REPUBLIC OF GHANA

OFFICE OF THE PRESIDENT

MINISTRY OF MONITORING AND EVALUATION

RAPID EVALUATION OF THE ONE VILLAGE ONE DAM (1V1D)

October 2019

TABLE OF CONTENTS

ABBREVIATIONS

DCE	District Chief Executives
FGD	Focus Group Discussions
GIDA	Ghana Irrigation Development Authority
IPEP	Infrastructure for Poverty Eradication Programme
MMDAs	Metropolitan, Municipal and District Assemblies
MMDCEs	Metropolitan and Municipal District Chief Executives
MoME	Ministry of Monitoring and Evaluation
MSDI	Ministry of Special Development Initiative
NDA	Northern Development Authority
1V1D	One Village One Dam

F I G U R E S

EXECUTIVE SUMMARY

The Rapid Evaluation of the One Village One Dam (1V1D) project is the first of a series of evaluations to be conducted by the Ministry of Monitoring and Evaluation. The 1V1D is a component of the Government Flagship Programmes under the Infrastructure for Poverty Eradication Programme (IPEP). The project seeks to increase access to reliable source of water for livestock watering, domestic activities and dry season farming as a means of contributing to poverty eradication and addressing the various forms of inequalities with particular emphasis on rural and deprived communities. The aim of the evaluation was to assess the progress of implementation, emerging outcomes and potential impacts of the 1V1D intervention. It also sought to document emerging issues and challenges that will require immediate attention of the Cabinet, Ministry for Special Development Initiative (MSDI and other stakeholders. The evaluation was conducted by the Ministry of Monitoring and Evaluation (MoME) in collaboration with the MSDI with technical and financial support from **Twende Mbele** and **IDinsight**. The Rapid Evaluation covered 15 Metropolitan, Municipal and District Assemblies (MMDAs) spread across the five regions of northern Ghana.

The dams are intended to serve as multipurpose water storage structures, which will provide water all year round for small holder farming and livestock watering as well as for domestic activities such as brick moulding.

In line with the design, each dam is expected to have the following features:

- Land area ranging between 2 and 3 hectares.
- Earth embankment wall ranging between 150 to 250 meters with a maximum height of 5 metres depending on the topography of the location.
- A maximum depth of about 5 metres (2.5m below and 2.5 above ground level).
- Water holding capacity of about 30,000 cubic meters.
- Inlet-outlet Structure to supply water downstream (to irrigation farms) from the small dam.
- Spillway to control the level of water in the small dams

Purpose and Scope of the Assessment

The main purpose of the evaluation was to assess as objectively and systematically as possible the progress of implementation, emerging outcomes and potential impacts of the One Village One Dam project. The assessment also sought to document implementation challenges and opportunities for accelerating implementation. The study covered 57small earth dams in 15 MMDAs across the five regions in northern Ghana. Specifically, the evaluation sought to:

- gauge the progress of construction of the dams in the target communities;
- appraise emerging outcomes and use of the dams;
- identify and document challenges that are likely to affect optimisation of the benefits and sustainability of the dams;
- document emerging issues inclduing lesson learned that can be fed into future programming and fine-tuning of the project design and roll-out; and

- recommend strategies for accelerating implementation and impact of the programme.

Approach and Methodology

The rapid evaluation is an innovative approach adopted by the Ministry of Monitoring and Evaluation to strengthen evidence-based decision making and accountability for results across all the levels of decision making in the public sector. The approach seeks to provide real-time evidence to the Cabinet, sector ministries and other stakeholders on the performance and impact of Government Flagship Programmes. It employs an adult-learning and utilisation focused approach to gather information from sector ministries, project beneficiaries and other stakeholders to ascertain: the responsiveness; efficacy, impact and sustainability of the flagship programmes. The evaluation employes a mixed method approach involving the collection, analysis and reporting based on both quantitative and qualitative data gathered from primary and secondary sources

Limitations

- The sample frame comprised of dam sites that were active, thus where actual construction of the dams has begun. In this regard, the findings do not apply to sites where construction is yet to begin.
- The evaluation was conducted in the rainy seasons and as a result did not capture the ability of the dams to retain enough water during the dry season and the rate of adoption of dry season farming in the beneficiary communities. However, to fill this gap, the MoME intends to conduct a follow-up assessment during the dry season in collaboration with MSDI.

Findings

- **Responsiveness of 1V1D to the needs of beneficiary communities**

There was unanimous agreement among the respondents including farmers, women, chiefs and officials of the MMDAs that the 1V1D project is very relevant and responds to one of the critical needs of the communities, scarcity of water especially in the dry season.

- **Progress of implementation 1V1D**

The 1V1D project is spread across the northern ecological zone. The actual construction of the dams started in April 2018 and a total 560 dams have been initiated as at the time of the review. On average the dams were 85% complete. Out of the 57 dams visited, 21 (36%) were 95% complete, 28 (49%) were 85% complete, 5 (9%) were 75% complete, and only 3 dams were less than 5% complete.

- **Usage of the dams**

The 1V1D project is designed to provide reliable source of water all year round for household activities, watering of livestock and for dry season farming in the beneficiary communities. Although none of the dams in the study area were fully completed, the evidence from the assessment showed that the community members had started using the water mainly for watering of livestock (67%) and for domestic activities such as drinking and washing (63%). Only a few respondents indicated that they are using the water for farming

Emerging Outcomes:

In terms of the emerging outcomes, the study identified the following outcomes:

- **Reliable source of water for livestock watering:** Water from some of the dams are being used by the communities to water their livestock. Out of 399 key informant interviewed, 266 (67%) revealed that they use the dam for animal watering. They also reported that before the construction of the dams, they used to have serious challenges securing adequate water for their livestock and hope that this situation will change with the construction of the small earth dams.
- **Safe and reliable source of water for domestic activities:** In terms of domestic use, 252 (63%) of the respondents revealed that the dams are serving as a reliable source of water for domestic activities such as washing, construction. They indicated that the siting of the dams very close to the communities have relieved them of travelling long distances for water and the associated risks
- **Potential source of water for dry season farming:** The dams are intended to serve as a reliable source of water for farming all year round. Feedback from the beneficiaries especially the youth revealed that the dams could provide them with a reliable source of water for dry season farming especially vegetable farming
- **Promoting social cohesion:** Most of the dams are shared by a number of communities and thus create a bond among them and an opportunity for the communities to work together. Further, the provision of reliable source of water throughout the year for domestic activities and watering of livestock, according to the community members will reduce conflicts that usually emanate from water shortage and ensuing competition for scare water especially for watering of animals
- **Potential source of employment:** The dams are seen by most of the community member including the opinion leaders as a potential source of employment. It was evident from the engagement with the respondents that the dams provide an opportunity of expanding existing farms and or engaging in vegetable farming during the dry season
- **Reducing migration down south during the dry season:** The findings from the focus group discussions and key informant interviews revealed that once completed, the dams will facilitate dry season farming and thereby reduce the migration of young men and women from the northern to the southern part of the country in search of jobs.

