3.1. Institutional arrangement and adaptive management

85. The project implementation follows Multilateral Implementing Entity method. Setting up a proper PMU for the project ensures an independent and more targeted project management. This arrangement is enhanced with a delegation of operational aspect at the community level to specialized NGOs who have intervened on sites for a significant amount of time showing institutional sustainability. UNDP has been providing overall management and guidance from its Accra Country Office and the Regional Centre, and has carried out for monitoring and evaluation functions as per UNDP guidelines.

86. The project is coordinated by a Programme Steering Committee (PSC) and consists of high-level representatives from UNDP, MESTI, EPA, and key stakeholders from government agencies (Water Resources Commission, Community Water and Sanitation Agency, and Ministry of Food and Agriculture, and others), civil society organizations, and other development partners. The PSC is supposed to meet at least twice a year but since the implementation of the project, 2 meetings Steering Committee has been organized:

- Inaugural meeting of the Project Steering Committee held on the 23<sup>rd</sup> May 2017 in Eastern Region
- 2<sup>nd</sup> Project Steering Committee meeting held on 17<sup>th</sup> July, 2018.

87. The actors that are involved in the project are mentioned in the following Table 12. The roles are clearly defined which helps to clearly focus on results and allows good synergy:

Table 12: Key stakeholders, roles and responsibilities

STAKEHOLDERS	ROLES AND RESPONSIBILITIES
Secretariat/Project Management Unit (PMU), Ministry of Environment, Science, Technology and Innovation (MESTI)	Overall responsibility for project coordination, management, monitoring and evaluation as well as fiduciary management, with respective sector agencies responsible for management of field implementation, under the oversight of PSC
<b><i>Implementing agencies and collaborating partners</i></b>	
Environmental Protection Agency (EPA)	<ul style="list-style-type: none"> <li>• To be the technical unit of the project, leading the implementation of all components on the ground.</li> <li>• Together with the PMU, to identify and engage the relevant Ministries and agencies to perform specific sub-components of the project.</li> <li>• To organize project operational activities, workshops, educational outreach in the project areas to provide the opportunity to discuss climate change adaptation, water resources management and rural livelihood issues with government agencies, related projects, beneficiary communities and development partners.</li> <li>• Timely submission of inputs on project reports to steering committee, as well as semi-annual updates and quarterly financial reports according to formats provided.</li> </ul>
Water Resources Commission (WRC)	<ul style="list-style-type: none"> <li>• Supervisory role in components related to water use planning and management (component 1)</li> <li>• To support developing TOR for various technical assignments in areas within their mandate</li> <li>• To support in the organization of workshops &amp; meetings in project areas within their domain/mandate</li> <li>• To review all documents produced by technical experts and consultants in their mandate areas under the project</li> </ul>



STAKEHOLDERS	ROLES AND RESPONSIBILITIES
	<ul style="list-style-type: none"> <li>• To adapt documents generated from the project for their use as an institution</li> <li>• To support other institutions with technical advice during implementation of their sub-components of the project.</li> </ul>
Water Research Institute under CSIR	<ul style="list-style-type: none"> <li>• To provide technical backstopping for the project in respect of all research activities in the areas of water quality for aquaculture, water levels and impact of climate change on river basins and water resources in project communities.</li> </ul>
Irrigation Development Authority (IDA)	<ul style="list-style-type: none"> <li>• Support in the design, construction and installation of all irrigation infrastructure in target communities.</li> <li>• To provide technical support to communities and other project implementing partners such as MoFA in the use and maintenance of the reservoirs and installed irrigation systems</li> </ul>
Community Water and Sanitation Agency (CWSA)	<ul style="list-style-type: none"> <li>• Support the project in the construction of boreholes, repair and rehabilitation of existing dams and dugouts, construction of sand dams and rain harvesting systems as well as training of WATSAN committees, water boards and water users associations in proper management of community water resources and systems.</li> <li>• Train local artisans to support communities with periodic and timely maintenance of boreholes and dams/dugouts</li> </ul>
Fisheries Commission	<ul style="list-style-type: none"> <li>• Support the project in establishing viable fish farms as alternative livelihood option for project communities.</li> <li>• The identification of communities with prospects for sustainable aquaculture enterprises</li> <li>• To be responsible for capacity building in the areas of cage/pond construction and management for improved productivity on sustainable basis.</li> <li>• To work closely with MoFA to explore the possibility of integrated aquaculture-vegetable enterprises to ensure optimum use of water resources.</li> </ul>
National Fire Service (NFS)	<ul style="list-style-type: none"> <li>• Support the project in the creation of buffer zones and fire belts as well as periodic training of community groups in fire prevention and management in forests and woodlots</li> <li>• Support in forming or reviving existing yet weak fire volunteer squads to protect established woodlots.</li> </ul>
Forestry Commission (FC)	<ul style="list-style-type: none"> <li>• Manage project activities through its Forest Services (FS) and Wildlife Divisions in the regions and districts of the project.</li> <li>• Preparation and review of Activity and Management Plans relating to tree nursery establishment, woodlot establishment and creation of the riparian buffer zones.</li> <li>• Undertake awareness creation about woodlot establishment, biodiversity conservation and control of firewood and charcoal production.</li> <li>• Assist in capacity building local community members in the establishment of tree nurseries, woodlots and riparian buffer zones.</li> <li>• Support districts and communities to undertake enrichment planting in degraded areas along watercourses.</li> <li>• Support districts and communities to establish and manage green firebreaks.</li> <li>• Ensure that safeguards provisions are followed in management plans, in particular those related to access restriction in the buffer zones.</li> </ul>
District Assemblies (DA)	<ul style="list-style-type: none"> <li>• Be responsible for monitoring and overseeing project activities being undertaken in all communities in the respective districts</li> </ul>
Ministry of Food and Agriculture (MoFA)	<ul style="list-style-type: none"> <li>• Provide technical backstopping support to field implementation of aspects of the project under their mandate (especially Component 3)</li> <li>• Periodically provide technical input to PMU for regular update of project implementing strategies and options.</li> <li>• Development of capacity building programs/modules for AEAs and Community Extension volunteers.</li> <li>• Submit to the PMU, timely input to annual plans and reports, semi-annual updates and quarterly financial reports according to formats provided.</li> <li>• Support farmer based organizations and farmers with regular agricultural extension services for enhanced technology adoption and improvement in crop productivity</li> <li>• Train different interest groups on alternative livelihood options introduced by the project</li> </ul>

STAKEHOLDERS	ROLES AND RESPONSIBILITIES
	under component 3 (e.g. dry season gardening, tree nursery management, bee keeping, agro-processing, etc.) <ul style="list-style-type: none"> <li>• Ensure sound management of project assets under its supervision (e.g. irrigation infrastructure in communities).</li> </ul>
Non-Governmental Partners	<ul style="list-style-type: none"> <li>• Support community engagement and provision of some training in the areas of dry season gardening, water resources management planning, riparian buffer zone and CAC establishment and management as well as management of non-farm businesses.</li> <li>• Complement the technical expertise of District and Regional staff of EPA, MoFA and FC to provide extra capacity for community planning and institutional development.</li> <li>• Support specific technical activities, such as the introduction of new livelihood options or water management technologies, in cases where they have specific expertise and experience in those activities.</li> <li>• Play an active role in learning workshops for inter-District exchange and lesson sharing.</li> </ul>
Mass Media partners	<ul style="list-style-type: none"> <li>• Be engaged to support regional and district learning networks, including publicizing project workshops and results, and supporting extension efforts by providing access to technical information, supporting peer discussions and recognition of strongly performing communities or individuals.</li> </ul>
SADA	<ul style="list-style-type: none"> <li>• To play a supporting role in the implementation of agricultural and aquaculture as well as irrigation projects in project districts and communities.</li> </ul>
NADMO	<ul style="list-style-type: none"> <li>• Supports NFS in preventing and managing disasters in buffer zones and other protected areas in project communities.</li> <li>• Training in flood prevention and management</li> </ul>
Ministry of Finance	<ul style="list-style-type: none"> <li>• Be represented on the steering committee to provide technical backstopping in respect of budgeting, financing, procurement and expenditures on specific aspects of the project.</li> <li>• Have representation on the Project Validation committee which will be responsible for the review of technical reports and recommend to MESTI via the PMU approval of reports, evaluate technical and financial proposals of studies and other related documents</li> </ul>
Beneficiaries	<ul style="list-style-type: none"> <li>• Attend meetings (including workshops and demonstrations) regularly</li> <li>• Mobilize community members to establish tree nurseries and create buffer zones around water resources</li> <li>• Mobilize community members to protect water resources and the buffer zones created by the project by preventing bush fires and felling of trees, among others.</li> <li>• Report on resources received and activities undertaken in line with established reporting schedules and templates</li> <li>• Report periodically on activities at farm or community level</li> <li>• Make input into annual plans and targets.</li> </ul>

Source: PRODOC and PMI

88. In practice, the Project has encountered a number of issues and implemented some adjustments to overcome the issue:

- Delay in the release of funds by the Adaptation Fund Secretariat (donor) for project implementation stalled activity implementation of planned activities for the first and second quarter of year 2.
  - To deal with this challenge, the Project Management Unit used the opportunity (while waiting for the release of funds) to engage with the Project's Regional and District stakeholders including the EPA to plan for project activity implementation for year 2 as planned activities, milestones and targets had to be revised.
- Inadequate Monitoring by the regional and district EPA team on interventions being implemented at the community level.
  - To deal with this, the PMU intends to intensify its community outreaches, resource the regional/district EPA offices and conduct joint implementation monitoring as well as periodic post implementation monitoring to ensure that community level implementation is done timely, appropriately and yields the planned/intended outcomes.