Emerging Issues and Challenges

- **Inadequate participation and weak ownership of projects:** Inadequate participation and weak ownership of the dams by lower level stakeholders such as the MMDAs and the community members possess great danger to the effective use, impact and sustainability of the dams. Findings from the field assessment revealed that there is low participation and ownership of the dams by the MMDAs and the communities.
- **Structural Defects:** Another category of issues identified was structural defects. A significant number of the dams visited were found to have structural defects in the form of broken embankment, severe erosion and defective spill ways which requires immediate attention.
- **Lack of effective monitoring and feedback mechanism:** Save for the M&E team at MSDI, there were no evidence of a mechanism or functional arrangements for monitoring and receiving feedback from the beneficiary communities.
- **Inadequate knowledge and awareness among the key stakeholders at the local level**
  Despite the potential benefits of the 1V1D programme, the evaluation revealed that the level of knowledge and awareness among the stakeholders especially the community members regarding the purpose, type and process of constructing the dams was very low. The community members

interviewed provided divergent views and explanation of what the 1V1D seeks to achieve, how and when.

- **Weak communication and information sharing**
  There were no formal and systematic arrangements for communicating and sharing information with stakeholders at the decentralised levels. There were serious gaps in communication and information sharing from the MSDI leading to misinformation and misrepresentation across the beneficiary communities.

Conclusion

Despite the fact that the dams visited have not been fully completed, it was identified that most of them were being used mainly for animal watering and for domestic activities. This clearly shows the tremendous potential of the dams to transform the lives and wellbeing of the people in the northern part of the country. In conclusion, it can be said that, the 1V1D is indeed a catalytic and forward looking intervention that has the potential to significantly transform the livelihoods of local farmers in the northern part of the country in line with the Ghana beyond Aid agenda

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Recommendations

- **Prioritise the repair of structural defects immediately after the raining season**

  Given the high expectation, potential benefits and the urgency to get the dams ready for the dry season, it is recommended that the MSDI focus on repairing the dams with structural defects and ensure completion of all the dams that have been initiated. In addition, the Ministry should work closely with NDAs and the MMDAs to sustain and grow the interest and commitment of the beneficiary communities.

- **Develop and roll-out intensive sensitisation and education programme across the Districts**

  The MSDI in collaboration with the Northern Development Authority and the MMDAs should develop and implement tailor-made sensitisation and community engagement programmes with the opinion leaders such as the chiefs, assembly members and religious leaders as well as youth and women's groups in the communities to deal with the misconceptions and the misrepresentations.

- **Develop and operationalise robust monitoring, evaluation and feedback mechanism**

  A robust monitoring, evaluation and feedback mechanism should be developed to facilitate timely implementation and reporting on the delivery and impacts of the 1V1D.

- **Strengthen collaboration and partnership between MSDI, NDA and MMDAs**

  Conscious effort should be made to establish a clear process of sharing documents and information as well as including the MMDAs in the relevant stages of the programme. The MMDAs should be capacitated to provide continuous support to the communities in terms of repair and maintenance of the dams especially after the dams have been completed and handed over.

- **Periodic evaluation of the programme**

  The MSDI should have a clear plan and dedicated budget for periodic assessment and evaluations that will provide timely information to facilitate evidence-based decision making.

1. INTRODUCTION AND BACKGROUND

1.1 Introduction

This report presents the findings of Rapid Evaluation of the One Village One Dam (1V1D) intervention under the Infrastructure for Poverty Eradication Programme (IPEP). The evaluation aimed at assessing the progress of implementation, emerging outcomes and potential impacts of the 1V1D intervention. It also sought to document emerging issues and challenges that will require immediate attention of the Cabinet, Ministry for Special Development Initiative (MSDI and other stakeholders. The evaluation was conducted by the Ministry of Monitoring and Evaluation (MoME) in collaboration with the MSDI with technical and financial support from IDinsight and Twende Mbele. The Rapid Evaluation covered 15 MMDAs spread across the five regions of northern Ghana.

1.2 Background

The 1V1D (components of IPEP) is one of the initiatives under the Government Flagship Programme[1] initiated by His Excellency, Nana Addo Dankwa Akuffo Addo, the President of the Republic of Ghana when he assumed office in 2017. The programme is an innovative development initiative being implemented by MSDI in collaboration with other agencies to eradicate poverty and address the various forms of inequalities in with particular emphasis on rural and deprived communities. Per the project design, the 1V1D project is to: construct about 560 Small earth Dams across 56 constituencies in the 5 regions[2] of northern Ghana. Each of the districts is expected to have at least 10 dams. These dams are intended to serve as multipurpose water storage structures, which will provide water all year round for small holder farming and livestock watering as well as for domestic activities such as brick moulding.

In line with the design, each dam is expected to have the following features:

- Land area ranging between 2 and 3 hectares.
- Earth embankment wall ranging between 150 to 250 meters with a maximum height of 5 metres depending on the topography of the location.
- A maximum depth of about 5 metres (2.5m below and 2.5 above ground level).
- Water holding capacity of about 30,000 cubic meters.
- Inlet-outlet Structure to supply water downstream (to irrigation farms) from the small dam.
- Spillway to control the level of water in the small dams

[1] Planting for Food and Jobs; Free Senior High School; Railway Development; Fish landing sites; Infrastructure for Poverty Eradication; One District-One Factory; NACOB, NIA, Free SHS, Syno Hydro MASLOC, etc.

[2] Northern, North East, Savannah, Upper East, and Upper West regions.

1.3 Purpose and Scope of the Assessment

The main purpose of the evaluation was to assess as objectively and systematic as possible the progress of implementation, emerging outcomes and potential impacts of the One Village One Dam project. The study also sought to document implementation challenges and opportunities for accelerating implementation. The assessment covered 57 dams in 15 MMDAs across the five regions in northern Ghana. Specifically, the evaluation sought to:

- gauge the progress of construction of the dams in the target communities;
- appraise emerging outcomes and use of the dams;
- identify and document challenges that are likely to affect optimisation of the benefits and sustainability of the dams;
- document emerging issues inclduing lesson learned that can be fed into future programming and fine-tuning of the project design and roll-out; and
- recommend strategies for accelerating implementation and impact of the programme.

2. APPROACH AND METHODOLOGY

2.1 Overall Approach

The rapid evaluation is an innovative approach adopted by the Ministry of Monitoring and Evaluation to strengthen evidence-based decision making and accountability for results across all the levels of decision making in the public sector. The approach seeks to provide real-time evidence to Cabinet, sector ministries and other stakeholders on the performance and impact of Government Flagship Programmes. It employs an adult-learning and utilisation focused approach to gather information from sector ministries, project beneficiaries and other stakeholders to ascertain: the responsiveness; efficacy, impact and sustainability of the flagship programmes. The evaluation employs a mixed method approach involving the collection, analysis and reporting based on both quantitative and qualitative data gathered from primary and secondary sources.

The rapid evaluation of the 1V1D followed a three-phased approach as detailed below:

2.2.1: Inception Phase

The inception phase involved developing shared understanding of the purpose, scope and approach of the rapid evaluation among the key stakeholders, development of draft data collection instruments and a detailed workplan for the field assessment. The MoME held a series of meetings with the MSDI and the collaborating partners. Other inception activities included establishment of a Technical Committee that led the detailing of the approach and methodology and development of data collection instruments as well as selection of sample MMDAs and dam sites for the study. Specifically, the inception phase included:

2.2.1.2 Documents Review

To gain deeper insight of the 1V1D project, the technical team conducted an extensive review of relevant background documents provided by MSDI as well as from other sources to learn from other best practices. The documents included the results framework of IPEP, progress reports and Power Point presentations. The review enabled the team to have a clear appreciation of the Theory of Change Mapping behind the 1V1D project and to detail a fit-for-purpose approach and action plan.

2.2.1.3 Sample and Sampling Process

A combination of probability and non-probability sampling techniques were used to select the sites (dams) and key informants for the assessment. Notable among the key informants were theDistrict Chief Executives (DCEs), District Engineers, District Planning Officers, Chiefs, Assembly members, and women from the beneficiary communities. The stakeholderere selected based on the level of knowledge and participation in the 1V1D programme. With respect to the selection of project sites (dams), a four-stepped approach elaborated below was followed to scientifically select the final sites (dams) covered during the assessment (Annex 1).

Table 1: Sampling approach

Sampling approach	
Step 1: Purposive sampling of active small earth dam sites	57 dam sites with active construction were selected out of 570 dams initiated under the 1V1D project to serve as the study population. These dams were purposively selected to ensure that the assessment covered dam site with significant evidence of construction works.
Step 2: Stratified and weighted by region	The data was then grouped into 3 regions and each was assigned a weight according to the percentage of active dams: • Northern region 58% • Upper East region 28% • Upper West region 14% This ensured balanced selection of communities across regions.
Step 3: Random selection of districts	Districts were randomly selected from the 3 regions in line with the assigned: • Northern region 9 districts • Upper East region 4 districts • Upper West region 2 districts The randomization ensured reduced selection bias.
Step 4: Random selection of dam sites	4 small earth dam sites (communities) within each of the districts were randomly selected to avoid bias.

2.2.1.4 Design of Data Collection Instrument

Based on the objectives of the evaluation, a comprehensive data collection instrument comprising of both qualitative and quantitative questions was developed focused on the following details:

- District specific data (quantitative) on the status of implementation of 1V1D interventions
- Qualitative and quantitative data from key informants such as the District Chief Executives, the District Planning Officers and the District Engineers on their perspectives on the 1V1D project as well as the status of implementation of the 1V1D interventions in their respective districts.
- Data from intended beneficiaries on project relevance, Community water needs and Uses (current and future)

- Knowledge, Attitude and Behaviour Questionnaire for collecting qualitative data relating to knowledge and perceptions of the beneficiary communities on project implementation, including areas for improvement.

2.2.3 Phase 2: Field Collection

The field data collection included the conduct of key informant interviews and physical verification and validation of the status of the dams across the selected district.

2.3.1 Data Collection

The field data collection was conducted over a period of five days. Two groups comprising of staff of MoME and MSDI supported by the collaborating partners conducted the field exercise. Using the agreed data collection instruments, the teams conducted onsite assessment of the progress of implementation of the dams and face-to-face interviews of key informants from the selected communities. In most of the communities the teams conducted Focus Group Discussions (FGDs) to elicit additional information and the views and perceptions of the community members especially the youth. In total, the team visited 57 dam in 15 MMDAs across the 5 regions in northern Ghana.

The senior staff of MoME conducted quality assurance of the data collection process and evidence gathered by the teams. They also participated in 4 site visits and discussions with the District Chief Executive of Mion District in the Northern region. Furthermore, they participated in an exit meeting with the leadership of the Northern Development Authority.

2.3.2 Data Analysis and Reporting

The data collected from each of the dam site was analysed to glean insights on the progress of implementation, usage of the dams, emerging outcomes and potential challenges.

Quantitative analysis: Descriptive statistic and graphs were generated from the quantitative data. Using percentage representations and histograms, trends and patterns were developed form the quantitative data to show the progress of implementation and to describe the key uses and emerging issues.

Qualitative analysis: The qualitative responses were coded and analysed through the following steps:

- Verbatim recording of interview transcripts
- Analysis of initial data by pulling out key ideas from each response
- Coding and categorization of ideas and concepts into descriptive codes that capture the main themes of the responses
- Generation and assignment of overarching themes that captured key patterns in the codes

Reporting: The content of the report includes a narrative section that details the performance of the dams, usage, emerging outcomes and issues that require the attention of key decision makers and the Sector Ministry. The narrative report is complemented with graphs and pictures from the site visits to buttress the evidence from the quantitative data.

2.4 Limitation of the evaluation

The following limitations were noted:

- The sample frame comprised of dam sites that were active, thus where actual construction of the dams has begun. In this regard, the findings do not apply to sites where construction is yet to begin.
- Another limitation is that the evaluation did not capture the ability of the dams to retain enough water during the dry season and the rate of adoption of dry season farming in the beneficiary communities. This is because the dams have just been constructed and is yet to experience the dry season and also as a result of the fact that evaluation was conducted during the raining season. However, to fill this gap, the MoME intends to conduct a follow-up assessment during the dry season in collaboration with MSDI.

3.0 FINDINGS

This section details the key findings from the rapid evaluation. It captures beneficiaries' perspectives on the responsiveness of the dams to their needs, status of implementation and the current and or potential use of the dams. The section also highlights some of the key emerging outcomes and issues that will require the attention of Cabinet, MSDI, NDA, MMDAs and the beneficiary communities.

3.1 Rollout of 1V1D

The roll-out of the 1V1D went through the following stages: selection of prospective dam sites using a database developed by Ghana Irrigation Development Authority (GIDA), prioritisation of ten (10) dams across constituencies by MMDAs, validation of suitability of sites selected by MMDAs, mapping of dam sites and development of structural designs, site entry and construction of dams, and handing over of dams to community. The process from selection of dam site through to the construction of dams was led by a team of consultants engaged by MSDI. The information gathered from the assessment showed that the process was intended to be participatory, thus involved all the relevant stakeholders at the relevant stages of the process. However, save for the site selection, the available evidence shows that neither GIDA nor MMDA were fully involved in the remaining stages of the process.

3.2 Responsiveness of 1V1D to the needs of beneficiary communities

There was unanimous agreement among the respondents including farmers, women, chiefs and officials of the MMDAs that the 1V1D project is very relevant and responds to one of the critical needs of the communities, scarcity of water especially in the dry season. The respondents indicated that the construction of dams across the constituencies is a very laudable intervention that will greatly contribute to the improvement of the wellbeing of the people, thus having the potential to reduce the incidence of poverty in the area. To them when completed, the dams will provide a reliable and sustainable source of water for domestic and agricultural use throughout the year.