- The original project proposed by the NGOs / CSOs / LNGOs were very expensive and with a timeline that sometimes exceed the AF project duration.
  - The PMU negotiated with the project proponent to shorten the timeline and review the budget which is a good solution in the short term (but we will see in the section “Sustainability” that this solution can be improved to ensure the sustainability of the projects).
- In Bongo District, there is no area officer of EPA
  - It has been decided to designate the District Director of Agric as the focal point of the AF project. This adaptive management has driven to an unexpected positive dynamic. In one community of Bongo, the fencing material for a dry season gardening site was not enough (sized for 1 acre and 25 beneficiaries) compared to the need expressed by the community (to them, a man can cultivate ¼ acre). There was a risk of disappointment. Participative negotiations have driven to an innovative solution which was to take the fencing for 20 additional acres from a mature mango plantation monitored by the MOFA (Ghana Social & Opportunities Project). Now, the 1<sup>st</sup> acre financed by AF project become a field school and the 20 acres an extension.

89. The MTE team judges the quality of stakeholders’ implementation and adaptive management as satisfactory:

- PMU for achievement of the Project’s goals and objectives in collaboration with the Ministry.
- EPA for execution of regional and district activities (but need to improve his monitoring).
- MOFA for the good synergy with EPA.
- NGO for execution at the community level:
  - Putting together NGOs and communities to work on the same projects is an innovative idea; this consolidates the bottom-up approach of the project (community > district > regional > national). The NGOs create a good relationship with the community, with the District Assembly and the RAMC. Relationships between the District Assembly and the NGOs are perfect. NGO reported to the District Assembly. District Assembly members come for launching the activities of the NGO.
  - Community members also reported that with NGOs, everything goes well. In terms of transparency, communities are provided with the budget of each NGO subproject. That increased the awareness on quality of the work.
  - With the project, the NGOs come to visit communities regularly. The NGOs came to train and organize them.

### 3.3.2. Work planning

90. Annual work plans have been developed each year since Project start-up, so in 2016-17 and 2017-18. They are communicated from region (Regional EPA Direction + NGOs region by region) to national (PMU), discussed and validated in a participative way at regional level and national level. The PIM stated the following procedure:

Table 13: Work plans and Reports Submission Dates (source: PIM)

Agency / unit	1 <sup>st</sup> quarter	2 <sup>nd</sup> quarter	3 <sup>rd</sup> quarter	4 <sup>th</sup> quarter
Regional Adaptation Committee	Report to PMU by the first week of the preceding month of the quarter	Report to PMU by the first week of the preceding month of the quarter	Report to PMU by the first week of the preceding month of the quarter	Report to PMU by the first week of the preceding month of the quarter
District Adap-	Report to RAC	Report to RAC by the last	Report to RAC	Report to RAC by the last week of the

tation committee	by the last week of the quarter	week of the quarter	by the last week of the quarter	quarter
Community Adaptation committees	Report to DAC by the third week of the quarter	Report to DAC by the third week of the quarter	Report to DAC by the third week of the quarter	Report to DAC by the third week of the quarter
				AR and FS to PSC, UNDP & AF not later than February 01 of following year

FS – Financial Statement; PR – (Semi-annual) Progress Report; AP – Annual Work Plan; AR – Annual Report

91. The project has set up important procedures for activity management, planning and follow-up as well as stakeholders participation. Setting up a proper PMU for the project ensures an independent and more targeted project management. This arrangement is enhanced with this delegation that the project provides for specialized NGOs for operational aspect at the community level mainly those having intervened on sites for a significant amount of time showing institutional sustainability.

92. **The MTE team ascertains that the annual plans’ quality is satisfactory** as they allow detailed and precise planning of activities to undertake each execution year. The team also confirms that annual activities determined within the annual plans are relevant to contribute to the Project’s expected outcomes and outputs achievement. Again, they are shared, discussed and validated in a participative way at regional level and national level. However, the engagement of the intermediate scale that is the district in project monitoring is lower than expected (see recommendation 1). They have expressed a need of more support to increase the frequency and / or duration of field visits by a representative of the district adaptation committee (fuel and food during the field visits by district committee members).

### 3.3.3. Financial execution

93. The budget planning and expenditure for years 1 and 2 is presented in Table 14. The financial execution of the project is rated as **satisfactory (S)** as the planned budget has been followed. There is an excess expenditure of 102,942 USD in component 1. The budget planning and expenditure from project start to 31 December 2018 is presented in the following table. Also the budget balance of Component 4 (Project implementation, 135,500 USD) is short and an excess is likely to occur at the end of the project.

Table 14: Financial execution with regards to project’s budget of year 1 and 2

Components	Total budget (\$)	Year 1 (April 2016- April 2017)		Year 2 (May 2017- 4 <sup>th</sup> April 2018)		Part of Year 3 (May 2018-Dec 2018)		Sub Total Years 1 and 2		
		Planned	Expenditures	Planned	Expenditures	Planned	Expenditures	Planned	Expenditures	% execution
Component 1	364,000	274,000	43,091	30,000	345,342	30,000	78,508	334,000	466,942	140%
Component 2	4,495,999	0	56,892	721,875	233,500	2,567,088	251,761	3,288,963	542,153	16%
Component 3	2,251,456	0	0	378,125	293,494	1,245,813	768,470	1,623,938	1,061,964	65%
Project implementation costs	<b>7,111,455</b>	<b>274,000</b>	<b>99,983</b>	<b>1,130,000</b>	<b>872,337</b>	<b>3,842,900</b>	<b>1,098,740</b>	<b>5,246,900</b>	<b>2,071,059</b>	<b>39%</b>

Project execution	532,759	26,735	311,956	84,750	133,310	281,443	51,977	392,928	497,242	127%
<b>Total project costs</b>	<b>7,644,214</b>	<b>300,735</b>	<b>411,938</b>	<b>1,214,750</b>	<b>1,005,646</b>	<b>4,124,343</b>	<b>1,150,717</b>	<b>5,639,828</b>	<b>2,568,302</b>	<b>46%</b>
Management fees	649,758	25,562	35,015	103,254	85,480	350,569	97,811	479,385	218,306	46%
<b>TOTAL</b>	<b>8,293,972</b>	<b>326,297</b>	<b>446,953</b>	<b>1,318,004</b>	<b>1,091,126</b>	<b>4,474,912</b>	<b>1,248,528</b>	<b>6,119,213</b>	<b>2,786,607</b>	<b>46%</b>

94. Throughout the Programme, AF resources have been aligned with the financing and delivery of outputs that have competitive procurement components to ensure best value for money. Moreover, the UNDP procurement procedures is followed. The historical record of contracts and bidding process are available in the PPR annual reports to the AF board.

95. A recommendation would be to be ready for the acceleration of expenditures from January 2019 to May 2020 (66% of project overall budget to be spent in less than 2 years). The activities will be very intense therefore the project team should continue to do a strong planning, and donors should be very prompt on transferring the fund (see recommendation n°6).

96. Less than two years prior to the project’s completion (the project is supposed to end on May 2020), it is recommended to provide the UNDP’s administrative and financial services with all the possible measures to ease and improve administrative and financial procedures effectiveness; meanwhile supporting transparency and close monitoring of expenses and limiting fiduciary risks. As far as NGOs are concerned, they are recommended to be more proactive in making fund requests and more rigorous with fund use justification within provided time.

### Cost-effectiveness analysis

97. The Table 14 above allows us to conclude that the cost effectiveness of the project has been “satisfactory”, based on the fact that Project expenditures achieved so far reflect achievements that (in general) follow the results framework’s targets, as described in Section 3.2.

98. The project has been able to adopt measures to achieve its results in a cost-effective manner

- Competitive bidding process.
- Review of the budget proposals received from the NGOs, CSOs, LNGOs.
- Use of locally available materials (bee hives of local manufacture, wooden pond structures, etc.)

99. The costs of the NGOs projects are very competitive given the amount of beneficiaries. We can say that the use of the community based NGOs for the community level interventions is more efficient that execution by Accra or Regional teams, in term of coverage and costs. But we need also to consider that the costs of NGO projects are based on a duration of 1-year after negotiations (when in the original concept notes the wish of the NGOs was to do 2 to 4 years with a higher budget). Our opinion is that the project must find solution to finance an additional period of monitoring by the NGOs which is a condition of success and sustainability.

100. Interestingly, some NGOs like World Vision have mobilized co-funding, as they are already present in the areas under other projects.

101. Due to the time budget of the MTE, we were unable to analyse the cost effectiveness of the investments for each activity. Only the cost efficiency of the boreholes has been evaluated and the MTE team can say that the average cost of these boreholes with “India” pumps is competitive (if we compare with other project in the bordering countries). Above all, the enterprise is paid based on a positive drilling (if the drilling does not deliver safe water, the enterprise must try again in another site).

102. The project document has made a good cost-benefit analysis and a cost-effectiveness analysis of the solutions proposed by the AF project (Table 8). A general recommendation we may formulate concerns the project team which should update this analysis. Also the project team could record the unit costs of materials and equipment’s based on the first 2 years of experience (eg. What is the average cost of a quality house for agro-processing?) to ease the budgeting for future projects in the area.

### 3.3.4. Reporting, monitoring and evaluation of the project

103. In terms of monitoring and evaluation, project activities are supposed to be monitored and evaluated at four different levels: community, district, region and national level through technical and financial reports of activities that are transmitted to higher levels of the implementation hierarchy.

104. The EPA regional offices engage with the Regional Climate Change Adaptation Monitoring Committee to give feedback on programme implementation. A copy of each project goes to the community and one to regional committee. So the regional committee can easily make the monitoring of each project based on the proposal they approved.

105. The District Adaptation Committee launches the activities, makes sensitization, and intervenes livelihood diversification, trees planting, visiting the communities for monitoring, meetings with the NGOs. In between the field monitoring visits, consultations between the district AE officers and the community-based extension workers are conducted by mobile telephones and new technologies like “WhatsApp”. The District Adaptation Committees are supposed to do regular monitoring to keep the project on the right way. The monitoring at the district level could have been easy if there was a meeting each quarter to increase the awareness on quality of the work.

106. Several reports were produced during the first two years of implementation and allow monitoring the project’s performance, measuring project results against objectives and evaluating the impact in relation to planned activities. These reports include annual reports (years 1 and 2) and quarterly reports based on the expected results and their indicators to assess the level of achievement of the results obtained during the two years of implementation. An evaluation of the NGOs was also carried out in order to evaluate the progress of the work, to share the conclusions of the field monitoring visits on the implementation of the activities on the project field, and make recommendations on the sustainability of the operations and results of the NGOs’ work. However, the activity reports indicate an inadequate monitoring by the regional and district EPA team regarding interventions being implemented at the community level:

- At the national level, the PMU created a position for monitoring and evaluation, the Monitoring and Evaluation Officer (UNDP consultant). He has established an appropriate collaboration with the national and regional stakeholders on monitoring and evaluation field. UNDP, MESTI and EPA have carried out joint monitoring missions.
- At the community level, people interviewed by the MTE team (assembly men, chiefs, community members) were aware of the activities happening in the field.
- But a real challenge remains at the intermediate scale that is the district. The fact is that the district committees are unable to do what they are supposed to do which is “to be responsible for collecting primary data on implementation of agricultural and natural resource management subprojects”. The main reasons as stated by the stakeholders are the access to information (subprojects documents) and the very low frequency of the monitoring missions due to absence of budget.

107. In conclusion, the MTE team can say that the monitoring and evaluation system is satisfactory.

### 3.3.5. Stakeholders’ engagement

108. The midterm review team had the opportunity to assess the stakeholders’ involvement during the field mission at the end of November 2018. The MTR experts interviewed stakeholders from different categories as explained earlier. Interviews with national, regional and local committees provided the views of committee members regarding communities and NGOs involvement in the project. Interviews with

NGOs and communities revealed that the project is well on track, at all scales of governance, stakeholders are involved and active.

109. To be more specific at the local level the communities are satisfied with the project implementation as 88% of the communities we met were very satisfied or satisfied (Figure 4). According to them, the causes of satisfaction are the quality of consultation (56% of opinion expressed), the unity the project has bought across the community by organizing them into groups (88% of the opinion of the communities visited) and the livelihoods they are experiencing or expecting (82% of the opinion of the communities visited). When they were not satisfied or did not provide their opinion, it was because the livelihood projects or community projects (boreholes) were under way and not completed.

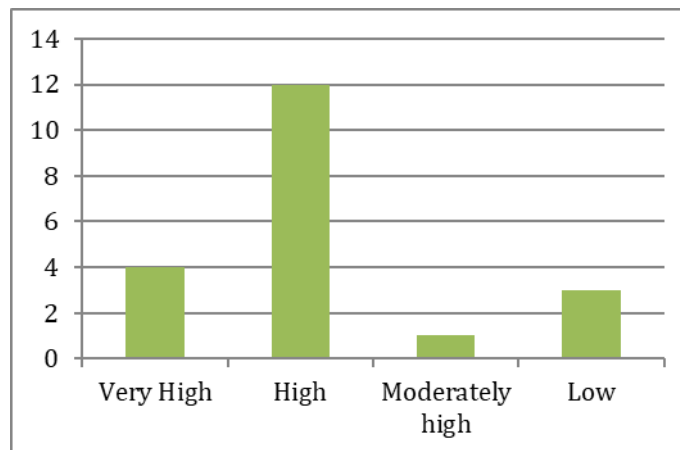
Figure 4: Level of satisfaction across the communities\*



\* 16 communities expressed their opinion

110. As a consequence, 85% of the communities we met in the field have a very high or high engagement in the project<sup>3</sup> (Figure 5). This engagement is reinforced by the satisfaction they have from the access to water and the expectation of a raise in livelihoods (they are confident about their future). This is a good foundation to build sustainability.

Figure 5: Perception of community engagement\*



\* Opinions have been expressed by 20 communities.

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<sup>3</sup> The level of commitment



111. There is a good communication between NGOs and communities for the implementation of activities like beekeeping, and the feedbacks from the communities are taken into account to improve the project effectiveness. For example, the community of Bugubele started soya plantation after a demand from local beneficiaries of the program.

### 3.3.6. Communication

112. In terms of external communication, for the moment, a local Ghanaian media firm (Input Media Solution) has been recruited by MESTI on behalf of the PMU to undertake baseline video documentary, baseline photobook and project newsletters for the 3rd and 4th quarters of the project's implementation. As a key objective for the community entry exercise, the PMU committed to update stakeholders on the progress of the Adaptation Fund project in the three Northern regions. The PMU worked with the regional EPA Directors to host an hour radio discussion and media interaction at the regional capitals (Wa and Bolgatanga) respectively. The community entry and media outreach were held from the 5<sup>th</sup> of February until the 15<sup>th</sup> of March 2017 in the Northern, Upper East and West regions. A forty-five (45) minutes radio discussion and thirty (30) minutes media interaction were centered on:

- Raising awareness on the project, target districts and communities as well as on the relevance of the project to Government and its benefits to the target communities;
- Updating stakeholders on major activities implemented and lessons documented since the inception of the project.

113. It was estimated that about a million listeners and readers of online print media such as the Ghana News Agency (GNA) and affiliated media houses as well as listeners of Radio Upper West region benefited from these media interactions.

114. At the local level, signboards are put on the boreholes. Still, there is a lack of information about what is happening at project sites. Only one signboard has been seen (in Tumu) during the field visits informing about NGO projects. This case is very interesting because even while the building (a groundnut processing center in fact) was under construction, the NGO implemented a signboard to inform the communities all around, to increase the awareness and to prepare the opening.



Photo 2: Signboard on a borehole



Photo 3: Signboard on an NGO project site in Tumu

115. The management unit is planning to put in place a more powerful communication strategy around the project.

116. **Conclusion 3.3**

Considering the analysis of this chapter, the mid-term review team evaluates that **the project implementation is satisfactory (S)**.

### 3.4. Project sustainability

117. This section presents the results of the analysis on the impacts and sustainability of the project. It intends to answer the following questions:

- Does the project improve beneficiaries' capacities?
- What is the probability for the activities and the expected project outputs to carry on after the project's implementation?
- What are the financial, institutional, socio-economic and environmental risks that could affect the project's sustainability?

118. **Institutional risks.** The sustainability of this project lies in the sustainability of the technical and multi-institutional partnership established between the various national and / or international structures. This partnership can be exploited for the mobilization of financial resources through national and international tenders to continue activities in the different target regions of the project and to extend the actions to the other regions of Ghana. The project has trained and strengthened the capacities of local actors in the field of water resources conservation, adaptation to climate change, market gardening, plant production. These trained actors will be able to design and implement development projects adapted to specific local situations. An added value to the project can be the involvement of NGOs in the target communities of the project. This has created a link between the NGOs and these communities and will facilitate the appropriation of the different results obtained by the local populations.