> "We usually experience hard times with no water and this causes low crop productivity. We needed the small dams as a source." (Community member)

Responses from key informant interviews and focus group discussions revealed that the 1D1V project is a response to the perennial water shortage in the area. They were of the view that, the project addresses one of the core underpins of poverty in the area and believes that once completed, the dams will serve as a means of achieveing food security and a source of economic empowerment. For example, 88% of community members and 66% of staff of the MMDAs interviewed noted that the 1V1D project is critical to the water needs of the beneficiary communities.

In addition, it was reported that the dams will provide great relieve to the communities especially women and the youth in terms of reducing the burden of having access toclean water and the potential risks

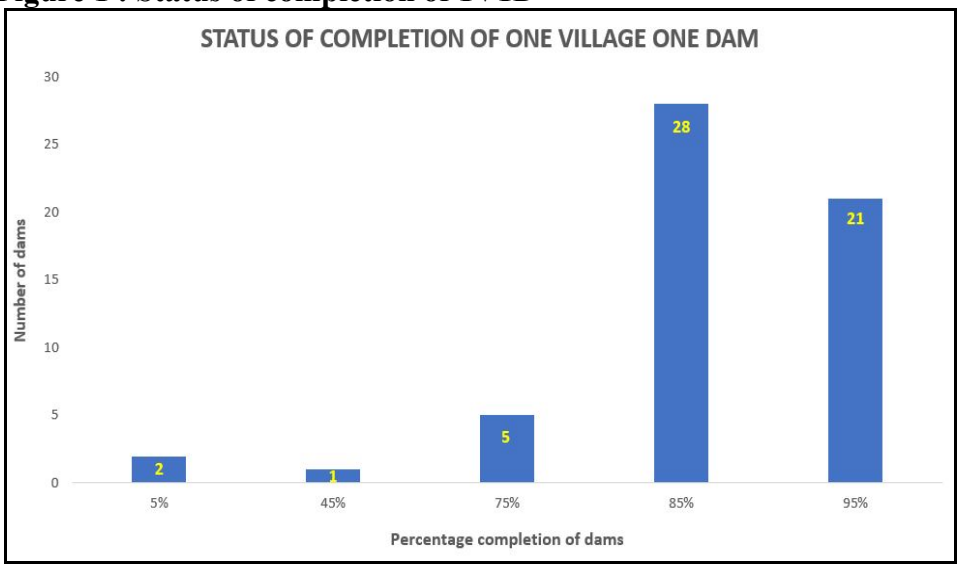
associated with travelling long distances in search of water during the dry season. They reported that most of the communities depend mainly on hand-dug wells, streams/river, and boreholes for their water needs. However, most of these sources as reported by the community members tend to dry up during the dry season and possess serious challenge to communities. In this regard, they asserted that 1V1D project holds a great potential for a better future for the communities.

The above notwithstanding, the community members reported that they were yet to realise the full benefits and impacts of the 1V1D project.

3.3 Progress of implementation 1V1D

The 1V1D project is spread across the northern ecological zone. The actual construction of dams started in April 2018 and a total 560 dams have been initiated as at the time of the review. The review identified significant progress in the construction of the dams with and average completion rate of 85%. The findings showed that out of 57 dams visited 21 (36%) were 95% complete, 28 (49%) were 85% complete, 5 (9%) were 75% complete, and only 3 dams were less than 5% complete(figure 1.1). The average completion rate of the dams was estimated at 84% (See annex 1).

Figure 1 : Status of completion of 1V1D



Although the number of dams initiated is impressive, there is an urgent need to accelerate the construction so as to complete all of the ongoing ones before end of June 2020.

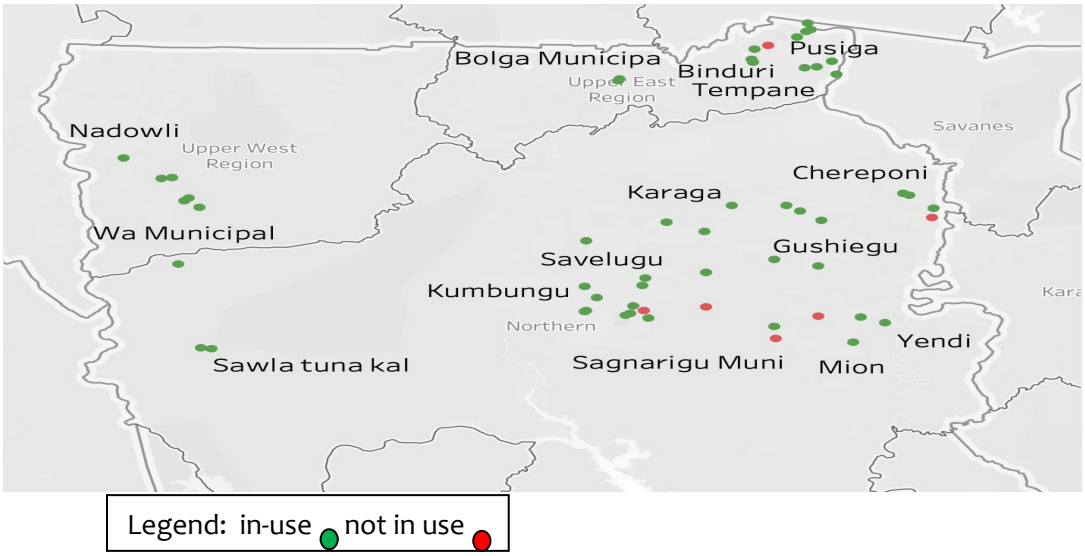
3.4 Usage of the dams

The 1V1D project is designed to provide reliable source of water all year round for household activities, watering of livestock and for dry season farming in the beneficiary communities. The findings from the evaluation revealed that although none of the dams is fully completed, the community members have

started using the water mainly for watering of livestock (67%) and for domestic activities such as drinking and washing (63%). Only a few respondents indicated that they are using the water for farming. This is partly because the assessment was conducted in the rainy season when water was in abundance and as a result there was no urgent need to water the field.