According to the local communities, the sustainability will also be based on the unity the project has brought in the villages. The project organized them into groups, with same target among the members: to increase the livelihoods (income diversification, bringing benefits in the dry season) and good governance of the mean given to the group. This unity allowed them to go faster and better (improvement of the quality of work). To them, unity will ease fundraising in the future ("donors only give to groups not individuals").

119. **Socio-economic risks.** In addition, the sustainability of this project lies in the reduction of the different risks identified during the project preparation and those identified during its implementation. Insecurity in the region, weak mobilization of the target group due to a poor understanding of climate

change issues and lack of capacity to meet financial commitments, especially resources and partners in the implementation of the program have been identified during project preparation. In addition, the resistance of the riparian communities of the watersheds not selected as project beneficiaries, the lack of clarity of the roles and responsibilities of the main government institutions were identified as risks that could slow down the progress of the project during the first year of the project. To mitigate these risks, a project implementation plan has been developed in consultation with all major stakeholders of the project. Their responsibilities have been spelt out to reflect their mandates for the smooth implementation of the project activities.

Community climate change adaptation monitoring committees have been set up involving the traditional authority, the women groups and Fulani Headmen to collaborate the implementation and monitoring of the project. A participatory process was used in the selection of beneficiary communities. The PMU developed selection criteria and the districts selected 10 potential communities which subsequently became five through a field assessment by a joint team made up of the PMU, local authorities and the communities. Some communities were put into clusters to deal with the risk of conflict resistance, which could cause a deliberate action of the non-selected communities to cause harm or danger to the project intervention. To deal with this risk, the project ensured that communities close to a river basin were selected and grouped into zones and referred to as a single beneficiary community with the acceptance of the leadership and stakeholders of these communities. These risks were significantly reduced and are expected to be eliminated after the submission of the final report of the Project Implementation Manual.

To the local communities, in addition of the above-mentioned unity among the people, the project also brought gender equity. When the groups were formed, the communities have decided to have at least 50% women among the members; some groups have in fact 2/3 women (for example in the community of Tilli Azupunpugu).

120. **Environmental risks.** The field visits allowed us to identify some technical risks the project faced. The major risk encountered in year 2 was the planting of trees on already existing farmlands close to water resources (rivers and dams). This was a major hurdle to the establishment of buffer zones with fence in the beneficiary communities. To deal with this risk, the project management team worked with the community leaders, affected farmers and community climate adaptation committees to sensitize community members during focus group discussions and community engagements meetings. It was unanimously agreed that affected farmers should keep their crops grown on existing farmlands along with the trees until harvest so that they do not lose livelihoods in the short to medium term. With this arrangement, the affected farmers also joined the tree planting teams themselves to help achieving this agro-forestry objective.

121. **Technical risk.** Some technical risk must be raised. We mentioned that fish ponds are highly dependent form fingerlings and feed supplies and will not detail this again. Moreover, we are very concerned about the duration of the NGO / CSO / LNGO projects. At first, the project developer proposed 2 to 4 years' project with a very comfortable monitoring period (source: concept notes). But because of budget limitation, they were asked by the project to review their proposals to 1 year. The fact is that many projects will deliver the impacts on livelihoods after 1 or 2 campaign. For example, bee keeping takes at least 6 months before the first harvest and normally to preserve the bees there will not be a significant harvesting. Dry season gardening also takes time, etc.

122. **Financial risks.** At mentioned before, the communities are satisfied with the project implementation as 88% of the communities we met were very satisfied or satisfied (Figure 4). According to them, the causes of satisfaction are among others the livelihoods they are expecting (82% of the opinion of the communities visited). Many of them want to fasten the economic activities. However, according to the consultant, the stakeholders should be aware and **really monitor the profitability of the activities to ensure the long term sustainability**. The economic model of bee keeping and shea processing seem to be

strong given the high demand in the market. But if we go to the fish farming, it is still fragile because of the dependency to the fingerlings providers, the need to always buy feed and the lack of cool chain. Also, some women benefiting from dry season gardening complained about the difficulties they face in the first years of income generating activities. When they migrate, they are housed and fed by the farmers where they sell their labour. So, even if the income is given by the farmers at the end of the campaign the women do not have to worry about the day to day expenses. But now that they do not migrate "because of NGO projects," they have no sustenance while waiting for the harvest. Here is a testimony from the women of Dua:

“The women used to migrate in down south during the dry season. Since the project, they stay in the villages. At least 50% of the 28 fish ponds beneficiaries project used to migrate. Same for the group of beekeepers. **We have a loss of income of 6-7 bags of corn/women because the projects have not bought any income yet. When the money will come, we wish that it will be more than we earned in the South each year.** 1 bag of corn is at least 130 GH but may go to 160. In addition of the corn, our daily fees are paid by the land owner during the dry season (accommodation, food).

#### Conclusion and recommendation 3.4

The mid-term review team put the score of Likely for the sustainability of project’s outcomes. However, **the duration of NGO projects must be longer** to provide a quality monitoring. Moreover, there is a need of strengthening the econometric monitoring at the household level (see recommendation 3).

## 4. Conclusions, recommendations et learnt experience

### 4.1. Conclusions

123. The mid-term evaluation team made several observations, which mainly focused on project’s strategy, progress towards result achievement (for each achievement) project implementation and its reactive management and sustainability. If possible, it is necessary to restructure following these topics.

#### Project strategy

124. The PRODOC is well documented and of an excellent quality. In fact, the process has combined a scientific approach with participative inquiries and capitalization of pre-existing practices. We consider that the project’s strategy is relevant.

#### Project implementation

125. The project has set up important arrangements for activity management, planning, monitoring and evaluation and stakeholders’ participation. Corrective measures are necessary for internal communication, fund disbursement and District adaptation committee’s engagement.

126. The cumulated consumption amount for Adaptation funds and UNDP funds for the first 2 years is \$1 403 969, which is 93% of the planned budget for year 1 and 2. This consumption rates is good despite some delays in the disbursement from AF to PMU and from PMU to NGOs.

127. The mid-term review team considers that financial resources’ use was efficient with regards to different activities supported and with regards to the implementation of expected outcomes.

128. The project document as it has been validated plans a consumption of 80% of the overall budget in the second half period (year 3 and year 4), meaning that the AF must be very quick in the upcoming instalments and the PMU must do a very good planning of the activities.

### **Progress to outcome achievement**

129. The project has made important progress on component 1 but needs a stronger integration to components 2 and 3. Component 1 is supposed to provide the stakeholders information, data and future scenarios of water bodies. To enhance the adaptation capacity of the communities the information provided by component 1 should guide the activities of component 2 and 3 or at least make the communities and the NGOs aware about where to implement fish farms, boreholes, etc. within the next 10-20 years. Important progress has been made on component 2 and 3 but activities are still on-going.

### **Sustainability**

130. The MTE team has identified two recommendations that can contribute to enhance sustainability:

- To strengthen the monitoring process of the District adaptation committees.
- To support the NGO projects in a longer time-lapse.

131. As stated in the project document, “The main indicator of vulnerability reduction will be changes in access to water and diversification of livelihood activities when income generation will increase by 30% in at least 50% of households in the communities”. There remain significant efforts for a better integration of the 3 components and better measurement of the progress in terms of livelihoods and adaptation capacity of the communities.

## **4.2. Recommendations**

132. In the light of the analyses and conclusions presented above, the following recommendations are considered a priority and should be implemented within 3- 6 months to strengthen the delivery of AF project as it moves past its mid-term stage:

133. **Recommendation 1: Give the district adaptation committees the means to move more often and monitor the activities at the district level.**

Indeed, the community-level activities implementation is followed up by the District Assemblies through the Community Water and Sanitation Department, District Agriculture Development Unit, and Forestry Services Division, depending on the nature of the activity. So, it is key to ensure that this intermediate scale is fully aware of what is going on (NGO projects, community projects). A better involvement of district can also help to mitigate any risks of conflicts or misunderstanding between beneficiaries and service providers and also mitigate any risks of delays (from NGO or service providers) by a stronger monitoring. For that purpose, at least two actions could be done:

- The PMU and EPA **to train the members of the district adaptation committees on the project scope** especially where the members have changed (retired or moved to other districts). Trainings could be carried out as follow: share again the theory of change of the project, present the activities planned at the district level, discuss around how to monitor these activities (NGO projects, community projects) and how to send day-to-day feedbacks to regional and national levels.
- For the EPA **to allow an increase in the frequency of field visits by one or two members from the district adaptation monitoring committee**. The one or two chosen members should not always be the same people to allow a cross analysis (view from gender perspective can enrich agriculture perspective and reciprocally). Given the fact that the project will end in May 2020 and that

the rhythm of the project activities will be particularly intense, **quarterly visits** could be an acceptable rhythm.