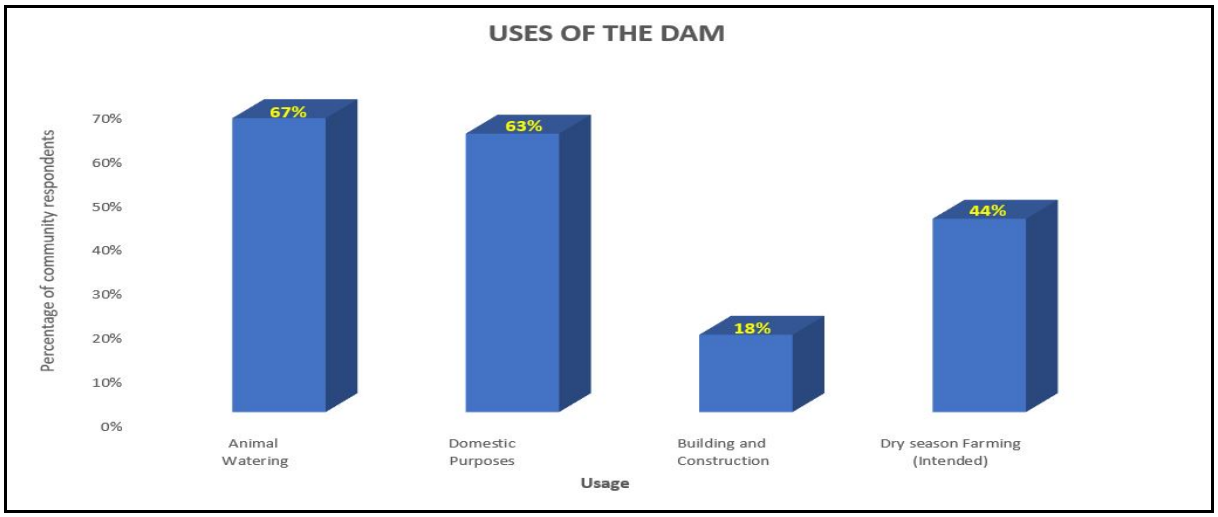
Figure 3, shows the locations where the communities have started using water from the dam for domestic and farming activities.

Figure 2: Location of dams that are in use



In terms of the potential usage of the dams, the respondents including traditional leaders and the Assembly members from the beneficiary communities revealed that in addition to the current use (for household activities and watering of animals) the small earth dams will be used for dry season farming of crops such as tomatoes and onions. Figure 3 shows the current and potential use of water from the dam within the targeted communities. Some of the Assemblies reported that they areputting in place programmes that will prepare the interested community members especially the youth and women to go into dry season vegetable farming since it's a new venture.

Figure 3: Uses of the dams



4.0 EMERGING OUTCOMES

This section highlights some of the emerging outcomes of the 1V1D programme. It captures key benefits of the dams and the potential impacts over time. The evaluation identified that although none of the dams is fully constructed, the community members have started enjoying some of the expected benefits. Below is a summary of some of the key emerging outcomes from the project:

4.1 Access to reliable source of water

- **Reliable source of water for livestock:** One of the current uses of the dams reported by the communities was the use of the dams as source of water for livestock. Out of 399 key informant from 57 communities, 266 representing 67% revealed that they used the dam for animal watering. They reported that before the construction of the dam, they had serious challenges having access to reliable source of water for their livestock. They reported that the used to travel very long distances to get water for their animals. For example, in Tabiase, a community located in Wa Municipality of the Upper West region, the community members reported that they had to travel to Busa to get water for their animals. The scramble for water also became a potential source of conflict among the communities.

Figure 4: Watering of livestock using water from the dams under 1V1D

Herdsmen taking animals to drink water at Marantinga

Herdsmen taking animals to drink water at Kultamise dams

- **Safe and reliable source of water for domestic activities:** In terms of domestic use, 252 people representing 63% of the respondents revealed that the dams are serving as a reliable source of water for domestic activities such as washing, construction. The indicated that the siting of the dams very close to the communities have relieved them of travelling long distances for water and the associated risks. It was observed that some of the dams serve as the main source of water for drinking, washing, cooking, bathing, and cleaning.

Figure 5: Using water from 1V1D for Household activities

Community members in Kumbugu District fetching and using water the dam for washing.

- **Potential source of water for dry season farming:** The dams serve as a reliable source of water for farming all year round. Feedback from the beneficiaries especially the young adults in the beneficiary communities revealed that the dam provides them with a reliable source of water for dry season farming especially vegetable farming. They reported that the dams will help solve the perennial draught which occurs during greater part of the year that prevents them engaging in farming during the period. For example, 175 people representing 44% of the respondents mentioned that they intend using water from the dams for vegetable farming during the dry season. According to the Karaga District Chief Executive, the Agriculture Department of the District has started a process to train the youth in dry season farming to enable them take advantage of the dams.

Figure 6: Potential source of water for dry season farming

4.2 Promoting social cohesion

Most of the dams are shared by a number of communities and thus creating a bond among them and an opportunity for the communities to work together. Further, the provision of reliable source of water throughout the year for domestic activities and watering of livestock, according to the community members will reduce conflicts that usually emanate from water shortage and ensuing competition for scare water especially for watering of animals. For example, the MMDCEs of Mion, Sawla-Tuna-Kalba, and Wa reported that in the past there were incidence of communal conflicts between herdsmen from some of the communities in their district and other communities due to competition for water for their animals and for domestic use. However, the construction of the dams have provided the communities including the herdsmen with access to reliable source of water for their animals and thereby eliminating the need to travel to other communities in search of water. It emerged that some of the dams serve or are intended to serve a cluster of communities a shared facility as a result, these communities have evolved modalities to ensure effective and sustainable use of the dams. The dam as a shared facility is expected to facilitate close collaboration and social interaction among the communities. These interactions were identified to bolster social cohesion and reduce conflicts among the communities due to scarcity of water.

4.3 Potential source of employment

The dams are seen by most of the community member including the opinion leaders as a source of employment. It was evident from the engagement with the respondents that the dam provides a potential source of expanding once farm and or engaging in vegetable farming during the dry season. Feedback from the key informant interview showed that 44% of the respondents indicated that they intend using water from the dams for dry season farming in addition to using the water for domestic activities and watering their animals.

4.4 Reducing migration down south during the dry season

The findings from the focus group discussions and key informant interviews revealed that once completed, the dams will facilitate dry season farming and thereby reduce the migration of young men and women from the northern to the southern part of the country in search of jobs. A follow up study will be done to determine the actual benefits of the dams during the dry season. Additionally, information provided by staff of MMDAs engaged during the exercise pointed to the fact that the dams have the potential of providing a reliable source of employment and income to the community members especially the youth thereby preventing most of them from travelling outside the regions for work down south. Conversely, it was revealed that the construction of the dams is likely to attract people from other areas to the beneficiary communities especially immigrant farmers from Burkina Faso. The dams, according to the beneficiary communities is likely to reduce the spate of rural urban migration in Northern Ghana.

5.0 EMERGING ISSUES AND CHALLENGES

This section of the report details the key issues and challenges that were identified during the assessment which will require the attention of Cabinet, MSDI, NDA and the Assemblies. The section is clustered around issues such as durability of the dams, level of stakeholder participation and ownership of the dams and effectiveness of monitoring and oversight mechanisms.

5.1 Inadequate participation and weak ownership of projects.

Inadequate participation and weak ownership of the dams by lower level stakeholders such as the MMDAs and the community members possess great danger to the effective use, impact and sustainability of the dams. Findings from the field assessment revealed that there is low participation and ownership of the dams by the MMDAs and the communities. Although the Assemblies reported that they played a lead role during site selection, they however indicated that they have not been actively involved afterwards. For example, they reported that they have not been furnished with copies of the designs and other relevant documents neither have they been empowered to supervised the work in the communities.

> "The contractors see us as intruders because they have no contractual obligation with the Assembly. They only come to the Assembly when there are problems"
> (District Chief Executive)

Feedback from the communities, Assemblies and the NDA showed that the level of engagement and information sharing by the Ministry is quite weak. It was revealed that most of the contractors by-passed the Assemblies and went straight to the communities and only got in touch with them when there were issues or misunderstanding with the communities. This according to them has had negative implication on the ability of the assemblies to be fully involved in the project and to stimulate community ownership which is critical for effective use and sustainability of the dams. They also indicated that the weak collaboration also explain the slow and poor delivery by some of the contractors.

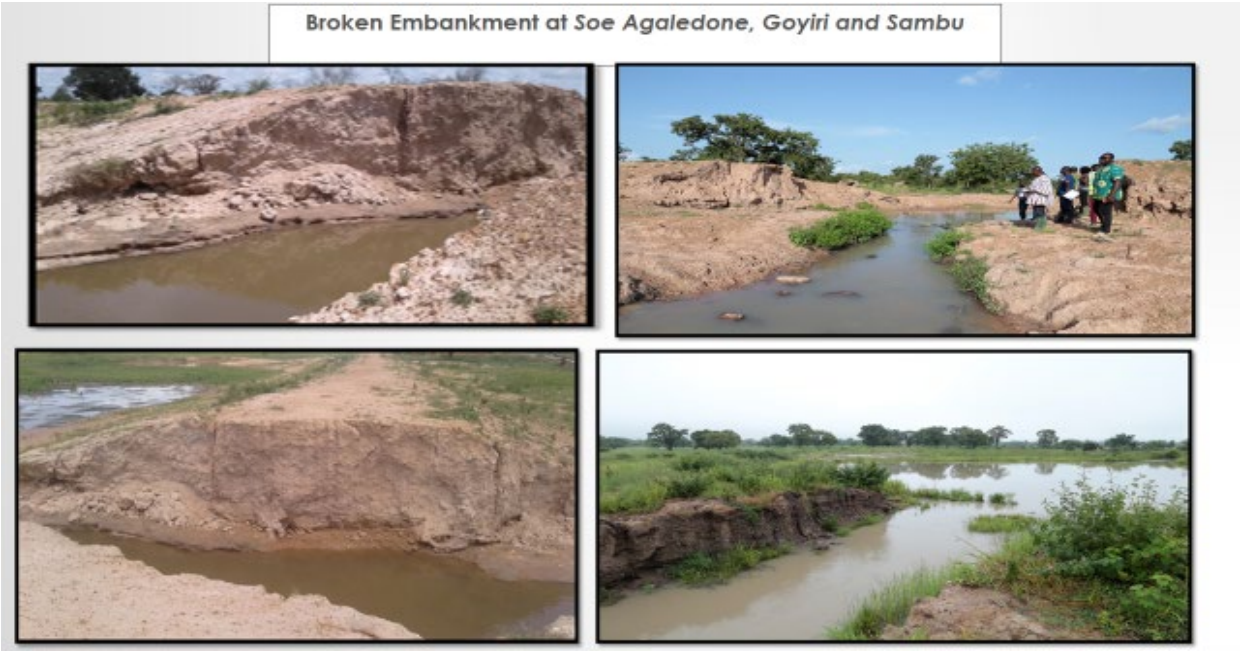
5.2 Structural Defects

Another category of issues identified was structural defect. Although, most of the dams in the selected communities were almost complete (average of 85% completion rate), a significant number of them had structural defects (Annex 1) in the form of broken embankment, severe erosion and defective spill ways which requires immediate attention.

Below are details of the structural defects:

- **Broken embankment wall:** The design of the dams envisaged the use of boulders to protect the embankment walls from collapsing, however, almost all the dams visited did not have such protection as a result the embankment of some of the dams have been split into two, broken or have severe cracks due to erosion. For example, the embankment of dams in communities such as Goyiri (Northern Region), Soe Agaledone (Upper East), Nangogu, Nalugu (Northern Region) were found to be broken (see Figure below and annex 2).

Figure 7 : Broken Embankment at Soe Agaledone,Goyiri and Sambu



Spillways not properly done: Evidence from the field assessment showed that some of the spillways were either wrongly sited, not completed or too low given the topography. These limitations negatively affected the volume of water in the dam. Most of the communities indicated that they were hesitant to use the water from the dam for farming since they were not sure if the volume of water in the dam will be adequate enough to carry them through the dry season.

In some cases, the volume of spillage from the dam was quiet high which meant that large volumes of water was exiting the dam at a short interval. For example, the spillway of the dam in Kulikpegu was broken leading to a rapid loss of water from the dam.

"We are happy we are given a dam, but we will be truly happy when it is well constructed." (Community member)

Figure 8: Broken spillway of a dam in Kulikpegu- Mion District

- **Uncompleted Reservoir**: Feedback from the community members and staff of the Assemblies revealed that some of the reservoirs were not be up to right specification. They reported that some of them were not up to the required depth or accurately excavated. However, due to the fact that the dams were full due to the rains, the team could not ascertain the validity of the issues raised concerning the quality of the reservoirs.

***5.3 Lack of effective monitoring and feedback mechanism*:** The findings from the evaluation showed that, save for the M&E team at the Ministry, there were no evidence of a mechanism or functional arrangements for monitoring and receiving feedback from the beneficiary communities. Although the Assemblies explicitly indicated the relevance and potential value of the dams to the livelihoods and wellbeing of the communities, they revealed that they were no systems in place for effective monitoring of the quality of the dams, use and impact of the dam and sustainability of the facility. They agreed that such a system is critically important to ensure that the benefits of the facilities are optimised in the communities and to ensure that the benefits continue for generations to come. It was also identified that the weak M&E system, has contributed to the low knowledge and awareness of 1V1D project and the misinformation in the communities about the purpose and types of the dams as well as the intended benefits

> "The assemblies have been left out, contractors just show up and show us issuance certificate what do we do?"
> (District Coordinating Director)

5.4 Inadequate knowledge and awareness among the key stakeholders at the local level

Despite the potential benefits of the 1V1D programme, the evaluation revealed that the level of knowledge and awareness among the stakeholders especially the community members regarding the purpose, type and process of constructing the dams was very low. There were divergent views and explanation of what the project seeks to achieve, how and when. There was information asymmetry between MSDI and contractors on the one side and the MMDAs and the communities on the other. The assessment showed that, there are no formal platforms and avenues for stakeholder engagements especially by women and youth groups who are considered potential beneficiaries of the project. The youth engaged felt excluded from the project implementation, a perception that does not augur well for effective use and sustainability of the project.

5.5 Weak communication and information sharing

The review identified that the were no formal and systematic arrangements for communicating and sharing information with stakeholders at the decentralised levels. Findings from the key informant interview and FGD revealed severe gaps in communication and information sharing from the MSDI leading to misinformation and misrepresentation of the project across the beneficiary communities. In addition, the study did not find any formal mechanism for receiving and responding to issues from the MMDAs and the including complaints and grievances from the beneficiary communities.

The lack of clear communication and information sharing modalities has led to some individual trying to fill the gaps with their own interpretation and intentionally sending out wrong information just to incite the citizens against the project and sometime create dissention among the key actors. This situation possess a potential reputational risk for the government and as a result should be addressed within the shortest possible time.