*Responsible: EPA and PMU*

**134. Recommendation 2: Develop a communication strategy at all levels; production and dissemination of several of the best practices and success stories from the implementation of the project and through several means of communication (YouTube channel, website of the project, etc.).**

Communication is essential both internally (national, regional, district and community levels) and externally and can be strengthened. Greater thought is needed on mechanisms to achieve this but the MTE team suggests that improvements could be made in the visibility of the project and its products globally, greater availability of project documents and training materials, mechanisms to inform key decision makers at the district and regional level of technical outputs and findings, day-to-day communication between the agencies, with external partners. The project works with 46 NGOs and several research centres that probably use very interesting training tools and materials. With time, the project could develop, record them as an asset and systematically apply them. Practical action of communication and visibility at the regional level is for example to provide equipment to the RAMC: GPS, car to facilitate the monitoring, dedicated project computer (1 or 2 computer per region), camera, etc.

*Responsible: PMU and NGOs*

**135. Recommendation 3: Develop an econometric monitoring of a sample of households to demonstrate the reduction of vulnerability and increase of income.**

This action will allow the project team to measure the net positive impacts at the household level: are the activities developed by NGOs lucrative enough to really be a game changer? A very rich vulnerability study is available and now may help to build a monitoring and evaluation framework based for example on the “household economic approach”<sup>4</sup>. The idea here is to scientifically measure the main indicator of vulnerability reduction of the project which is “changes in access to water and diversification of livelihood activities and income generation will increase by 30% in at least 50% of households in the communities”.

*Responsible: M&E*

**136. Recommendation 4: Develop a strategy and framework of total maintenance guarantee of the boreholes.**

There are two complementary solutions which are:

- To train a technician per village or group of neighbouring villages for a quick maintenance and a sound spare parts management to avoid failures.
- To support the creation of a social business dedicated to providing a maintenance service. Such activity can be implemented within existing companies (agri inputs providers for example) or by Water User Associations - WUA. The significant density of new pumps in the area allows easy and less expensive coverage, and with a fine-tuned business plan it can be profitable.

*Responsible: PMU, WRC and WRI*

**137. Recommendation 5: Extend the duration of the NGO projects from 6 months to 1 year to allow a longer monitoring period and strengthen the foundations for sustainability.**

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<sup>4</sup> This methodology, developed by a consortium of NGOs and researchers allows the monitoring of vulnerability and resilience at the household level. Through fine-tuned surveys, it is possible to evaluate the response of several types of households of a given region to external shocks. <http://foodeconomy.com/wp-content/uploads/2015/09/The-Practitioners-Guide-to-HEA.pdf>

The duration of some NGO projects like fish farming or dry season gardening is too short to ensure sustainability. Also, some agro-processing centres are under construction, so there will not have the opportunity to monitor a significant amount of production cycles. As far as possible, the project should **continue these NGO projects for at least six months** (one year could be more secure).

*Responsible: UNDP*

#### 138. **Recommendation 6: Develop a very detailed planning of year 3 and 4**

To be prepared for the expected increase in expenditures in year 3 and 4 (80% of the overall budget), we highly encourage project team to develop mechanism to accelerate project delivery for the 3 and 4 years. It could be a presentation that will drill down the planning of the year 3 and 4 and a good risk management plan. We also encourage AF to be reactive on fund transfers to the project and the project to the local level.

*Responsible: PMU, UNDP, AF*

#### 139. **Recommendation 7: Plan now for a reflection on the next generation of project that would strengthen the link between climate service and adaptation**

The project has made a lot in term of modelling the climate trends, but as mentioned before, these studies could be better used (see recommendation 3). The consultant also thinks that the integration of the findings from these studies to the action will take time and need additional strategies like the delivery of climate services (eg. providing early warning to the farmers based on weather forecasts and also giving advices to the farmers on how to prepare to the long term). So, the staff must not wait until the end of the first phase **to think of a second phase for the project**. An understanding can be developed early on **through a series of meeting (6 months each for example) within the team and some members of the steering committee to discuss the outcomes of the projects, the remaining challenges and the priorities**.

*Responsible: UNDP, PMU*

### 4.3. **Learnt experience**

MTR has highlighted the following lessons learned in terms of implementation process and sustainable management:

**Lesson 1.** The quality of social engineering and consultation applied to various level (national, regional, local) will strongly determine the robustness of the project. Consultation between involved ministries was essential. Also, one of the first factors that determine the level of sustainability of an adaptation project is relative to community involvement: communities must be closely involved in each stage (consultations, validation of the technical solutions, implementation).

**Lesson 2.** Communities are involved, convinced and active in the project. Their economic prosperity is key to prove that the adaptation solutions suggested were correct. The risk of disappointment is reduced if the period between community involvement and the first economic benefits is shortened. The grants from projects must be considered as a starter to unlock some challenges (boreholes, ponds, etc.). The long-term viability will depend on the quality of regional development planning and stimulation of local economies.

**Lesson 3.** Implementation of a quality monitoring and evaluation system was made possible both by having created a dedicated position within the PMU and through close work between UNDP and the PMU.

**Lesson 4.** The target of monitoring indicators could be better built if based on the suggestions from the vulnerability study made at the early stage of the project.

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# 5. Appendices

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Appendix 1: List of activities and deliverables of the program

OUTCOMES	EXPECTED CONCRETE OUTPUTS	CORE ACTIVITIES
<b>Outcome 1:</b> Improved basin level management and planning of water resources, taking into account climate change impacts on surface and groundwater sources	<b>Output 1.1:</b> Climate change historical data and future projections generated for the White Volta, Black Volta and Oti basins	<ul style="list-style-type: none"> <li>• Conduct trend/historical analysis of the impact of climate variability on the White, Black and Oti River basins</li> <li>• Generate climate change projections for the White and Black Volta and the Oti River basins</li> <li>• Conduct a vulnerability analysis of communities along the White and Black Volta as well as the Oti River basins</li> </ul>
	<b>Output 1.2:</b> White Volta management and investment plans comprehensively reviewed to take into account climate change impacts	<ul style="list-style-type: none"> <li>• Review White Volta management &amp; investment plans</li> <li>• Develop Black Volta &amp; Oti River management &amp; investment plans</li> </ul>
	<b>Output 1.3:</b> Climate smart water management plans designed for the Black Volta and the Oti River basins	<ul style="list-style-type: none"> <li>• Carry out an assessment of existing water management activities along the rivers</li> <li>• Develop/review community/district based water management plans to include tributaries</li> <li>• Identify/form and train water management committees in the various districts and communities.</li> </ul>
	<b>Output 1.4:</b> National, Regional, District and Community based Climate Change Adaptation Monitoring Committee established/adopted and strengthened (as envisioned by the National Climate Change Adaptation Strategy) in the three target regions	<ul style="list-style-type: none"> <li>• Expand existing Ghana Environmental Management Project regional committees to be more inclusive and relevant institutions</li> <li>• Identify existing/establish district and community adaptation monitoring committees</li> <li>• Build capacity of district and community adaptation monitoring committees on Disaster Preparedness, Management and Coordination</li> </ul>
<b>Outcome 2:</b> Climate resilient management of water resources by 50 communities in northern Ghana	<b>Output 2.1:</b> Climate responsive community water supply and management plans designed for 10 districts in northern Ghana	<ul style="list-style-type: none"> <li>• Conduct an inventory/feasibility study of existing water resources and vulnerabilities.</li> <li>• Design water supply systems suitable for 30 communities</li> <li>• Form/ train existing water management committees</li> </ul>
	<b>Output 2.2:</b> Climate smart community based water supply systems provided for multiple uses and users in 30 communities in northern Ghana	<ul style="list-style-type: none"> <li>• Construct/rehabilitate existing dugouts</li> <li>• Construct/Repair broken gravel dams</li> <li>• Desilt dams/dug outs etc.</li> <li>• Construct sand dams</li> <li>• Support rain water harvesting</li> <li>• Incorporate water harvesting into road construction (weirs)</li> <li>• Drill boreholes</li> </ul>
	<b>Output 2.3:</b> Small scale irrigation systems installed in 30 communities and water users associations to manage irrigation systems established and/or strengthened to improve efficiency and effectiveness of water usage under conditions of climate-induced water pressures	<ul style="list-style-type: none"> <li>• Mechanize high yielding boreholes/dugouts for irrigation</li> <li>• Supply pipes, diesel generators, sprinklers, watering cans for irrigation</li> <li>• Construct reservoirs and supply materials for drip irrigation</li> <li>• Install solar irrigation systems</li> </ul>