The above notwithstanding, the evidence gathered showed that the communities generally believe and support the project and as a result will require timely communication and frequent interaction through community durbars, radio discussions and communication through other platforms.

6.0 CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The One Village One Dam intervention is one of the flagship programmes initiated by His Excellency, Nana Addo Dankwa Akufo Addo, when he assumed office in 2017. The project is a component of the Infrastructure for Poverty Eradication Programme (IPEP) designed to help eradicate poverty and address the various forms of inequalities in the country. The evaluation findings showed that by providing reliable source of water for animal watering, domestic activities and dry season farming, the 1V1D has responded to and address one of the critical needs of the communities in the target area. Although none of the 560 dams is fully completed (average completion rate of 85%), the communities have started using water from the dams for domestic and farming activities. Feedback from key stakeholders such as MMDCEs, the youth and women interviewed showed that the dams are likely to facilitate dry season farming in vegetables, a wish that has long been in the heart of the people. Some of the key challenges identified relates to structural defects, weak communication and citizens engagement as well as lack of effective monitoring and feedback mechanism.

The possible use of the dams as revealed by the beneficiary communities, is a clear indication of the tremendous potential that can be harnessed from the initiative to improve the livelihoods and wellbeing of the targeted regions. In a nutshell, it can be concluded that, the 1V1D is indeed a catalytic and forward looking intervention that has the potential to significantly transform the livelihoods of local farmers in the northern part of the country in line with the Ghana beyond Aid agenda.

6.2 Recommendations

- **Prioritise the repair of structural defects immediately after the raining season**

Given the high expectation, potential benefits and the urgency to get the dams ready for the dry season, it is recommended that the MSDI focus on repairing the dams with structural defects and ensure completion of all the dams that have been initiated. In addition, the Ministry should work closely with NDAs and the MMDAs to sustain and grow the interest and commitment of the beneficiary communities.

- **Develop and roll-out intensive sensitisation and education programme across the Districts**

The MSDI in collaboration with the Northern Development Authority and the MMDAs should roll-out as a matter of urgency a sensitisation and educational programme across all the beneficiary districts to deal with the misconception and misinformation about the 1V1D and to promote shared knowledge and understanding among the community members of the purpose, approach and types of dams that are being constructed under the 1V1D programme. Tailor-made and targeted sensitisation and community engagement programmes should be organised with the opinion leaders such as the chiefs, assembly members and religious leaders as well as youth and women's groups in the communities. The aim is to clarify and educate them on the goal and objectives of the 1V1D and to receive and respond to questions, comments and suggestions from the community members.

- **Develop and operationalise robust monitoring, evaluation and feedback mechanism**

A robust monitoring, evaluation and feedback mechanism that will ensure timely and effective implementation of the intervention and to stimulate effective and sustainable use of the dams. It is

recommended that the MSDI in collaboration with NDA and MMDAs develop a comprehensive and a fit-for-purpose M&E system that links all the key actors. The system should be designed in such a way that it facilitate timely collection, reporting and feedback of lessons learned into decision making at MSDI, NDA, MMDAs and the community level. Data collection, reporting, performance review and feedback mechanisms should be established across the different levels - community, MMDA and sector – to facilitate timely decision making.

- **Strengthen collaboration and partnership between MSDI, NDA and MMDAs**

One of the weakest links identified is inadequate collaboration and information sharing between the Ministry, NDA and the MMAs. It is therefore recommended that conscious effort should be made to establish a clear process of sharing documents and information as well as including the MMDAs in the relevant stages of the programme. This MMDAs should be capacitated to provide continuous support to the communities in terms of repair and maintenance of the dams especially after the dams have been completed and handed over.

- **Periodic evaluation of the programme**

To ensure continuous relevance of IPEP, it is recommended that the MSDI develops and roll-out and evaluation plan that will enable the ministry secure systematic and objective evidence on the use and impact of the 1V1D programme over time.

Annex 1: Percentage completion of dams in selected communities as at the September 2019.

Region	District	Communities	Site cleared	Key Trench	Embankment	Reservoir/ Dugout Section	Spillway Structure	Slope Protection	Percentage Completion
1. Upper East	Bolga Municipal	Daporentindogo	yes	yes	yes	yes	yes	yes	95%
2. Upper East	Bolga Municipal	Soe_agaledone	yes	yes	yes	yes	yes	no	85%
3. Upper East	Pusiga	Marantinga	yes	yes	yes	yes	yes	no	85%
4. Upper East	Pusiga	Kultamise	yes	yes	yes	yes	yes	no	85%
5. Upper East	Pusiga	Terago	yes	yes	yes	yes	yes	yes	95%
6. Upper East	Pusiga	Tesbego	yes	yes	yes	yes	yes	yes	95%
7. Upper East	Tempane	Nisung	yes	yes	yes	yes	yes	no	85%
8. Upper East	Tempane	Zansilibuiga	yes	yes	yes	yes	yes	yes	95%
9. Upper East	Tempane	Yabrago	yes	yes	yes	yes	yes	yes	95%
10. Upper East	Tempane	Busunating	yes	yes	yes	yes	yes	no	85%
11. Upper East	Binduri	Gumyoro	yes	yes	yes	yes	yes	yes	95%
12. Upper East	Binduri	Boko	yes	yes	yes	yes	yes	yes	95%
13. Upper East	Binduri	Atuba	yes	yes	yes	yes	yes	yes	95%
14. Upper East	Binduri	Agumisi	yes	yes	yes	yes	yes	yes	95%
15. Upper West	Nadowli	Serekpere	yes	yes	yes	yes	yes	yes	95%
16. Upper West	Nadowli	Chaang	yes	yes	yes	yes	yes	yes	95%
17. Upper West	Nadowli	Janguasi	yes	yes	yes	yes	yes	yes	95%
18. Upper West	Wa Municipal	Cianso	yes	no	no	no	no	no	5%
19. Upper West	Wa Municipal	Kadowli	yes	yes	yes	yes	yes	yes	95%
20. Upper West	Wa Municipal	Yibele	yes	yes	yes	yes	yes	yes	95%
21. Upper West	Wa Municipal	Tabiase	yes	yes	yes	yes	yes	no	85%
22. Northern	Kumbungu	Cheshegu__Reha	yes	yes	yes	yes	yes	yes	95%
23. Northern	Kumbungu	Kpaligu__Rehab	yes	yes	yes	yes	yes	yes	95%
24. Northern	Kumbungu	Zugu	yes	yes	yes	yes	yes	yes	95%
25. Northern	Kumbungu	Chanzegu	yes	yes	yes	yes	yes	no	85%
26. Northern	Mion	Kulikpegu	yes	yes	yes	yes	yes	no	85%