OUTCOMES	EXPECTED CONCRETE OUTPUTS	CORE ACTIVITIES
	<b>Output 2.4:</b> Measures for water conservation under climate impacts implemented in 25 communities	<ul style="list-style-type: none"> <li>• Establish tree nurseries for catchment/river bank re-afforestation schemes.</li> <li>• Create buffer zones</li> <li>• Plant vertiva grass/ and other cover crops</li> <li>• Support District Assemblies &amp; Traditional Authorities to promulgate/enforce bye-laws to protect water bodies and their catchment areas.</li> <li>• Introduce terracing and plant fodder plants such as al-bezies along river banks</li> <li>• Support on going advocacy of DAs &amp; TAs to curb illegal mining within catchment of water bodies</li> </ul>
	<b>Output 2.5:</b> Learning platforms on systems for integrating climate change-related risks into community management of water resources and livelihood activities in northern Ghana institutionalized in 10 districts	<ul style="list-style-type: none"> <li>• Institute district/community award schemes &amp; study tours</li> <li>• Hold reflection and annual review meetings&amp; learning festivals</li> <li>• Embark on media outreach</li> <li>• Organize participatory scenario planning sessions</li> </ul>
<b>Outcome 3:</b> Enhanced diversification of livelihoods by 50 communities in northern Ghana	<b>Output 3.1:</b> Improved infrastructure for water distribution for CCA and agricultural use installed in 10 districts	<ul style="list-style-type: none"> <li>• Construct/repair irrigation canals</li> <li>• Install small scale solar pumps</li> <li>• Install/supply diesel generator water pumps</li> <li>• Lay pipes for irrigation</li> <li>• Install community based reservoirs for drip irrigation systems</li> </ul>
	<b>Output 3.2:</b> Livelihoods diversification for improved adaptation to climate change in 50 communities.	<ul style="list-style-type: none"> <li>• Supply inputs for dry season gardening e.g. Seeds, small water pumping machines, water horses etc.</li> <li>• Support community based bee keeping with hives and training</li> <li>• Build capacity of women groups in shea butter/groundnut oil extraction</li> <li>• Provide support for small ruminants production for women and youth groups</li> <li>• Provide support for poultry/guinea fowl production</li> <li>• Capacity building of women groups in improved rice processing eg. Bolga rice technology</li> </ul>
	<b>Output 3.3:</b> Community tree nurseries and wood lots established for climate risk management in 40 communities.	<ul style="list-style-type: none"> <li>• Establish/adapt community nurseries for seedling production</li> <li>• Plant economic trees in river catchment areas</li> <li>• Protect all trees in water catchment areas</li> <li>• Establish community woodlots</li> </ul>
	<b>Output 3.4:</b> Fish farms are established and supported in 20 communities	<ul style="list-style-type: none"> <li>• Introduce cage fishing in constructed/rehabilitated water bodies</li> <li>• Support the establishment of community based fish ponds</li> <li>• Encourage and regulate wild fishing</li> <li>• Supply inputs such as fingerlings and nets for wild fishing and cage fishing</li> </ul>
	<b>Output 3.5:</b> Best practices for adaptation and lessons learned from the implemented actions. Related policy processes are recorded and disseminated to all 38 districts in northern Ghana through appropriate mechanisms	<ul style="list-style-type: none"> <li>• Produce and disseminate brochures, maps, video documentaries</li> <li>• Create website</li> <li>• Radio and TV broadcast</li> <li>• Institutionalize best practices</li> </ul>

Appendix 2: Evaluation process



Appendix 3: Meeting summary

Location	Group interviewed	Gender representation/ attendance	Overall feedback on the project (most significant change approach)	Main challenges
Upper West Region Nadowli District	Community of Goli	11 women/17 men	<b>Satisfied.</b> The project took into account the activities of the people in the area, it raised women incomes and access to lands and reduced climatic pressure through new irrigation systems (water pump)	The main challenges identified in this interview are linked to lack of material to properly conduct the activities. Beekeeping activities need more harvest material, groundnut farming need seeds with a better germination rate, and dry season gardening activities need more cement. The needs of project beneficiaries should be considered to ensure expected outcomes.
Upper West Region	Regional adaptation monitoring committee of Upper West	8 members	<b>Satisfied.</b> This committee has successfully improved the living conditions of the people touched by the project through sharing new techniques and developing boreholes.	The main challenges identified for this monitoring committee are: 1 consistency of meetings, they should be more regular; 2 communication with officials as data sharing can be improved along with facilitating access to funds (not on time).
Upper West Region Nadowli District	District adaptation monitoring committee of Nadwoli	10 members	<b>Satisfied.</b> This committee has a good connection the local communities and NGOs working on Livelihood empowerment programs. Good community engagement.	They report that the main challenges faced to implement the program are water scarcity due to drought and lack of weather forecasting data.
Upper West Region	District adaptation monitoring committee of Nandom	10 members 1 chief met	<b>Very satisfied.</b> Community engagement is very high and coordinated efforts managed to significantly reduce damages from wild fires.	The tree planting in this district was a success but the development of activities to increase livelihood has to be reviewed (to have a stronger impact), the funds must be delivered sooner to match with farmers calendar.
Upper West Region	Community of Ko	6 women 11 men		
Upper West Region Sissala East District	District adaptation monitoring committee of Sissala	11 members	<b>Moderately satisfied.</b> This committee wants to be more connected to NGOs and beneficiaries.	The committee does not have report from NGOs making the exercise of monitoring harder. They lack general vision on the project steps and need a timeline.
Upper West Region Sissala East District	Community of Bugubelle	31 women 19 men	<b>Satisfied.</b> The project adopted a participatory approach and local communities. Good cooperation for fencing off.	Need to develop alternative sources of income like beekeeping.

Location	Group interviewed	Gender representation/ attendance	Overall feedback on the project (most significant change approach)	Main challenges
Upper West Region Sissala East District	Community of Tumu	10 women 13 men 1 assembly man	<b>Satisfied.</b> A lot of activities are being developed and need to be supported.	The contract with NGO needs to be reviewed to ensure sustainability. The project should prioritise to finish boreholes constructed and increase women's income with a machine for groundnut processing centers.
Upper East Region	District adaptation monitoring committee of Bongo	4 members	<b>Satisfied.</b> Strong engagement from communities, boreholes have strongly improved local access to clean water.	NGO such as LINK Ghana, META and READI have were interview on the activities state of implementation. The fishponds were not working because of delays in the construction (fingerling starved) and the lack of food. Community engagement is high but to ensure sustainability funds must be delivered more easily.
Upper East Region	Community of Dua	13 women 5 men 1 assembly man		High mortality of fingerlings. Raincoats for beekeeping activities are needed. <i>The women used to migrate down south during the dry season. Since the project started implementation, they stay in the villages. At least 50% of the 28 members used to migrate. Same for the beekeepers.</i>
Upper East Region	Community of Yidongo	1 assembly man 10 women 6 men	<b>Very satisfied.</b> The project has already successfully impacted this community through the development of new activities and the construction of boreholes.	Water point are far so it is difficult to refill the fishponds introduced by the NGO (READI), to build them closer would strongly help the activity. This community is dedicated to beekeeping and want to develop this activity.
Upper East Region	District adaptation monitoring committee of Bakwu West	4 members	<b>Unsatisfied.</b> This committee has never truly been formed, they have not enough meetings and are not in contact with NGOs for monitoring.	Training must be done as soon as possible to give more information to this committee in order to ensure that their task of monitoring will be done.
Upper East Region	Community of Farik	1 assembly man 11 women 11 men 1 traditional chief, 1 land chief 1 woman representative of the queen mother	<b>Very satisfied.</b> The project has already successfully impacted this community which is, They are very involved in the project.	Need support to continue the development of on-going projects.
Upper East Region	Community of Tilli	12 women	<b>Satisfied.</b> The tree nursery is very suc-	The protection of the seedling against animal

Location	Group interviewed	Gender representation/ attendance	Overall feedback on the project (most significant change approach)	Main challenges
	Azupunpugu	6 men	cessful and improves local living conditions.	on free range is a challenge that can be addressed by investment in fencing. Fish-farming has not been developed.
Northern Region	Regional Adaptation Committee	6 Men 1 Women	<b>Very Satisfied.</b> This committee has a strong like with local committees and NGOs. Good communication and transparency.	
Northern Region	Savelugu Agriculture Department	2 Representatives	<b>Satisfied.</b>	
Northern Region	NGO CSIR Tamale	Dr. FelixAkpabie	<b>Moderately satisfied.</b> Activities haven't started yet due to reconsiderations.	Most of the site in Zabzugu district, in particular Oti river are not suitable for fish farming. The two large and deep dams in the district in which one can pose cages are in communities that are not part of the adaptation funds projects. CSIR researchers noted flaws in fish farming projects in other districts as well. When they reported to the PMU, they were asked to relocate fish farming projects in district or communities where it is possible. Communities involved in this fishing are not yet aware and are still waiting.
Northern Region	Community of Mognegu I	11 Men (4 young) 4 Women	<b>Very satisfied.</b> The project had a strong impact on the livelihood of the people in this community. Very good relation between beneficiaries, NGOs and the District Assembly.	Support for fencing in order to reduce social conflicts between livestock's and farmers. Improve decision making at local level.
Northern Region	Community of Mognegu II	13 Men (3 young) 11 Women (1 young)	<b>Satisfied.</b> Projects to improve livelihood have been implemented and need to be supported.	A single machine for dry season gardening for the whole community is insufficient. Facing a problem of pest with insects affecting the okra and the grasshoppers eating peppers.
Northern Region	NGO active in Mognegu	4 representatives	<b>Moderately satisfied.</b> NGOs have successfully started some of the projects but need more support.	All the NGO complain that they don't receive the fund early and said that the first installment could not allow them to achieve the activities they planned. They also said that during the first fund installment, the process was complicated but after a training, the fund flow has been improved.

Location	Group interviewed	Gender representation/ attendance	Overall feedback on the project (most significant change approach)	Main challenges
Northern Region	Community of Sabare I	9 Men including 5 young 1 Women	<b>Satisfied.</b> Projects to improve livelihood have been implemented and need to be supported.	The main challenge is the land security according to the community. Access to water, there are 2 boreholes, but they are currently spoiled.
Northern Region	Community of Sabare II	6 Men 2 Women	<b>Very satisfied.</b> The project had a strong impact on the livelihood of the people in this community.	The setting up of fences for the buffer zone is becoming urgent. The delay of the project implementation is a big issue.
Northern Region	NGO GRAMEEN Ghana	1 NGO representative	<b>Satisfied.</b> NGO reported a strong involvement of the community into the gardening activities. Need to scale up.	They face delay in the activities because of delay of fund but the implementer is confident to achieve the project at due time
Northern Region	Community of Libga	15 Men (5 young) 15 women	<b>Moderately satisfied.</b> Projects are starting to be implemented but no improvement has been felt yet.	The seedling of tree planting came too late and after the rain season, so the community didn't plant trees yet. The equipment for farming is still in Tamale.
Northern Region	Community of Zaazi	15 Men (6 young) 20 Women	<b>Satisfied.</b> Projects to improve livelihood have been implemented and need to be supported.	This community has successfully launched many activities such as tree planting or fishing but are lacking funds to finish them or to launch other activities like beekeeping. The communication with officials could be improved.
Northern Region	NGOs Agroiintroduction Ghana, basic Needs-Ghana and CLIP	4 representatives	<b>Moderately satisfied.</b> NGOs have successfully started some of the projects and have a fruitful relation with local communities but lack funds.	Budget tied is affecting activities, the cut in the budget is detrimental to some activities. For example, the purchase of canoe for fishing has been removed. Now the cages are in the water and can not be harvested. Cost of project management is high as NGOs say that moving from one community to another is extremely expensive for them. Finally inflation is a challenge: from the time of submission of their project to date prices have changed.
Northern Region	Community of Tampion	11 Men 17 Women	<b>Moderately satisfied.</b> Projects are starting to be implemented but no improvement has been felt yet.	The palace of Tampion ask to extend the Shea processing sub-project which happens to be the main activity of the women. The projects are in their early stages (maybe due to late funding).

Location	Group interviewed	Gender representation/ attendance	Overall feedback on the project (most significant change approach)	Main challenges
Northern Region	Community of Tamaligu	18 Men 27 Women	<b>Very Unsatisfied.</b> It appears that the village does not know the project.	They say they came to see them but they were not trained or organized as in other communities. There is no borehole in the village. Women said that they fight over water with animals. On 20 November 2018, when the mission was already on the ground, CLIP just put the cages in the dam of the village.
Northern Region	NGOs URBANET, TRUWAYLIF and CLIP	8 NGO representatives	<b>Satisfied.</b> Through the programme, NGOs have improved the already existing activities and improved local communities livelihood. They have a good relationship with beneficiaries but are slowed by the late release of funds.	The first challenge is the delay on the second tranche of funds which is delaying the project activities. NGOs report that Some communities are very far away and supervision costs are very expensive. Unfortunately, the project does not support it. Finally, before the adaptation fund project, there was a buffer zone project implemented by EPA. This project paid the communities' planting activities and this is why, through the UNDP project, some community members expect direct benefits.



Appendix 4: Mapping of livelihood activities received after the call of proposal (49 of them were approved) and other interventions (source: PMU)

District	Community	# of NGO	NGO	Proposed interventions	Community projects
Bawku Municipal	Kuka	3	Centre for Rural Water Development & sanitation Garu Presbyterian CBR Programme SavaNet-Ghana,	1. Tree Planting 2. Dry season gardening 3. Bee keeping	Planted Trees (buffer zones)
	Natinga	3	Centre for Rural Water Development & Sanitation, Garu Presbyterian CBR Programme, SavaNet-Ghana,	4. Tree Planting 5. Dry season gardening 6. Bee keeping	
	Gentiga I	3	Centre for Rural Water development sanitation, ZOVFA, BIWFA	7. Tree Planting 8. Dry season gardening 9. Agro processing (shea, dawadawa & rice)	Fenced Planted Trees (buffer zones)
	Gentiga II	3	Centre for Rural Water Development & Sanitation, ZOVFA, BIWFA	10. Tree Planting 11. Dry season gardening 12. Agro processing (shea, dawadawa & rice)	Ring Fenced Planted Trees (buffer zones)
	Tambalugu	2	BEWDA, SavaNet-Ghana,	13. Dry season gardening 14. Bee keeping 15. Fish farming	Ring Fenced Planted Trees (buffer zones)
	Zabugu	2	Garu Presbyterian CBR Programme, SavaNet-Ghana	16. Dry season gardening 17. Bee keeping	Fenced Planted Trees (buffer zones)
	Tampizua I	2	NORTHFIN FOUNDATION, Trade Aid Integrated,	18. Dry season gardening 19. Groundnut processing	Fenced Planted Trees (buffer zones)
	Tampizua II	1	NORTHFIN FOUNDATION	20. Dry season gardening	
Bawku West	Tilli Az-upunpugu	4	Akandem Farms Ltd, WACEP Ghana, WVI-Ghana, READI	21. Tree nursery 22. Dry season gardening 23. Shea butter processing 24. Fish farming	Fenced Planted Trees (buffer zones)
	Timonde	4	Akandem Farms Ltd, BEWDA, SavaNet-Ghana, Trade Aid Integrated	25. Tree nursery 26. Dry season gardening 27. Bee keeping 28. Groundnut processing	
	Farik	4	SavaNet-Ghana,	29. Bee keeping	Fenced Planted Trees (buffer zones)

District	Community	# of NGO	NGO	Proposed interventions	Community projects
			WACEP Ghana, WVI-Ghana,	30. Dry season gardening 31. Shea butter processing	zones)
	Lamboya	3	WACEP Ghana, WVI-Ghana,	32. Dry season gardening 33. Shea butter processin	Ring Fenced Planted Trees (buffer zones
	Dagunga	2	SavaNet-Ghana, Trade Aid	34. Bee keeping 35. Agroprocessing	
Bole	Sonyor	3	AROCHA Ghana, Maata-N-Tudu, Open Ghana, Behasun Integrated Dev't Org	36. Bee keeping 37. Shea butter processing 38. Dry season gardening 39. Integrating cultural values	Borehole
	Kiape	3	AROCHA Ghana, Maata-N-Tudu, Open Ghana	40. Bee keeping 41. Shea butter processing 42. Dry season gardening	Borehole Fenced Planted Trees (buffer zones)
	Chache – Bhemshi	2	AROCHA Ghana, Pure Trust Social Investors Foundation	43. Bee keeping 44. Dry season gardening 45. Shea butter processing	Borehole Planted Trees (yet to be fenced)
	Jama	1	AROCHA Ghana	46. Bee keeping	
	Cheribawale	2	AROCHA Ghana, Pure Trust Social Investors Foundation	47. Bee keeping 48. Dry season gardening 49. Shea butter processing	Borehole
	Ntreso	2	AROCHA Ghana, Pure Trust Social Investors Foundation	50. Bee keeping 51. Dry season gardening 52. Shea butter processing	Borehole
	Seripe	3	Northern Centre for Sustainable Development management, Pure Trust Social Investors Foundation, Zaasilari Ecological Farms Project	53. Dry season gardening 54. Bee keeping 55. Shea butter processing	Borehole Fenced Planted Trees (buffer zones)
	Kakaese	2	Zaasilari Ecological Farms Project, Northern Centre for Sustainable Development management	56. Dry season gardening 57. Bee keeping	Borehole Planted Trees (yet to be fenced)