27. Northern	Mion	Gunsi	yes	yes	yes	yes	yes	no	85%
28. Northern	Mion	Sakoya	yes	yes	yes	yes	no	no	75%
29. Northern	Mion	Sambu	yes	yes	yes	no	no	no	45%
30. Northern	Yendi	Nakpachee	yes	yes	yes	yes	yes	yes	95%
31. Northern	Yendi	Kpalgabeni__re	yes	yes	yes	yes	yes	yes	95%
32. Northern	Yendi	Zang	yes	yes	yes	yes	yes	no	85%
33. Northern	Yendi	Bunbon	yes	yes	yes	yes	no	yes	85%
34. Northern	Sawla-Tuna-Kalba	Goyiri	yes	yes	yes	yes	no	no	75%
35. Northern	Sawla-Tuna-Kalba	Kumasai	yes	yes	yes	yes	yes	no	85%
36. Northern	Sawla-Tuna-Kalba	Jentilpe	yes	yes	yes	yes	yes	no	85%
37. Northern	Sawla-Tuna-Kalba	Nasoyiri	yes	yes	yes	yes	yes	no	85%
38. Northern	Savelugu	Sando__Rehab	yes	yes	yes	yes	yes	no	85%
39. Northern	Savelugu	Guno	yes	yes	yes	yes	yes	no	85%
40. Northern	Savelugu	Manguli__Rehab	yes	yes	yes	yes	yes	yes	95%
41. Northern	Savelugu	Dinga	yes	yes	yes	yes	no	no	75%
42. Northern	Karaga	Yemokariga	yes	yes	yes	yes	yes	no	85%
43. Northern	Karaga	Gunavili__Rehab	yes	yes	yes	yes	yes	no	85%
44. Northern	Karaga	Langogu__Rehab	yes	yes	yes	yes	yes	no	85%
45. Northern	Karaga	Pishugu	yes	yes	yes	yes	yes	no	85%
46. Northern	Gushiegu	Wawuo	yes	yes	yes	yes	yes	no	85%
47. Northern	Gushiegu	Kpatinga	yes	yes	yes	yes	yes	no	85%
48. Northern	Gushiegu	Naloggu	yes	yes	yes	yes	yes	no	85%
49. Northern	Gushiegu	Bogukamongnaay	yes	yes	yes	yes	yes	no	85%
50. Northern	Chereponi	Tombu	yes	yes	yes	yes	yes	no	85%
51. Northern	Chereponi	Achuma	yes	no	no	no	no	no	5%
52. Northern	Chereponi	Aromabila_no_2	yes	yes	yes	yes	yes	no	85%
53. Northern	Chereponi	Japka	yes	yes	yes	yes	yes	no	85%
54. Northern	Sagnarigu	Fou	yes	yes	yes	yes	yes	no	85%
55. Northern	Sagnarigu	Kpawumo	yes	yes	yes	yes	no	no	75%
56. Northern	Sagnarigu	Kpunt	yes	yes	yes	yes	no	no	75%

57. Northern	Sagnarigu	Kulaa	yes	yes	yes	yes	yes	yes	95%
Average % Completion									**84%**

Annex 2: Structural Defects of dams

Region	District	Communities	Structural Defect			
			Embankment	Spillway	Inlet-Outlet Valve	Reservoir
Upper East	Bolga Municipal	Daporentindogo	Cracks on embankment			
Upper East	Bolga Municipal	Soe_agaledone	Broken embankment	Spillway wrongly site		
Upper East	Pusiga	Marantinga		Spillway not completed		
Upper East	Pusiga	Kultamise				
Upper East	Pusiga	Terago	Cracks on embankment			
Upper East	Pusiga	Tesbego				
Upper East	Tempane	Nisung	Cracks on embankment			
Upper East	Tempane	Zansilibuiga				
Upper East	Tempane	Yabrago				
Upper East	Tempane	Busunating				
Upper East	Binduri	Gumyoro		Spillway is wrongly sited. It is located upstream		
Upper East	Binduri	Boko	Cracks on embankment	No Spillway		
Upper East	Binduri	Atuba				
Upper East	Binduri	Agumisi				
Upper West	Nadowli	Serekpere		Broken Spillway		
Upper West	Nadowli	Chaang		Spillway not done		
Upper West	Nadowli	Janguasi		Spillway appear too low		
Upper West	Wa Municipal	Dianso				
Upper West	Wa Municipal	Kadowli				
Upper West	Wa Municipal	Yibele				

Region	District	Communities	Structural Defect			
			Embankment	Spillway	Inlet-Outlet Valve	Reservoir
Upper West	Wa Municipal	Tabiase				
Northern	Kumbungu	Cheshegu__reha				
Northern	Kumbungu	Kpaligu__rehab	Cracks on embankment			
Northern	Kumbungu	Zugu	Cracks on embankment			
Northern	Kumbungu	Chanzegu				
Northern	Mion	Kulikpegu		Broken Spillway		
Northern	Mion	Gunsi	Cracks on embankment	spillway not active due to a channel created by a family		
Northern	Mion	Sakoya	Cracks on embankment	No Spillway	No inlet-Outlet structure	Reservoir not properly done
Northern	Mion	Sambu	Broken embankment	No Spillway	No inlet-Outlet structure	reservoir not completed
Northern	Yendi	Nakpachee	Cracks on embankment			
Northern	Yendi	Kpalgabeni__re				
Northern	Yendi	Zang	Cracks on embankment			
Northern	Yendi	Bunbon		No Spillway		
Northern	Sawla-Tuna-Kalba	Goyiri	Broken embankment	No Spillway		
Northern	Sawla-Tuna-Kalba	Kulmasa	Huge cracks on embankment	No Spillway	Inlet-Outlet structure not completed	
Northern	Sawla-Tuna-Kalba	Jentilpe	Cracks on embankment		No inlet-Outlet structure	
Northern	Sawla-Tuna-	Nasoyiri	Cracks on	Spillway appear		

Region	District	Communities	Structural Defect			
			Embankment	Spillway	Inlet-Outlet Valve	Reservoir
	Kalba		embankment	too low		
Northern	Savelugu	Sando__rehab				
Northern	Savelugu	Guno				
Northern	Savelugu	Manguli__rehab				
Northern	Savelugu	Dinga	Cracks on embankment			
Northern	Karaga	Yemokariga				
Northern	Karaga	Gunavili__reha				
Northern	Karaga	Langogu__rehab	Cracks on embankment			
Northern	Karaga	Pishugu		Broken Spillway		
Northern	Gushiegu	Wawuo				
Northern	Gushiegu	Kpatinga				
Northern	Gushiegu	Naloggu		Broken Spillway		
Northern	Gushiegu	Bogukamongnaay				
Northern	Chereponi	Tombu				
Northern	Chereponi	Achuma	No embankment	No Spillway	No inlet-Outlet structure	
Northern	Chereponi	Akromabila_no_2		No Spillway	No inlet-Outlet structure	the topographic of the place did not support small earth dam
Northern	Chereponi	Japka				
Northern	Sagnarigu	Fou		No Spillway because the dam is very close to the settlement		
Northern	Sagnarigu	Kpawumo				
Northern	Sagnarigu	Kpuntaliga		No spillway		No Clear access road