District	Community	# of NGO	NGO	Proposed interventions	Community projects
Bongo	Dua	3	COSEREC, LINK Ghana, READI	58. Nursery establishment 59. Bee keeping 60. Fish farming	Borehole
	Yidongo	3	LINK Ghana, META, READI,	61. Bee keeping 62. Dry Season Gardening 63. Fish farming	Borehole Fenced Planted Trees (buffer zones)
	Gorigo-Aliba	3	LINK Ghana, META, READI,	64. Bee keeping 65. Dry Season Gardening 66. Fish farming	Borehole Planted Trees (yet to be fenced)
	Adaboya	2	LINK Ghana, READI,	67. Bee keeping 68. Fish farming	Borehole Planted Trees (yet to be fenced)
	Kunkua	3	LINK Ghana, META, READI,	69. Bee keeping 70. Dry Season Gardening 71. Fish farming	Borehole Fenced Planted Trees (buffer zones)
Builsa South	Wiesi	2	BIWFA, READI,	72. Agro Processing (shea, dawadawa & rice) 73. Fish farming	Borehole Planted Trees (yet to be fenced)
	Kanjarga-Nyandema	2	BIWFA, READI	74. Agro processing (shea, dawadawa & rice) 75. Fish farming	Borehole
	Gbedema-Kunkua	2	WILPHIN Foundation, LINK Ghana	76. Dry season gardening 77. Agro processing	Borehole
	Kasiesa	2	WILPHIN Foundation (on hold), LINK Ghana,	78. Dry season gardening 79. Agro Processing	Borehole Fenced Planted Trees (buffer zones)
	Gbedembilisi	2	WILPHIN Foundation, READI, LINK Ghana	80. Dry Season gardening 81. Fish farming 82. Agro Processing	Borehole Planted Trees (yet to be fenced)
Nadowli	Jang	3	Coalition for Change, ProNet North, CSIR	83. Dry season gardening 84. Bee keeping 85. Fish Farming	Borehole Fenced Planted Trees (buffer zones)
	Goli	3	Coalition for Change, ProNet North, CSIR	86. Dry season gardening 87. Bee keeping 88. Fish Farming	Borehole Fenced Planted Trees (buffer zones)
	Zukpiri	3	Coalition for Change, ProNet North,	89. Dry season gardening 90. Bee keeping	Borehole

District	Community	# of NGO	NGO	Proposed interventions	Community projects
			CSIR	91. Fish Farming	
	Nanvilli	3	Coalition for Change, ProNet North, CSIR	92. Dry season gardening 93. Bee keeping 94. Fish Farming	Borehole Fenced Planted Trees (buffer zones)
	Takpo	3	Coalition for Change, ProNet North, CSIR	95. Dry season gardening 96. Bee keeping 97. Fish Farming	Borehole Fenced Planted Trees (buffer zones)
Nandom	Nabugaugn	3	CIBRI, Lahorima Islamic Youth Ass, PRUDA,	98. Bee keeping 99. Agro processing 100.Dry season gardening	Borehole Fenced Planted Trees (buffer zones)
	Zogpielle	3	CIBRI, PRUDA, FM Shea Group	101.Bee keeping 102.Dry season gardening 103.Shea processing	Borehole Fenced Planted Trees (buffer zones)
	Guri	3	CIBRI, PRUDA, FM Shea Group	104.Bee keeping 105.Dry season gardening 106.Shea Processing	Borehole
	Bechinteng	3	CIBRI, PRUDA, FM Shea Group	107.Bee keeping 108.Dry season gardening 109.Shea processing	Borehole Fenced Planted Trees (buffer zones)
	Ketuo	3	CIBRI, PRUDA, FM Shea Group	110.Bee keeping 111.Dry season gardening 112.Shea processing	Borehole Fenced Planted Trees (buffer zones)
	Dabagteng	3	CIBRI, PRUDA, FM Shea Group	113.Bee keeping 114.Dry season gardening 115.Shea processing	Borehole
	Naapaal	3	CIBRI, PRUDA, FM Shea Group	116.Bee keeping 117.Dry season gardening 118.Shea Processing	Borehole Fenced Planted Trees (buffer zones)
	Ko-Bukom	4	Lahorima Islamic Youth Association, PRUDA, CIBRI	119.Agro processing 120.Dry season gardening 121.Bee keeping	Borehole Fenced Planted Trees (buffer zones)
	Gengekpe	2	PRUDA, FM Shea Group	122.Dry season gardening 123.Shea Processing	Borehole Fenced Planted Trees (buffer zones)
	Venne	2	PRUDA, FM Shea Group	124.Dry season gardening 125.Shea Processing	Borehole Fenced Planted Trees (buffer zones)

District	Community	# of NGO	NGO	Proposed interventions	Community projects
	Sonne	2	PRUDA, FM Shea Group	126.Dry season gardening 127.Shea Processing	Borehole
Savelugu	Libga	4	Agrointroduction Ghana, Basic Needs-Ghana, CLIP, NORTHCODE	128.Nursery establishment and tree planting 129.Dry season gardening 130.Fish farming 131.Bee keeping	Borehole
	Zaazi	4	Agrointroduction Ghana, basic Needs-Ghana, CLIP, NORTHCODE,	132.Nursery establishment and tree planting 133.Dry season gardening 134.Fish farming 135.Bee keeping	Borehole Fenced Planted Trees (buffer zones)
	Bihinaayili	4	Agrointroduction Ghana, Basic Needs-Ghana, CLIP, NORTHCODE	136.Nursery establishment and tree planting 137.Dry season gardening, 138.Fish farming 139.Bee keeping	Borehole
	Sugtampia	3	Agrointroduction Ghana, Basic Needs-Ghana, CLIP	140.Nursery establishment and tree planting 141.Shea butter processing 142.Dry season gardening 143.Fish farming	Borehole
	Dinga	4	Agrointroduction Ghana, Basic Needs-Ghana, CLIP, TRUWAYLIF	144.Nursery establishment and tree planting 145.Shea butter processing 146.Dry season gardening 147.Soyabean processing	Borehole
	Kukobila	4	Agrointroduction Ghana, CLIP, NORTHCODE, URBANET, Behasun Integrated Dev't Org (BIDO)	148.Nursery establishment and tree planting 149.Fish farming 150.Bee keeping 151.Dry season gardening 152.Integrating cultural values	Borehole Planted Trees (yet to be fenced)
	Tamaligu	4	Agrointroduction Ghana, CLIP, URBAANET, Behasun Integrated Dev't Org (BIDO)	153.Nursery establishment and tree planting, 154.Fish farming 155.Dry season gardening	Borehole Planted Trees (yet to be fenced)

District	Community	# of NGO	NGO	Proposed interventions	Community projects
				156.Integrating cultural values	
	Nyoglo	4	Agrointroduction Ghana, Basic Needs-Ghana, CLIP, NORTHCODE,	157.Tree Nursery establishment 158.Dry season gardening 159.Fish farming 160.Bee keeping	
	Nagdigu	3	TRUWAYLIF, URBAANET, TICOFAMU	161.Soybean processing 162.Dry season gardening 163.Tree planting	Borehole
	Tampion	3	TICOFAMU, TRUWAYLIF, URBANET	164.Dry season gardening 165.Tree planting 166.Soybean processing	Fenced Planted Trees (buffer zones) Borehole
	Zieng	3	NORTHCODE, TICOFAMU, TRUWAYLIF,	167.Bee keeping 168.Tree planting 169.Soybean processing	
Sissala East	Tumu	3	ASUDEV, AUXANO FOREVER, Sungmah Organisation	170.Bee keeping 171.Shea butter processing 172.Baobab processing	Ring Fenced Planted Trees (buffer zones)
	Kong	2	ASUDEV, Sungmah Organisation	173.Bee keeping 174.Shea Butter processing	Fenced Planted Trees (buffer zones)
	Tasor-Kulfor	3	ASUDEV, AUXANO FOREVER, Sungmah Organisation	175.Bee keeping 176.Shea butter processing 177.Baobab processing	Fenced Planted Trees (buffer zones)
	Bugubelle	3	ASUDEV, AUXANO FOREVER, Friends of Rural Growth	178.Bee keeping 179.Shea & Baobab processing 180.Dry season gardening	Fenced Planted Trees (buffer zones)
	Welebelle	2	ASUDEV, Friends of Rural Growth	181.Bee keeping 182.Dry season gardening	
Zabzugu	Mognegu I	4	BILFACU, CSIR-WRI, Development Frontiers, Songtaba	183.Bee keeping 184.Fish farming 185.Shea processing 186.Dry season gardening	Borehole
	Mognegu II	4	BILFACU, CSIR-WRI,	187.Bee keeping 188.Fish farming	Borehole

<b>District</b>	<b>Community</b>	<b># of NGO</b>	<b>NGO</b>	<b>Proposed interventions</b>	<b>Community projects</b>
			Development Frontiers, Songtaba	189.Shea processing 190.Dry season gardening	
	Sabare I	3	CSIR-WRI, GRAMEEN Ghana	191.Fish farming 192.Dry season gardening	Borehole Fenced Planted Trees (buffer zones)
	Sabare II	4	GRAMEEN Ghana, Simli AID, CSIR-WRI	193.Dry season gardening 194.Dry season gardening 195.Fish Farming	Planted Trees (yet to be fenced) Borehole
	Kolikolini	3	Simli AID, Northern center for sustainable Dev't Mgt., CSIR-WRI	196.Dry season gardening 197.Bee keeping 198.Fish Farming	Borehole

Appendix 5: MTR Report Clearance

<b>Midterm Review Report Reviewed and Cleared By:</b>	
<b>Commissioning Unit</b>	
Name: _____	
Signature: _____	Date: _____
<b>UNDP-GEF Regional Technical Advisor</b>	
Name: _____	
Signature: _____	Date: _____